

CHƯƠNG TRÌNH ĐÀO TẠO KHÓA 2025
NGÀNH KỸ THUẬT XÂY DỰNG
TRÌNH ĐỘ ĐẠI HỌC

*(Kèm theo Quyết định số /QĐ-ĐHQT ngày tháng năm 2025
của Hiệu trưởng Trường Đại học Quốc tế)*

1. Thông tin chung

- Tên ngành đào tạo:
- + Tiếng Việt: Kỹ thuật Xây dựng
- + Tiếng Anh: Civil Engineering
- Mã ngành đào tạo: 7580201
- Trình độ đào tạo: Đại học
- Loại hình đào tạo: Chính quy
- Thời gian đào tạo: 4.5 – 5 năm
- Tên văn bằng sau khi tốt nghiệp:
- + Tiếng Việt: Kỹ sư Kỹ thuật Xây dựng
- + Tiếng Anh: Engineer in Civil Engineering
- Nơi đào tạo: Trường Đại học Quốc tế - ĐHQG-HCM

2. Thông tin tuyển sinh và kế hoạch đào tạo

a. Đối tượng tuyển sinh

Đối tượng tuyển sinh căn cứ theo quy chế tuyển sinh đại học của Bộ Giáo dục và Đào tạo và Thông tin tuyển sinh hàng năm của Đại học Quốc gia TP.HCM và Thông tin tuyển sinh của trường Đại học Quốc tế.

b. Hình thức tuyển sinh

Trường Đại học Quốc tế thực hiện tuyển sinh theo Quy chế tuyển sinh Đại học ban hành hàng năm bởi Bộ Giáo dục và Đào tạo, căn cứ theo Thông tin tuyển sinh hàng năm của Đại học Quốc gia TP.HCM và Thông tin tuyển sinh của trường Đại học Quốc tế.

c. Nhóm ngành tuyển sinh: Kỹ thuật

d. Tổ hợp môn xét tuyển: A00, A01, B00, B08, D01, D07

e. Dự kiến chỉ tiêu tuyển sinh, quy mô đào tạo: 40 sinh viên

3. Mục tiêu đào tạo

a. Mục tiêu chung:

Đào tạo các kỹ sư xây dựng chuyên nghiệp có kiến thức, kỹ năng chuyên môn cao; có đủ phẩm chất chính trị và trách nhiệm xã hội cao để có thể giải quyết các vấn đề phức tạp và mang tính đa ngành trong ngành công nghiệp xây dựng; và có khả năng thích ứng cao với thị trường lao động luôn biến đổi và đòi hỏi ngày càng cao trong nước và quốc tế.

Bảng 1. Sự phù hợp của mục tiêu đào tạo với Tầm nhìn, sứ mạng và
Mục tiêu giáo dục của Luật giáo dục đại học.

Mục tiêu đào tạo của CTĐT	Tầm nhìn	Sứ mạng	Luật giáo dục
Đào tạo các kỹ sư xây dựng chuyên nghiệp có kiến thức, kỹ năng chuyên môn cao; có đủ phẩm chất chính trị và trách nhiệm xã hội cao để có thể giải quyết các vấn đề phức tạp và mang tính đa ngành trong ngành công nghiệp xây dựng; và có khả năng thích ứng cao với thị trường lao động luôn biến đổi và đòi hỏi ngày càng cao trong nước và quốc tế.	Trường ĐHQT là trường đại học nghiên cứu thuộc top đầu tại châu Á; là cơ sở giáo dục quốc tế, tự chủ, sáng tạo; là nơi vun đắp và phát triển nguồn nhân lực chất lượng cao cho thị trường lao động trong nước và quốc tế.	Trường Đại học Quốc tế - Là cơ sở giáo dục quốc tế, mang bản sắc văn hóa Việt Nam. - Cơ sở giáo dục đại học đi tiên phong trong đổi mới cơ chế quản trị đại học theo mô hình tự chủ và tiên tiến. - Đào tạo chất lượng cao đa ngành – đa lĩnh vực. Đạt chuẩn kiểm định chất lượng giáo dục theo tiêu chuẩn quốc tế/khu vực cho tất cả các chương trình đào tạo. - Giảng dạy và nghiên cứu thực hiện bằng tiếng Anh là điểm khác biệt nâng tầm quốc tế của nhà trường. Người học được đào tạo và rèn luyện để trở thành công dân toàn cầu và có trách nhiệm với xã hội, dẫn dắt xã hội trong tương lai. - Nghiên cứu cơ bản với hàm lượng tri thức lớn song hành với nghiên cứu ứng dụng, đáp ứng yêu cầu đổi mới sáng tạo và phát triển bền vững của doanh nghiệp, địa phương và xã hội; quan tâm, thúc đẩy các hoạt động kết nối và phục vụ cộng đồng.	Khoản 1, điều 5: - Đào tạo nhân lực, nâng cao dân trí, bồi dưỡng nhân tài, nghiên cứu khoa học, công nghệ tạo ra tri thức, sản phẩm mới, phục vụ yêu cầu phát triển kinh tế - xã hội, bảo đảm quốc phòng, an ninh vào hội nhập quốc tế; - Đào tạo người học có phẩm chất chính trị đạo đức, có kiến thức, kỹ năng thực hành nghề nghiệp, năng lực nghiên cứu vào phát triển ứng dụng khoa học và công nghệ tương xứng trình độ đào tạo, có sức khỏe, khả năng sáng tạo và trách nhiệm nghề nghiệp, thích nghi với môi trường làm việc, có ý thức phục vụ nhân dân.

		Khoa Kỹ thuật và Quản lý Xây dựng - Nghiên cứu theo hướng học thuật và thực tiễn ; - Đào tạo thế hệ kỹ sư Xây dựng "mới", có khả năng giải quyết các vấn đề trong thực tiễn kỹ thuật đồng thời có kỹ năng giao tiếp tiếng Anh thành thạo trong công việc và giao tiếp thường nhật; - Cung cấp các dịch vụ hiện đại cho công nghiệp và xã hội.	

b. Mục tiêu cụ thể (Program Objectives - POs)

Mục tiêu cụ thể của CTĐT được xác định từ mục tiêu chung, bao gồm 03 mục tiêu, trong đó có 01 mục tiêu về kiến thức, 01 mục tiêu về kỹ năng và 01 mục tiêu về tự chủ và trách nhiệm, được trình bày như sau:

Kiến thức:

PO1: Sinh viên tốt nghiệp có thể giải quyết các vấn đề phát sinh trong ngành kỹ thuật xây dựng theo phương pháp định lượng và tiếp cận hệ thống;

Kỹ năng:

PO3: Sinh viên tốt nghiệp có khả năng thiết kế và quản lý các dự án xây dựng một cách chuyên nghiệp, tuân thủ các quy chuẩn về đạo đức nghề nghiệp.

Tự chủ và trách nhiệm

PO2: Sinh viên tốt nghiệp có động lực học tập lâu dài, có cảm hứng sáng tạo và đổi mới để đóng góp cho lĩnh vực Kỹ thuật Xây dựng;

4. **Chuẩn đầu ra của chương trình đào tạo (Program Learning Outcomes – PLOs)**

STT	Chuẩn đầu ra	Trình độ năng lực
Kiến thức		
1.	Kiến thức đại cương	
PLO1	Hiểu và vận dụng kiến thức tự nhiên, toán học mô tả hiện tượng vật lý trong các nghiên cứu định tính và định lượng.	4,0

PLO7	Khả năng giao tiếp chuyên ngành với đồng nghiệp cùng ngành và với cộng đồng, với các hình thức giao tiếp khác nhau (nói, viết ...)	4,0
PLO8	Có kiến thức rộng để hiểu được sự tác động của giải pháp xây dựng đến xã hội và toàn cầu.	4,0
PLO9	Có kiến thức về các vấn đề đương đại của ngành kỹ thuật xây dựng ở qui mô địa phương, quốc gia và quốc tế.	4,0
2.	Kiến thức chuyên ngành	
PLO2	Hiểu khái niệm cơ bản của ngành kỹ thuật xây dựng (địa chất công trình, khoa học vật liệu, kết cấu công trình, lý thuyết kết cấu, trắc địa, thiết kế kỹ thuật, cơ học đất, cơ học chất lỏng, và phương pháp tính toán, phân tích dữ liệu cho thiết kế xây dựng công trình).	4,5
PLO3	Khả năng phân tích và chuẩn bị dự án đầu tư, hiểu tác động kinh tế xã hội và môi trường của các dự án đó.	4,0
PLO5	Khả năng đóng góp chuyên môn khi tham gia làm việc nhóm đa ngành (bao gồm nhiều quốc gia và giới tính), cũng như có kiến thức quản lý và tổ chức để giữ vai trò dẫn dắt.	4,5
Kỹ năng		
3.	Kỹ năng chuyên ngành	
PLO2	Hiểu khái niệm cơ bản của ngành kỹ thuật xây dựng (địa chất công trình, khoa học vật liệu, kết cấu công trình, lý thuyết kết cấu, trắc địa, thiết kế kỹ thuật, cơ học đất, cơ học chất lỏng, và phương pháp tính toán, phân tích dữ liệu cho thiết kế xây dựng công trình).	4,5
PLO3	Khả năng phân tích và chuẩn bị dự án đầu tư, hiểu tác động kinh tế xã hội và môi trường của các dự án đó.	4,5
PLO5	Khả năng đóng góp chuyên môn khi tham gia làm việc nhóm đa ngành (bao gồm nhiều quốc gia và giới tính), cũng như có kiến thức quản lý và tổ chức để giữ vai trò dẫn dắt.	4,5
PLO10	Khả năng sử dụng kỹ thuật, kỹ năng và công cụ hiện đại trong thực hành, bao gồm xác định nhiệm vụ của kỹ sư xây dựng, phân tích, khái quát và xây dựng vấn đề, cùng với khả năng phát triển nguyên lý, kế hoạch và phương pháp chứng minh và dự đoán (ví dụ: phân tích ổn định, hiệu năng, bảo vệ tiếng ồn, phòng chống lũ lụt và cung ứng nguồn nước).	5,0
4.	Kỹ năng chung	
PLO1	Hiểu và vận dụng kiến thức tự nhiên, toán học mô tả hiện tượng vật lý trong các nghiên cứu định tính và định lượng.	4,5
PLO6	Nhận biết sự cần thiết và khả năng học tập không ngừng nhằm nâng cao hiệu quả công việc khi có sự ra đời của các công nghệ mới, cũng như tham gia phát triển công nghệ bằng cách tham gia công việc nghiên cứu diễn giải và tận dụng dữ liệu thực nghiệm, kết hợp kiến	4,5

	thức và dữ liệu để giải quyết các bài toán kỹ thuật xây dựng đặc trưng.	
PLO7	Khả năng giao tiếp chuyên ngành với đồng nghiệp cùng ngành và với cộng đồng, với các hình thức giao tiếp khác nhau (nói, viết ...)	4,5
PLO10	Khả năng sử dụng kỹ thuật, kỹ năng và công cụ hiện đại trong thực hành, bao gồm xác định nhiệm vụ của kỹ sư xây dựng, phân tích, khái quát và xây dựng vấn đề, cùng với khả năng phát triển nguyên lý, kế hoạch và phương pháp chứng minh và dự đoán (ví dụ: phân tích ổn định, hiệu năng, bảo vệ tiếng ồn, phòng chống lũ lụt và cung ứng nguồn nước).	4,5
PLO11	Khả năng sử dụng tiếng Anh kỹ thuật và giao tiếp thông thường.	
Mức tự chủ và trách nhiệm		
5.	Thái độ	
PLO4	Nhận thức về trách nhiệm nghề nghiệp và đạo đức của kỹ sư xây dựng; khả năng đưa ra các quyết định hợp lý dựa trên đạo đức, suy nghĩ chín chắn để tìm ra các giải pháp sáng tạo và hiệu quả cho các vấn đề định tính và định lượng giữa các bộ phận.	4,5
PLO6	Nhận biết sự cần thiết và khả năng học tập không ngừng nhằm nâng cao hiệu quả công việc khi có sự ra đời của các công nghệ mới, cũng như tham gia phát triển công nghệ bằng cách tham gia công việc nghiên cứu diễn giải và tận dụng dữ liệu thực nghiệm, kết hợp kiến thức và dữ liệu để giải quyết các bài toán kỹ thuật xây dựng đặc trưng.	4,5

*Trình độ năng lực theo thang Bloom

Các chuẩn đầu ra được đo bằng thang đo Bloom hiệu chỉnh gồm sáu cấp độ: Nhớ (1) - Hiểu (2) - Vận dụng (3) - Phân tích (4) - Đánh giá (5) - Sáng tạo (6). Các chuẩn đầu ra ở mức 4.5 nằm ở vị thế trung gian giữa mức Phân tích và Đánh giá, hàm ý là người học có khả năng phân tích nhưng chưa đạt tới mức độ toàn diện để làm cơ sở cho hoạt động đánh giá.

5. Ma trận giữa mục tiêu đào tạo và chuẩn đầu ra

CĐR sẽ gắn kết với mục tiêu cụ thể đã được xác định ở Mục 3, theo Bảng 2.

Bảng 2. Mối quan hệ giữa CĐR của CTĐT và mục tiêu đào tạo

	PLOs ⁽¹⁾	POs ⁽²⁾		
		PO1	PO2	PO3
Kiến thức	PLO 1	x		
	PLO 2	x		
	PLO 3		x	x
	PLO 6	x	x	

	PLO 8		x	
	PLO 9		x	
Kỹ năng	PLO 5			x
	PLO 7			x
	PLO 10	x	x	
Tự chủ và trách nhiệm	PLO 4			x
	PLO 11			x

6. Quy trình đào tạo, điều kiện tốt nghiệp

Căn cứ Quyết định số 1342/QĐ-ĐHQG ngày 30 tháng 9 năm 2022 của Giám đốc Đại học Quốc gia Thành phố Hồ Chí Minh về việc ban hành Quy chế đào tạo trình độ đại học.

Căn cứ Quyết định số 719/QĐ-ĐHQT ngày 06 tháng 12 năm 2021 của Hiệu trưởng trường Đại học Quốc tế về việc ban hành Quy chế đào tạo trình độ đại học theo hệ thống tín chỉ tại trường Đại học Quốc tế.

7. Thang điểm (theo thang điểm chính thức của trường)

Trường quy định thang điểm đánh giá kết quả học tập của người học (Quy chế đào tạo trình độ đại học theo hệ thống tín chỉ tại trường Đại học Quốc tế)

Bảng 3: Thang điểm

Xếp loại	Thang điểm 100	Điểm chữ	Thang điểm 4
Xuất sắc	Từ 90 đến 100	A+	4,0
Giỏi	Từ 80 đến cận 90	A	3,5
Khá	Từ 70 đến cận 80	B+	3,0
Trung bình khá	Từ 60 đến cận 70	B	2,5
Trung bình	Từ 50 đến cận 60	C	2,0
Yếu	Từ 40 đến cận 50	D+	1,5
Kém	Từ 30 đến cận 40	D	1,0
	Dưới 30	F	0,0

8. Khối lượng kiến thức toàn khoá

Tổng số tín chỉ: **152 tín chỉ**, trong đó phân bổ kiến thức như Bảng 4 (không bao gồm Giáo dục thể chất và Giáo dục quốc phòng):

Bảng 4. Cấu trúc chương trình đào tạo

TT	Các khối kiến thức ⁽³⁾	Khối lượng			
		Số tín chỉ			Tỷ lệ % (Tổng khối kiến thức/Tổng số tín chỉ)
		Tổng	Lý thuyết	Thực hành	

I	Khối kiến thức giáo dục đại cương	55	52	3	36.18
	- Bắt buộc: 55 tín chỉ	55	52	3	36.18
	- Tự chọn: 0 tín chỉ	0	0	0	0
II	Khối kiến thức cơ sở ngành	42	37	5	27.63
	- Bắt buộc: 42 tín chỉ	42	37	5	27.63
	- Tự chọn: 0 tín chỉ	0	0	0	0
III	Kiến thức chuyên ngành	42	38	4	27.63
	- Bắt buộc 27 tín chỉ	27	23	4	17.76
	- Tự chọn: 15 tín chỉ	15	15	0	9.87
IV	Kiến thức bổ trợ	0	0	0	0
	- Bắt buộc: 0 tín chỉ	0	0	0	0
	- Tự chọn: 0 tín chỉ	0	0	0	0
V	Thực tập, khóa luận/luận văn tốt nghiệp	13	0	13	8.55
	Tổng cộng	152	127	25	100

Theo quy định của điều 8 Thông tư số 17/2021/TT-BGDĐT ngày 22/6/2021, chương trình đào tạo ngành Kỹ thuật Xây dựng được thiết kế với 8 tín chỉ thực tập gồm: Khái niệm ngành Kỹ thuật Xây dựng (01 tín chỉ), Đồ án nền móng (01 tín chỉ), Đồ án bê tông cốt thép (01 tín chỉ), Đồ án thép (01 tín chỉ), Đồ án kỹ thuật thi công (01 tín chỉ), Thực tập tốt nghiệp (03 tín chỉ).

9. Nội dung chương trình đào tạo

Bảng 5: Khung CTĐT chung của nhóm ngành Kỹ thuật
(Tại bảng 5, Thầy/Cô bổ sung khung CTĐT chung đã thống nhất trong nhóm ngành)

STT	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			PTN
		Tiếng Việt	Tiếng Anh		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
I	Kiến thức giáo dục đại cương							
I.1	Lý luận chính trị							
1	PE015IU	Triết học Mác-Lênin	Philosophy of Marxism and Leninism	Bắt buộc	3	3	0	
2	PE016IU	Kinh tế chính trị Mác-Lênin	Political Economics of Marxism and Leninism	Bắt buộc	2	2	0	

3	PE017IU	Chủ nghĩa xã hội khoa học	Scientific Socialism	Bắt buộc	2	2	0	
4	PE018IU	Lịch sử Đảng Cộng sản Việt Nam	History of Vietnamese Communist Party	Bắt buộc	2	2	0	
5	PE019IU	Tư tưởng Hồ Chí Minh	Ho Chi Minh's Thoughts	Bắt buộc	2	2	0	
I.2	Toán - Tin học - Khoa học tự nhiên							
6	MA001IU	Toán 1	Calculus 1	Bắt buộc	4	4	0	
7	MA003IU	Toán 2	Calculus 2	Bắt buộc	4	4	0	
8	PH013IU	Vật lý 1	Physics 1	Bắt buộc	2	2	0	
I.3	Khoa học xã hội - Nhân văn - Nghệ thuật, Quản trị và Kinh tế							
9	PE021IU	Pháp luật đại cương	General Law	Bắt buộc	3	3	0	
I.4	Ngoại ngữ							
10	EN007IU	Tiếng Anh chuyên ngành 1 (kỹ năng viết)	Writing AE1	Bắt buộc	2	2	0	
11	EN008IU	Tiếng Anh chuyên ngành 1 (kỹ năng nghe)	Listening AE1	Bắt buộc	2	2	0	
12	EN011IU	Tiếng Anh chuyên ngành 2 (kỹ năng viết)	Writing AE2	Bắt buộc	2	2	0	
13	EN012IU	Tiếng Anh chuyên ngành 2 (kỹ năng nói)	Speaking AE2	Bắt buộc	2	2	0	
I.5	Giáo dục thể chất							
14	PT001IU	Giáo dục thể chất 1	Physical Training 1	Bắt buộc	3	0	3	
15	PT002IU	Giáo dục thể chất 2	Physical Training 2	Bắt buộc	3	0	3	

Bảng 6. Các môn học thuộc CTĐT

STT	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			PTN
		Tiếng Việt	Tiếng Anh		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
I	Kiến thức giáo dục đại cương							
I.1	Lý luận chính trị							
1	PE015IU	Triết học Mác-Lênin	Philosophy of Marxism and Leninism	Bắt buộc	3	3	0	
2	PE016IU	Kinh tế chính trị Mác-Lênin	Political Economics of Marxism and Leninism	Bắt buộc	2	2	0	
3	PE017IU	Chủ nghĩa xã hội khoa học	Scientific Socialism	Bắt buộc	2	2	0	
4	PE018IU	Lịch sử Đảng Cộng sản Việt Nam	History of Vietnamese Communist Party	Bắt buộc	2	2	0	
5	PE019IU	Tư tưởng Hồ Chí Minh	Ho Chi Minh's Thoughts	Bắt buộc	2	2	0	
	Tổng cộng				11	11	0	
I.2	Toán - Tin học - Khoa học tự nhiên							
6	MA001IU	Toán 1	Calculus 1	Bắt buộc	4	4	0	
7	MA003IU	Toán 2	Calculus 2	Bắt buộc	4	4	0	
8	MA024IU	Phương trình vi phân	Differential Equations	Bắt buộc	4	3	1	
9	CE215IU	Đại số tuyến tính	Applied Linear Algebra	Bắt buộc	2	2	0	
10	CE216IU	Xác suất thống kê	Probability and Statistics	Bắt buộc	3	3	0	
11	PH013IU	Vật lý 1	Physics 1	Bắt buộc	2	2	0	
12	PH014IU	Vật lý 2	Physics 2	Bắt buộc	2	2	0	
13	PH015IU	Vật lý 3	Physics 3	Bắt buộc	3	3	0	
14	PH016IU	Thí nghiệm vật lý 3	Physics 3 Laboratory	Bắt buộc	1	0	1	

STT	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			PTN
		Tiếng Việt	Tiếng Anh		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
15	CH011IU	Hóa học cho kỹ sư	Chemistry for Engineer	Bắt buộc	3	3	0	
16	CH012IU	Thực hành hóa học	Chemistry Laboratory	Bắt buộc	1	0	1	
	Tổng cộng				29	26	3	
I.3	Khoa học xã hội - Nhân văn - Nghệ thuật, Quản trị và Kinh tế							
17	PE021IU	Pháp luật đại cương	General Law	Bắt buộc	3	3	0	
18	PE022IU	Đạo đức nghề nghiệp và tư duy phản biện	Engineering Ethics and Critical Thinking	Bắt buộc	3	3	0	
19	CE100IU	Khái niệm ngành Kỹ thuật Xây dựng	Introduction to Civil Engineering	Bắt buộc	1	1	0	
	Tổng cộng				7	7	0	
I.4	Ngoại ngữ							
20	EN007IU	Tiếng Anh chuyên ngành 1 (kỹ năng viết)	Writing AE1	Bắt buộc	2	2	0	
21	EN008IU	Tiếng Anh chuyên ngành 1 (kỹ năng nghe)	Listening AE1	Bắt buộc	2	2	0	
22	EN011IU	Tiếng Anh chuyên ngành 2 (kỹ năng viết)	Writing AE2	Bắt buộc	2	2	0	
23	EN012IU	Tiếng Anh chuyên ngành 2 (kỹ năng nói)	Speaking AE2	Bắt buộc	2	2	0	
	Tổng cộng				8	8	0	
I.5	Giáo dục thể chất							

STT	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			PTN
		Tiếng Việt	Tiếng Anh		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
24	PT001IU	Giáo dục thể chất 1	Physical Training 1	Bắt buộc	3	0	3	
25	PT002IU	Giáo dục thể chất 2	Physical Training 2	Bắt buộc	3	0	3	
	Tổng cộng				6	0	6	
II	Kiến thức chuyên nghiệp							
II.1	Kiến thức cơ sở							
26	CE102IU	Tin học cho kỹ sư	Introduction to Computing for Engineers	Bắt buộc	3	3	0	
27	CE213IU	Phương pháp tính trong xây dựng	Computational Methods for Civil Engineering	Bắt buộc	3	3	0	PTN Máy tính
28	CE101IU	Cơ lý thuyết – Tĩnh học	Engineering Mechanics - Statics	Bắt buộc	3	3	0	PTN Máy tính
29	CE217IU	Trí tuệ nhân tạo trong kỹ thuật và quản lý xây dựng	Artificial Intelligence in Civil Engineering and Construction Management	Bắt buộc	3	3	0	
30	CE103IU	Vẽ và thiết kế với sự hỗ trợ của máy tính	Computer-Aided Design and Drafting	Bắt buộc	3	3	0	
31	CE104IU	Thực hành CADD	Computer-Aided Design and Drafting Practice	Bắt buộc	1	0	1	
32	CE201IU	Sức bền vật liệu 1	Mechanics of Materials 1	Bắt buộc	2	2	0	
33	CE208IU	Sức bền vật liệu 2	Mechanics of Materials 2	Bắt buộc	2	2	0	
34	CE202IU	Thí nghiệm sức bền vật liệu	Mechanics of Materials Lab	Bắt buộc	1	0	1	
35	CE205IU	Cơ học chất lỏng	Fluid Mechanics	Bắt buộc	2	2	0	

STT	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			PTN
		Tiếng Việt	Tiếng Anh		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
36	CE206IU	Thực hành Cơ học chất lỏng	Fluid Mechanics Lab	Bắt buộc	1	0	1	
37	CE211IU	Thủy lực thủy văn	Hydrology-Hydraulics	Bắt buộc	3	3	0	
38	CE306IU	Cấp thoát nước	Water Supply and Sewerage	Bắt buộc	3	3	0	
39	CE210IU	Vật liệu xây dựng	Construction Materials	Bắt buộc	3	3	0	
40	CE214IU	Kiến trúc dân dụng	Civil Architecture	Bắt buộc	2	2	0	
41	CE307IU	Trắc địa	Surveying	Bắt buộc	2	2	0	
42	CE308IU	Thực tập trắc địa	Surveying Practice	Bắt buộc	1	0	1	
43	CE302IU	Cơ học đất	Soil Mechanics	Bắt buộc	3	3	0	
44	CE303IU	Thực hành Cơ học đất	Soil Mechanics Laboratory	Bắt buộc	1	0	1	
	Tổng cộng				42	37	5	
II.2	Kiến thức chuyên ngành chung (bắt buộc)							
45	CE309IU	Nền móng	Foundation Engineering	Bắt buộc	3	3	0	
46	CE209IU	Cơ học Kết cấu 1	Structural Analysis 1	Bắt buộc	2	2	0	
47	CE301IU	Cơ học Kết cấu 2	Structural Analysis 2	Bắt buộc	3	3	0	
48	CE304IU	Bê tông cốt thép 1	Reinforced concrete 1	Bắt buộc	3	3	0	
49	CE310IU	Bê tông cốt thép 2	Reinforced Concrete 2	Bắt buộc	3	3	0	
50	CE305IU	Kết cấu thép	Steel Structures	Bắt buộc	3	3	0	
51	CE311IU	Kỹ thuật thi công	Construction Engineering	Bắt buộc	3	3	0	
52	CE401IU	Quản lý xây dựng	Construction Management	Bắt buộc	3	3	0	
53	CE312IU	Đồ án thép	Steel Structure Project	Bắt buộc	1	0	1	

STT	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			PTN
		Tiếng Việt	Tiếng Anh		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
54	CE313IU	Đồ án bê tông cốt thép	Reinforced Concrete Project	Bắt buộc	1	0	1	
55	CE402IU	Đồ án nền móng	Foundation Project	Bắt buộc	1	0	1	
56	CE403IU	Đồ án kỹ thuật thi công	Construction Project	Bắt buộc	1	0	1	
	Tổng cộng				27	23	4	
II.3	Kiến thức chuyên ngành (tự chọn)							
	II.3.1 Kiến thức chuyên ngành kỹ thuật xây dựng: Tự chọn 3 môn trong các môn học sau (CE elective)							
57	CE404IU	Động lực học công trình	Dynamics of Structures	Tự chọn	3	3	0	
58	CE405IU	Công trình thủy	Hydraulics Structures	Tự chọn	3	3	0	
59	CE407IU	Nhà nhiều tầng	Tall Buildings	Tự chọn	3	3	0	
60	CE406IU	Thiết kế cầu	Bridge Engineering	Tự chọn	3	3	0	
61	CM310IU	Hệ thống thông tin xây dựng	Building Information Management	Tự chọn	3	3	0	
62	CE412IU	Trí tuệ nhân tạo nâng cao trong kỹ thuật và quản lý xây dựng	Advanced Artificial Intelligence in Civil Engineering and Construction Management	Tự chọn	3	3	0	
63	CE413IU	Hệ thống thông tin địa lý	GIS Applications in Civil Engineering	Tự chọn	3	3	0	
64	CE414IU	Quản lý dự án xây dựng	Construction Project Management	Tự chọn	3	3	0	
65	CM202IU	Đo bóc khối lượng và ước tính chi	Construction Measurement and Cost Estimating	Tự chọn	3	3	0	

STT	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			PTN
		Tiếng Việt	Tiếng Anh		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
		phí xây dựng						
66	CM302IU	Đầu thầu và mua sắm	Construction Procurement and Tendering	Tự chọn	3	3	0	
67	CM404IU	Quản lý hợp đồng – Hợp đồng FIDIC	Contract Management – FIDIC contracts	Tự chọn	3	3	0	
68	CE415IU	Xây dựng bền vững	Sustainable Construction	Tự chọn	3	3	0	
II.3.2 Tự chọn 2 môn trong các môn học sau (IU elective)								
69	BA003IU	Nguyên lý Marketing	Principles of Marketing	Tự chọn	3	3	0	
70	BA006IU	Giao tiếp trong kinh doanh	Business Communication	Tự chọn	3	3	0	
71	BA020IU	Đạo đức kinh doanh	Business Ethics	Tự chọn	3	3	0	
72	BA115IU	Dẫn nhập quản trị kinh doanh	Introduction to Business Administration	Tự chọn	3	3	0	
73	BA116IU	Dẫn nhập khoa học xã hội	Introduction to Social Science	Tự chọn	3	3	0	
74	BA117IU	Dẫn nhập kinh tế vi mô	Introduction to Microeconomics	Tự chọn	3	3	0	
75	BA118IU	Nhập môn tâm lý học	Introduction to Psychology	Tự chọn	3	3	0	
76	BA119IU	Dẫn nhập kinh tế vĩ mô	Introduction to Macroeconomics	Tự chọn	3	3	0	
77	BA120IU	Kỹ năng vi tính kinh doanh	Business Computing Skills	Tự chọn	3	3	0	
78	BA123IU	Quản trị học	Principles of Management	Tự chọn	3	3	0	
79	BA130IU	Hành vi tổ chức	Organizational Behavior	Tự chọn	3	3	0	

STT	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			PTN
		Tiếng Việt	Tiếng Anh		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
80	BA169IU	Hệ thống thông tin quản lý	Management Information Systems	Tự chọn	3	3	0	
81	IS019IU	Quản trị sản xuất	Production Management	Tự chọn	3	3	0	
82	IS026IU	Quản lý dự án	Project Management	Tự chọn	3	3	0	
83	IT063IU	Mô hình lý thuyết trong tính toán	Theoretical Models in Computing	Tự chọn	4	4	0	
84	IT091IU	Mạng máy tính	Computer Networks	Tự chọn	4	4	0	
85	IT094IU	Hệ thống thông tin quản lý	Information System Management	Tự chọn	4	4	0	
86	BA154IU	Sáng lập doanh nghiệp	Entrepreneurship and Small Business Management	Tự chọn	3	3	0	
87	IT116IU	Lập trình C++	C++ Programming	Tự chọn	4	4	0	
V	Thực tập, khóa luận/luận văn tốt nghiệp							
88	CE314IU	Thực tập tốt nghiệp	Internship	Bắt buộc	3	0	3	
89	CE420IU	Đồ án tốt nghiệp	Graduation Thesis	Bắt buộc	10	0	10	
	Tổng số (tín chỉ)				13	0	13	

10. Dự kiến kế hoạch giảng dạy (phân bổ các môn học theo từng học kỳ)

Bảng 7. Kế hoạch giảng dạy theo từng học kỳ (*Tham khảo*)

Học kỳ	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			Môn học (Tiên quyết/ Trước/ Song hành)
		Tiếng Anh	Tiếng Việt		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
HKI (19 tín chỉ)	PE015IU	Philosophy of Marxism and Leninism	Triết học Mác- Lenin	Bắt buộc	3	3	0	SH: PE016IU – Political Economics of Marxism and Leninism SH: PE017IU – Scientific Socialism.
	PH013IU	Physics 1	Vật lý 1	Bắt buộc	2	2	0	
	PT001IU	Physical Training 1	Giáo dục thể chất 1	Bắt buộc	3	0	3	
	MA001IU	Calculus 1	Toán 1	Bắt buộc	4	4	0	
	EN007IU	Writing AE1	Tiếng Anh chuyên ngành 1 (kỹ năng viết)	Bắt buộc	2	2	0	
	EN008IU	Listening AE1	Tiếng Anh chuyên ngành 1 (kỹ năng nghe)	Bắt buộc	2	2	0	
	PE021IU	General Law	Pháp luật đại cương	Bắt buộc	3	3	0	

Học kỳ	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			Môn học (Tiên quyết/ Trước/ Song hành)
		Tiếng Anh	Tiếng Việt		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
Tổng cộng					19	16	3	
HKII (20 tín chỉ)	PE017IU	Scientific Socialism	Chủ nghĩa xã hội khoa học	Bắt buộc	2	2	0	SH: PE015IU – Philosophy of Marxism and Leninism SH: PE016IU – Political Economics of Marxism and Leninism
	PT002IU	Physical Training 2	Giáo dục thể chất 2	Bắt buộc	3	0	3	
	MA003IU	Calculus 2	Toán 2	Bắt buộc	4	4	0	HT: MA001IU - Calculus 1
	PE022IU	Engineering Ethics and Critical Thinking	Đạo đức nghề nghiệp và tư duy phản biện	Bắt buộc	3	3	0	
	EN011IU	Writing AE2	Tiếng Anh chuyên ngành 2 (kỹ năng viết)	Bắt buộc	2	2	0	HT: EN007IU - Writing AE1

Học kỳ	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			Môn học (Tiên quyết/ Trước/ Song hành)
		Tiếng Anh	Tiếng Việt		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
	EN012IU	Speaking AE2	Tiếng Anh chuyên ngành 2 (kỹ năng nói)	Bắt buộc	2	2	0	HT: EN008IU - Listening AE1
	CE101IU	Engineering Mechanics - Statics	Cơ lý thuyết – Tĩnh học	Bắt buộc	3	3	0	
	CE100IU	Introduction to Civil Engineering	Khái niệm ngành Kỹ thuật Xây dựng	Bắt buộc	1	1	0	
	Tổng cộng				20	17	3	
HKIII (17 tín chỉ)	CE216IU	Probability and Statistics	Xác suất thống kê	Bắt buộc	3	3	0	
	CE102IU	Introduction to Computing for Engineers	Tin học cho kỹ sư	Bắt buộc	3	3	0	
	CE201IU	Mechanics of Materials 1	Sức bền vật liệu 1	Bắt buộc	2	2	0	HT: CE101IU - Engineering Mechanics -Statics
	CE202IU	Mechanics of Materials Lab	Thí nghiệm sức bền vật liệu	Bắt buộc	1	0	1	SH: CE201IU - Mechanics of Materials 1 HT: CE101IU - Engineering Mechanics -Statics

Học kỳ	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			Môn học (Tiên quyết/ Trước/ Song hành)
		Tiếng Anh	Tiếng Việt		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
	CE215IU	Applied Linear Algebra	Đại số tuyến tính	Bắt buộc	2	2	0	
	PH014IU	Physics 2	Vật lý 2	Bắt buộc	2	2	0	
	MA024IU	Differential Equations	Phương trình vi phân	Bắt buộc	4	4	0	HT: MA003IU - Calculus 2
Tổng cộng					17	16	1	
HKIV (19 tín chỉ)	CE210IU	Construction Materials	Vật liệu xây dựng	Bắt buộc	3	3	0	HT: CE201IU – Mechanics of Materials 1; hoặc CE105IU - Engineering Mechanics and Mechanics of Materials
	CH011IU	Chemistry for Engineer	Hóa học cho kỹ sư	Bắt buộc	3	3	0	SH: CH012IU - Chemistry Laboratory
	CH012IU	Chemistry Laboratory	Thực hành hóa học	Bắt buộc	1	0	1	HT: CH011IU - Chemistry for Engineer
	CE208IU	Mechanics of Materials 2	Sức bền vật liệu 2	Bắt buộc	2	2	0	HT: CE201IU - Mechanics of Materials 1
	CE209IU	Structural Analysis 1	Cơ học Kết cấu 1	Bắt buộc	2	2	0	HT: CE201IU - Mechanics of Materials 1; hoặc CE105IU -

Học kỳ	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			Môn học (Tiên quyết/ Trước/ Song hành)
		Tiếng Anh	Tiếng Việt		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
								Engineering Mechanics and Mechanics of Materials
	CE103IU	Computer-Aided Design and Drafting	CADD	Bắt buộc	3	3	0	SH: CE104IU - Computer-Aided Design and Drafting Practice
	CE104IU	Computer-Aided Design and Drafting Practice	Thực hành CADD	Bắt buộc	1	0	1	SH: CE103IU - Computer-Aided Design and Drafting
	PH015IU	Physics 3	Vật lý 3	Bắt buộc	3	3	0	HT: PH013IU - Physics 1 SH: PH016IU - Physics 3 Laboratory
	PH016IU	Physics 3 Laboratory	Thí nghiệm vật lý 3	Bắt buộc	1	0	1	SH: PH015IU - Physics 3
	Tổng cộng				19	16	3	
HK Hè 2	MP001IU	Military Training	Giáo dục quốc phòng	Bắt buộc				
HKV (18 tín chỉ)	CE302IU	Soil Mechanics	Cơ học đất	Bắt buộc	3	3	0	HT: CE201IU - Mechanics of Materials 1 SH: CE303IU - Soil Mechanics Laboratory
	CE303IU	Soil Mechanics Laboratory	Thực hành Cơ học đất	Bắt buộc	1	0	1	SH: CE302IU - Soil Mechanics

Học kỳ	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			Môn học (Tiên quyết/ Trước/ Song hành)
		Tiếng Anh	Tiếng Việt		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
								HT: CE201IU - Mechanics of Materials 1
	CE304IU	Reinforced concrete 1	Bê tông cốt thép 1	Bắt buộc	3	3	0	HT: CE209IU - Structural Analysis 1
	CE305IU	Steel Structures	Kết cấu thép	Bắt buộc	3	3	0	HT: CE209IU - Structural Analysis 1
	CE214IU	Civil Architecture	Kiến trúc dân dụng	Bắt buộc	2	2	0	
	CE301IU	Structural Analysis 2	Cơ học Kết cấu 2	Bắt buộc	3	3	0	HT: CE209IU - Structural Analysis 1
	CE205IU	Fluid Mechanics	Cơ học chất lỏng	Bắt buộc	2	2	0	SH: CE206IU - Fluid Mechanics Lab
	CE206IU	Fluid Mechanics Lab	Thực hành Cơ học chất lỏng	Bắt buộc	1	0	1	SH: CE205IU - Fluid Mechanics
	Tổng cộng				18	16	2	
HK VI (17 tín chỉ)	CE307IU	Surveying	Trắc địa	Bắt buộc	2	2	0	
	CE308IU	Surveying Practice	Thực tập trắc địa	Bắt buộc	1	0	1	
	CE309IU	Foundation Engineering	Nền móng	Bắt buộc	3	3	0	HT: CE302IU - Soil Mechanics

Học kỳ	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			Môn học (Tiên quyết/ Trước/ Song hành)
		Tiếng Anh	Tiếng Việt		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
	CE310IU	Reinforced Concrete 2	Bê tông cốt thép 2	Bắt buộc	3	3	0	HT: CE304IU - Reinforced concrete 1
	CE313IU	Reinforced Concrete Project	Đồ án bê tông cốt thép	Bắt buộc	1	0	1	
	CE312IU	Steel Structure Project	Đồ án thép	Bắt buộc	1	0	1	HT: CE305IU - Steel Structures
	CE311IU	Construction Engineering	Kỹ thuật thi công	Bắt buộc	3	3	0	
	CE213IU	Computational Methods for Civil Engineering	Phương pháp tính trong xây dựng	Bắt buộc	3	3	0	HT: MA003IU - Calculus 2
	Tổng cộng				17	14	3	
HK Hè 3 (3 tín chỉ)	CE314IU	Internship	Thực tập tốt ngh nghiệp	Bắt buộc	3	0	3	HT: CE305IU – Steel Structures
	Tổng cộng				3	0	3	
HK VII (16 tín chỉ)	CE401IU	Construction Management	Quản lý xây dựng	Bắt buộc	3	3	0	HT: CE311IU - Construction Engineering
	CE402IU	Foundation Project	Đồ án nền móng	Bắt buộc	1	0	1	HT: CE309IU - Foundation Engineering

Học kỳ	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			Môn học (Tiên quyết/ Trước/ Song hành)
		Tiếng Anh	Tiếng Việt		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
	CE403IU	Construction Project	Đồ án kỹ thuật thi công	Bắt buộc	1	0	1	HT: CE311IU - Construction Engineering
	PE016IU	Political Economics of Marxism and Leninism	Kinh tế chính trị Mác-Lênin	Bắt buộc	2	2	0	SH: PE015IU – Philosophy of Marxism and Leninism SH: PE017IU – Scientific Socialism
		CE Elective	Môn chuyên ngành tự chọn	Tự chọn	3	3	0	
	CE211IU	Hydrology-Hydraulics	Thủy lực thủy văn	Bắt buộc	3	3	0	HT: CE205IU - Fluid Mechanics
	CE217IU	AI in Civil Engineering and Construction management	Trí tuệ nhân tạo trong Kỹ thuật và Quản lý Xây dựng	Bắt buộc	3	3	0	
	Tổng cộng				16	14	2	
HK VIII (17 tín chỉ)		CE Elective	Môn chuyên ngành tự chọn	Tự chọn	3	3	0	
		CE Elective	Môn chuyên ngành tự chọn	Tự chọn	3	3	0	

Học kỳ	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			Môn học (Tiên quyết/ Trước/ Song hành)
		Tiếng Anh	Tiếng Việt		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
	CE306IU	Water Supply and Sewerage	Cấp thoát nước	Bắt buộc	3	3	0	HT: CE211IU Hydrology - Hydraulics
		IU Elective	Môn tự chọn bổ trợ	Tự chọn	3	3	0	
		IU Elective	Môn tự chọn bổ trợ	Tự chọn	3	3	0	
	PE019IU	Ho Chi Minh's Thoughts	Tư tưởng Hồ Chí Minh	Bắt buộc	2	2	0	SH: PE018IU - History of Vietnamese Communist Party HT: PE015IU – Philosophy of Marxism and Leninism HT: PE016IU – Political Economics of Marxism and Leninism HT: PE017IU – Scientific Socialism
Tổng cộng					17	17	0	
	CE420IU	Graduation Thesis	Luận văn tốt nghệ	Bắt buộc	10	0	10	

Học kỳ	Mã MH	Tên môn học (MH)		Loại MH (bắt buộc/ tự chọn)	Tín chỉ			Môn học (Tiên quyết/ Trước/ Song hành)
		Tiếng Anh	Tiếng Việt		Tổng cộng	Lý thuyết	Thực hành/ Thí nghiệm	
HK IX (12 tín chỉ)	PE018IU	History of Vietnamese Communist Party	Lịch sử Đảng Cộng sản Việt Nam	Bắt buộc	2	2	0	SH: PE019IU - Ho Chi Minh's Thoughts HT: PE015IU – Philosophy of Marxism and Leninism HT: PE016IU – Political Economics of Marxism and Leninism HT: PE017IU – Scientific Socialism
Tổng cộng					12	2	10	
Tổng					158			

*Tổng số tín chỉ: 152 tín chỉ (không bao gồm giáo dục thể chất và tiếng Anh tăng cường)

11. Ma trận các môn học và chuẩn đầu ra (kỹ năng)

Mức độ đóng góp của các môn học vào chuẩn đầu ra của CTĐT ngành Kỹ thuật xây dựng được trình bày như Bảng 8.

Bảng 8. Đóng góp của các môn học vào CDR của CTĐT

Học kỳ	Mã môn học	Tên môn học ⁽⁴⁾ (Bằng tiếng Anh)	Chuẩn đầu ra CTĐT ⁽⁵⁾										
			PLO1	PL O2	PL O3	PL O4	PL O5	PL O6	PL O7	PL O8	PL O9	PL O10	PL O11
I	PE015IU	Philosophy of Marxism and Leninism								M	M		
	PH013IU	Physics 1	M						M	M			M
	PT001IU	Physical Training 1											
	MA001IU	Calculus 1	M						M				M
	EN007IU	Writing AE1					M		M				M
	EN008IU	Listening AE1							M				M
	PE021IU	General Law											
II	PE017IU	Scientific socialism						M		M			
	PT002IU	Physical Training 2											
	MA003IU	Calculus 2	M						M				M
	PE022IU	Engineering Ethics and Critical Thinking				M	M						
	EN011IU	Writing AE2					M		M				M
	EN012IU	Speaking AE2							M				M
	CE100IU	Introduction to Civil Engineering	M	M	M	M			M				
	CE101IU	Engineering Mechanics - Statics	M	M				M					

Học kỳ	Mã môn học	Tên môn học ⁽⁴⁾ (Bằng tiếng Anh)	Chuẩn đầu ra CTĐT ⁽⁵⁾										
			PL O 1	PL O 2	PL O 3	PL O 4	PL O 5	PL O 6	PL O 7	PL O 8	PL O 9	PL O 10	PL O 11
III	CE216IU	Probability and Statistics	M	M					M				M
	CE102IU	Introduction to Computing for Engineers	M	M								M	
	CE201IU	Mechanics of Materials 1	M	M		M		M					
	CE202IU	Mechanics of Materials Laboratory		H			H						
	CE215IU	Applied Linear Algebra	M						M				M
	PH014IU	Physics 2	M						M	M			M
	CH011IU	Chemistry for Engineer	M						M				M
	CH012IU	Chemistry Laboratory	M						M				M
IV	CE210IU	Construction Materials		M		L				L			L
	MA024IU	Differential Equations	M						M				M
	CE214IU	Civil Architecture	M	M	L		L		H	M		H	M
	CE209IU	Structural Analysis 1	M	M								M	M
	CE103IU	Computer-Aided Design and Drafting (CADD)		H					H				M
	CE104IU	Practice CADD				M						L	
	PH015IU	Physics 3	M						M	M			M

Học kỳ	Mã môn học	Tên môn học ⁽⁴⁾ (Bằng tiếng Anh)	Chuẩn đầu ra CTĐT ⁽⁵⁾										
			PL O 1	PL O2	PL O3	PL O4	PL O5	PL O6	PL O7	PL O8	PL O9	PL O10	PL O 11
	PH016IU	Physics 3 Laboratory	M						M			M	M
Hè 2	MP001IU	Military Training											
V	CE302IU	Soil Mechanics	M	M				M				H	
	CE303IU	Soil Mechanics Laboratory		H			H					H	H
	CE304IU	Reinforced concrete 1	L	M								M	M
	CE305IU	Steel Structures	M	M				M		M			
	CE208IU	Mechanics of Materials 2	M	M		M		M					
	CE213IU	Computational Methods for Civil Engineering	H	H		H			M			H	
	CE205IU	Fluid Mechanics	H	H			M						M
	CE206IU	Fluid Mechanics Laboratory		H				L	H				M
VI	CE307IU	Surveying		H			M					H	H
	CE308IU	Surveying Practice		H			M					H	H
	CE309IU	Foundation Engineering	M	M				M				H	
	CE310IU	Reinforced Concrete 2	L	M								M	M
	CE312IU	Steel Structure Project		M		M		M				M	
	CE313IU	Reinforced Concrete Project					L	L					

[illegible]

Học kỳ	Mã môn học	Tên môn học ⁽⁴⁾ (Bằng tiếng Anh)	Chuẩn đầu ra CTĐT ⁽⁵⁾										
			PL O 1	PL O 2	PL O 3	PL O 4	PL O 5	PL O 6	PL O 7	PL O 8	PL O 9	PL O 10	PL O 11
	CE306IU	Water Supply and Sewerage					M	M				H	H
	PE019IU	Ho Chi Minh's Thoughts						M		M	M		
IX	CE420IU	GRADUATION THESIS	H	H	H	L	L	L	H	M	H	H	L
	PE018IU	History of Vietnamese Communist Party								M	M		

12. Mô tả vắn tắt nội dung và khối lượng các môn học

12.1. Philosophy of Marxism and Leninism, Triết học Mác-Lênin

Mã môn học: PE015IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học trước: không. Môn học song hành: SH: PE016IU – Political Economics of Marxism and Leninism, PE017IU – Scientific Socialism.

Mô tả nội dung môn học: This course is part of the general education curriculum in the field of political theory, providing students with fundamental knowledge of Marxism and Leninism philosophy. It explores the most general laws of motion and development of nature, society, and human thought. The course consists of three chapters: Philosophy and its role in social life, Dialectical Materialism, and Historical Materialism.

12.2. Political Economics of Marxism and Leninism, Kinh tế chính trị Mác-Lênin

Mã môn học: PE016IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học song hành: PE015IU – Philosophy of Marxism and Leninism, PE017IU – Scientific Socialism.

Mô tả nội dung môn học: This course provides students with Karl Marx's analysis of the capitalist mode of production and highlights its developmental limitations. V.I. Lenin further developed Marx's political economy theory in the context of a new era—when monopoly capitalism prevailed. Based on the core content of Political Economics of Marxism and Leninism, students will explore the general economic model of Vietnam during the transitional period—the socialist-oriented market economy. In addition, the course also equips students with an understanding of the necessity of industrialization, modernization, and international economic integration in the context of the Fourth Industrial Revolution and the intensifying process of globalization.

12.3. Scientific Socialism, Chủ nghĩa xã hội khoa học

Mã môn học: PE017IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học song hành: PE015IU – Philosophy of Marxism and Leninism, PE016IU – Political Economics of Marxism and Leninism.

Mô tả nội dung môn học: This course is part of the general education curriculum within the foundational knowledge block of political theory. It equips students with fundamental knowledge of scientific socialism, including: its subject matter, research methods, and the significance of studying scientific socialism; the historical mission of the working class; socialism and the transitional period toward socialism; socialist democracy and the socialist state; the social–class structure and the alliance of classes and social strata during the transitional period; and issues related to ethnicity and religion in the transition to socialism. The course plays a direct role in fostering students’ political stance and ideology, while also providing in-depth knowledge to help them better understand socio-political issues.

12.4. History of Vietnamese Communist Party, Lịch sử Đảng cộng sản Việt Nam

Mã môn học: PE018IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học trước: PE015IU – Philosophy of Marxism and Leninism, PE016IU – Political Economics of Marxism and Leninism, PE017IU – Scientific Socialism. Môn học song hành: PE019IU - Ho Chi Minh’s Thoughts

Mô tả nội dung môn học: This course is part of the general education curriculum in the field of political theory. It provides students with fundamental and systematic knowledge of the history of the Communist Party of Vietnam, including the Party’s founding, its leadership in the struggle for power, national liberation, and the construction of socialism from 1930 to the present.

12.5. Ho Chi Minh’s Thoughts, Tư tưởng Hồ Chí Minh

Mã môn học: PE019IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học trước: PE015IU – Philosophy of Marxism and Leninism, PE016IU – Political Economics of Marxism and Leninism, PE017IU – Scientific Socialism. Môn học song hành: PE018IU - History of Vietnamese Communist Party

Mô tả nội dung môn học: This course is part of the general education curriculum within the foundational knowledge block of political theory. It provides students with fundamental knowledge about: the subject, research methods, and significance of studying Ho Chi Minh’s thought; the foundations, formation, and development of Ho Chi Minh’s thought; national independence and socialism; the Communist Party and the State of Vietnam; national unity and international solidarity; and culture, ethics, and human development.

12.6. Calculus 1, Toán 1

Mã môn học: MA001IU

Số tín chỉ: 4 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: Functions; Limits; Continuity; Derivatives, Differentiation, Derivatives of basic elementary functions, differentiation rules; Application of Differentiation: L'Hopital's rule, Optimization, Newton's method; Anti-derivatives; Indefinite integrals, definite integrals; Fundamental theorem of calculus; Technique of integration; Improper integrals; Applications of integration.

12.7. Calculus 2, Toán 2

Mã môn học: MA003IU

Số tín chỉ: 4 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: MA001IU - Calculus 1

Mô tả nội dung môn học: Sequence and series; Convergence tests; Power series; Taylor & Maclaurin series; Cartesian Coordinates; Lines, Planes and Surfaces; Derivatives and integrals of vector functions; Arc length and curvature; parametric surfaces; Functions of several variables; Limits, continuity, partial derivatives, tangent planes; Gradient vectors; Extrema; Lagrange multipliers; Multiple integrals: double integrals, triple integrals, techniques of integration; Vector fields, line integrals, surface integrals.

12.8. Differential Equations, Phương trình vi phân

Mã môn học: MA024IU

Số tín chỉ: 4 tín chỉ (3 lý thuyết + 1 thực hành)

Điều kiện: Môn học tiên quyết: không. Môn học trước: HT: MA003IU - Calculus 2.

Mô tả nội dung môn học: First-order differential equations; second-order linear differential equations, undetermined coefficients, variation of parameters, applications, higher-order linear differential equations, systems of first-order linear equations, elementary partial differential equations and the method of separation of variables. This course also provides the laboratory by using Maple and Matlab to solve many different types of differential equations.

12.9. Applied Linear Algebra, Đại số tuyến tính

Mã môn học: CE215IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: The course will focus on matrix and vector methods for studying systems of linear equations, with an emphasis on concrete calculations and applications. Specific topics to be covered include matrices, Gaussian elimination, vector spaces, LU decomposition, orthogonality, the Gram–Schmidt process, determinants, inner products, eigenvalue problems, and applications to differential equations and Markov processes.

12.10. Probability and Statistics, Xác suất thống kê

Mã môn học: CE216IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: Không

Mô tả nội dung môn học: Probability problems in engineering, conditional probability, discrete and continuous distributions, sampling distribution, interval estimates, hypothesis testing, analysis of variance, regression models and non-parametric testing.

12.11. Physics 1, Vật lý 1

Mã môn học: PH013IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: An introduction to mechanics including planar forces, free body diagrams, planar equilibrium of rigid bodies, friction, distributed forces, internal forces, shear force and bending moment diagrams, simple stress and strain and associated material properties, kinematics and kinetic of particles, work, and energy, the motion of rigid bodies in a plane.

12.12. Physics 2, Vật lý 2

Mã môn học: PH014IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course provides students with basic knowledge about fluid mechanics, macroscopic description of gases; heat and the first law of thermodynamics; heat engines and the second law of thermodynamics; microscopic description of gases and the kinetic theory of gases.

12.13. Physics 3, Vật lý 3

Mã môn học: PH015IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: PH013IU - Physics 1. Môn học song hành: PH016IU - Physics 3 Laboratory

Mô tả nội dung môn học: This subject will provide a basic knowledge of electricity and magnetism.

12.14. Physics 3 Laboratory, Thí nghiệm vật lý 3

Mã môn học: PH016IU

Số tín chỉ: 1 thực hành

Điều kiện: Môn học tiên quyết: không. Môn song hành: PH015IU - Physics 3

Mô tả nội dung môn học: This laboratory includes the topics on vectors and uncertainties, electrostatic; Ohm's law; magnetic force; ampere law; faraday law, and RLC circuits.

12.15. Chemistry for Engineer, Hóa học cho kỹ sư

Mã môn học: CH011IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học song hành: CH012IU - Chemistry Laboratory

Mô tả nội dung môn học: This course is designed for non-chemistry majors, as it is intended for students pursuing a degree in information technology, electronic and telecommunication. The course is designed to provide a strong background in the fundamentals of chemistry, preparing students for further study in their major field. Topics include important principles, theories, concepts of chemistry, and chemical calculations necessary for a comprehension of the structure of matter, and the chemical actions of the common elements and compounds. The impact of chemistry on everyday life and on the environment is also introduced wherever possible.

12.16. Chemistry Laboratory, Thực hành hóa học

Mã môn học: CH012IU

Số tín chỉ: 1 thực hành

Điều kiện: Môn học tiên quyết: không. Môn học trước: CH011IU - Chemistry for Engineer

Mô tả nội dung môn học: This one-semester course is designed for engineering students those who are pursuing a nonchemistry engineering degree such as information technology, bio-technology, civil, biomedical, electronic and telecommunication engineering. The course will introduce students to basic laboratory safety, techniques and apparatus, and complement the information gained in lecture. Prior to each lab, students must read the lab manual about the experiment and complete a prelaboratory report. All students must complete mandatory safety training to participate in the course, which will be provided at the first day of the class. Students are expected to come to each lab on time and be prepared to carry out the day's tasks.

12.17. General Law, Pháp luật đại cương

Mã môn học: PE021IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course provides students with general knowledge, basic concepts, principles, and key branches of law that form the foundation of the Vietnamese legal system. Throughout the course, students will also become familiar with legal language, engage in critical thinking, and develop legal reasoning and problem-solving skills to enhance their abilities and apply them to real-life situations.

12.18. Engineering Ethics and Critical Thinking, Đạo đức nghề nghiệp và tư duy phản biện

Mã môn học: PE022IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course is designed to introduce engineering students to the concepts, theory and practice of engineering ethics. It will allow students to explore the relationship between ethics and engineering, and apply classical moral theory and decision making for engineering issues encountered in academic and professional careers. Further,

this course also provides the nature and techniques of thought as a basis for our claims, beliefs, and attitudes about the world. Specifically, the course includes the theory and practice of presenting arguments in oral and written forms, making deductive and inductive arguments, evaluating the validity or strength of arguments, detecting fallacies in arguments, and refuting fallacious arguments.

12.19. Introduction to Civil Engineering, Khái niệm ngành Kỹ thuật Xây dựng

Mã môn học: CE100IU

Số tín chỉ: 1 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: The course provides an outline of the long history, present status and future challenges of civil engineering. Ethics and professional responsibility and a description of different fields of civil engineering are presented. The course provides an overview of different works, and relationships between different disciplines of civil engineering such as construction materials, structural engineering, water resources engineering, geotechnical engineering, surveying, transportation, environmental and urban engineering, and construction technology.... An overview of the design process of a project such as buildings, bridges, dams, roads is provided. The national strategy and great plans for developing the infrastructure system and urban development of Vietnam are presented with related important decisions of the Government.

12.20. Writing AE1, Tiếng Anh chuyên ngành 1 (kỹ năng viết)

Mã môn học: EN007IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Sinh viên phải đạt TOEFL pBT 500 hoặc TOEFL iBT 60 hoặc hoàn thành khóa học IE2

Mô tả nội dung môn học: Writing skills are developed for pre-advanced academic writers. It focuses on composition writing using Writing process, Building Framework, Description, Opinion, Process, Comparison-Contrast, Cause-Effect, Problem-Solution, and Argument. Students will have writing practice in "Real-World Writing" formats.

12.21. Listening AE1, Tiếng Anh chuyên ngành 1 (kỹ năng nghe)

Mã môn học: EN008IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Sinh viên phải đạt TOEFL pBT 500 hoặc TOEFL iBT 60 hoặc hoàn thành khóa học IE2

Mô tả nội dung môn học: Strategies for Academic Listening, Note-taking, and Discussion will help the student face the challenges of learning English in an Academic environment. The student will learn to do all the things that successful international college students do – listen actively to lectures, take effective notes, and participate confidently in discussions about the lecture with classmates and the lecturer. While learning these strategies, you will also learn and use common academic vocabulary as well as useful idioms.

12.22. Writing AE2, Tiếng Anh chuyên ngành 2 (kỹ năng viết)

Mã môn học: EN011IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: EN007IU - Writing AE1

Mô tả nội dung môn học: Writing subject provides an overview of the organizational format for a research paper and assists students in completing research projects in any content area course by providing assistance in writing effective research papers using a step-by-step process approach. Course content includes the components of a research paper, and techniques of selecting and narrowing topics; writing thesis statements; outlining; locating and documenting sources; taking notes; writing introductions, body paragraphs, and conclusions; and writing rough and final drafts. Students work with projects relating to their content area courses.

12.23. Speaking AE2, Tiếng Anh chuyên ngành 2 (kỹ năng nói)

Mã môn học: EN012IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: EN008IU - Listening AE1

Mô tả nội dung môn học: Speaking subject provides students with the skills to be able prepare and deliver effective formal, structured presentations that are appropriate to the specific environment and audience.

12.24. Physical Training 1, Giáo dục thể chất 1

Mã môn học: PT001IU

Số tín chỉ: 3 thực hành

Mô tả nội dung môn học: Chess: After completing the course, students will gain an overview of issues related to physical education and sports in schools, the history of the development of chess, as well as the purpose, significance, benefits, and requirements involved in the training process. Students will also master some basic chess techniques.

Table Tennis: After completing the course, students will be able to proficiently perform some basic skills such as holding the racket correctly, footwork, ready stance, serving techniques, and basic forehand and backhand strokes.

12.25. Physical Training 2, Giáo dục thể chất 2

Mã môn học: PT002IU

Số tín chỉ: 3 thực hành

Mô tả nội dung môn học: Chess: After completing the course, students will master a number of basic and advanced chess techniques.

Table Tennis: After completing the course, students will proficiently perform a range of basic and advanced skills such as basic forehand and backhand backspin serves, push techniques, basic forehand and backhand chops, and practice matches.

12.26. Introduction to Computing for Engineers, Tin học cho kỹ sư

Mã môn học: CE102IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course is an introduction to solving engineering problems through the use of the computer. It introduces general problem-solving techniques including the concepts of step-wise refinement applied to the development of algorithms. This course will cover elementary programming concepts using the programming language MATLAB accompanied with VBA in Excel and apply those concepts to the solution of engineering problems.

12.27. Computational Methods for Civil Engineering, Phương pháp tính trong xây dựng

Mã môn học: CE213IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: MA003IU - Calculus 2

Mô tả nội dung môn học: Application of computational methods to civil engineering problems. Overview of numerical methods including engineering differential equations, systems of linear and nonlinear equations, numerical differentiation, integration and interpolation. Solving differential equations by finite element method. Introduce optimization problems in civil engineering, and optimization solvers, machine learning concept and algorithms.

12.28. Engineering Mechanics -Statics, Cơ lý thuyết – Tĩnh học

Mã môn học: CE101IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: Forces, moments, and couples; resultants of force systems; equilibrium analysis and free-body diagrams; analysis of forces acting on members of trusses, frames, etc.; Coulomb friction; centroids, center of mass, resultant of a distributed force system, moment of inertia, parallel-axis theorem, rotated-axis theorem, internal force diagrams of beams.

12.29. Artificial Intelligence in Civil Engineering and Construction Management, Trí tuệ nhân tạo trong kỹ thuật và quản lý xây dựng

Mã môn học: CE217IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course introduces how we apply artificial intelligence in civil engineering (CE) and construction management (CM). Several typical problems of applied artificial intelligence in CE and CM are introduced, such as regression/classification/segmentation/abnormality detection in experimental data, monitoring data, etc. The course introduces machine learning methods frequently utilized in CE and CM, including k-nearest neighbor, neural network, decision tree, and random forest, and explains their concepts so that students can know how to formulate a problem-solving.

12.30. Computer-Aided Design and Drafting, Vẽ và thiết kế với sự hỗ trợ của máy tính

Mã môn học: CE103IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không. Môn học song hành: CE104IU - Computer-Aided Design and Drafting Practice

Mô tả nội dung môn học: This course introduces to the students a comprehensive overview of construction drawings basic. The course explains the use of lines, dimensions, specifications, symbols and standards, terminology and manufacturing process notes contained on a CAD drawing. The course also offers and expands into broader topic such as different construction drawing types and how blueprints and construction drawings are used to implement the construction process.

12.31. Computer-Aided Design and Drafting Practice, Thực hành CADD

Mã môn học: CE104IU

Số tín chỉ: 1 thực hành

Điều kiện: Môn học tiên quyết: không. Môn học trước: không. Môn học song hành: SH: CE103IU - Computer-Aided Design and Drafting

Mô tả nội dung môn học: The course provides to students the common skills to draw objects in 2D plane from Auto CAD software

12.32. Mechanics of Materials 1, Sức bền vật liệu 1

Mã môn học: CE201IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE101IU - Engineering Mechanics - Statics

Mô tả nội dung môn học: This course is an introduction to the relationship between loads applied to a deformable body and the internal stress, strains and deformation. This course obtain knowledge of internal loading, axial force, shear, moment, and torque in structural members; stress, strain, and stress-strain relations; mechanical properties of material; strain energy; torsion of circular shafts; bending of singly symmetric beams.

12.33. Mechanics of Materials 2, Sức bền vật liệu 2

Mã môn học: CE208IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE201IU - Mechanics of Materials 1

Mô tả nội dung môn học: Combined loadings; stress and strains transformations, principal stresses and strains, stress, strain and stress-strain relationship; buckling of columns; design of beams and energy methods.

12.34. Mechanics of Materials Lab, Thí nghiệm sức bền vật liệu 1

Mã môn học: CE202IU

Số tín chỉ: 1 thực hành

Điều kiện: Môn học song hành: CE201IU - Mechanics of Materials 1. Môn học trước: CE101IU - Engineering Mechanics - Statics

Mô tả nội dung môn học: This course allows students to practice the basic mechanics of materials concepts discussed in the theory course - CE201IU Mechanics of Materials. It will also familiarize students with the different materials testing instruments. Basic mechanics of materials concepts: members subjected to tension, buckling, bending, torsion, indeterminate structures and stress-and-strain behaviors of materials.

12.35. Fluid Mechanics, Cơ học chất lỏng

Mã môn học: CE205IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học song hành: CE206IU – Fluid Mechanics Laboratory. Môn học trước: không

Mô tả nội dung môn học: Fluid mechanics is one of a principle subjects for civil engineers. Generally, fluid mechanics is the study of the mechanisms in which fluids, under all possible conditions (such as: gases and liquids) respond to forces, exert forces, and move from one place to another in physical view. This course will provide fundamental knowledge on physical properties of fluids and its characteristics as well. Moreover, students learn the laws and the governing equations representing different kinds of fluids at both static and motion state interacting to structures; and know how to solve these equations or compute physical parameters in practical meaning. In addition, the practices to measure fluid properties are introduced in this course. Therefore, fluid mechanics is involved in nearly all areas of civil Engineering either directly or indirectly. Some examples of direct involvement are those where we are concerned with manipulating the fluid, including: sea and river (flood) defenses, water distribution/sewerage (sanitation) networks, dams, irrigation, pumps and turbines, water retaining structures, and so on; and some examples where the primary object is construction - yet analysis of the fluid mechanics is essential, such as: flow of air in / around buildings; bridge piers in rivers; Ground-water flow, and so forth.

12.36. Fluid Mechanics Lab, Thực hành Cơ học chất lỏng

Mã môn học: CE206IU

Số tín chỉ: 1 thực hành

Điều kiện: Môn học song hành: CE205IU – Fluid Mechanics. Môn học trước: không

Mô tả nội dung môn học: This course is primarily used as an undergraduate teaching lab. The experimental exercises will be provided to students for demonstrating the theoretical class lectures. These experiments are designed to examine some properties of fluids and to conduct experiments involving principle phenomena of incompressible (water) flow, such as: flow over the weir, head losses of flow in pipe...

12.37. Hydrology- Hydraulics, Thủy lực thủy văn

Mã môn học: CE211IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE205IU - Fluid Mechanics

Mô tả nội dung môn học: This course provides students basic knowledge on hydrology and hydraulics, the fundamentals of water engineering, an important field in civil engineering. In the hydrology part of this course, the students will have a deeper understanding of the physical processes of the hydrological cycle, including an understanding of how human intervention through changes made in the environment can affect the hydrological characteristics of a catchment. The students will also learn a computer software to model the hydrology of a catchment. In the hydraulics part, the students will apply the basic principles learned from their basic fluid mechanics course in the analysis and design of open channels and other hydraulic structures. This course helps students understand basic engineering principles and enhance their analytic and problem-solving skills to address real life engineering problems. It has practical applications in the fields of water supply, hydropower, flood mitigation, and other related fields.

12.38. Water Supply and Sewerage, Cấp thoát nước

Mã môn học: CE306IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE211IU Hydrology - Hydraulics

Mô tả nội dung môn học: The rapid rise in population and industrialization place an enormous challenge on the environment and the resources. This has resulted to an increase in demand for water supply and sewerage services. In this course the students will learn the basic structure of a community water supply as well as that of sewerage systems. They will learn and practice the computations and decision-making involved in the planning and design of these systems. Furthermore, they will be taught some computer softwares to model a simple water distribution system and a stormwater sewer system. This course helps students understand basic engineering principles and enhance their analytic and problem-solving skills to address real life engineering problems.

12.39. Construction Materials, Vật liệu xây dựng

Mã môn học: CE210IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE201IU - Mechanics of Materials
1

Mô tả nội dung môn học: The course will introduce both conventional and modern construction materials that are commonly used in civil engineering construction. These are concrete, steel, asphalt concrete and other construction materials such as concrete, cement, brick, mortar, steel, asphalt and so on. Properties of materials will be taught and discussed. Students will find out what properties are the advantages and disadvantages of materials. Therefore, material applications and detailing in structural and non-structural building components are explored. Construction materials should be harmonized to the environmental sustainability, resource durability, capitalizing on using local materials and less fee to strengthen and retrofit, using local materials also satisfy culture, economic and social justice. Resulting from this course, students will gain a comparative knowledge of material properties and possible applications in construction.

12.40. Civil Architecture, Kiến trúc dân dụng**Mã môn học:** CE214IU**Số tín chỉ:** 2 lý thuyết**Điều kiện:** Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: The course provides students with a concise source of core information needed to form a framework for a detailed planning of any building project. The information includes the principles of the design process, basic information on siting, servicing and construction buildings, as well as illustrations and descriptions of a wide range of building types. Students work in teams, exploring hands-on activities to learn the characteristics of civil architecture

12.41. Surveying, Trắc địa**Mã môn học:** CE307IU**Số tín chỉ:** 2 lý thuyết**Điều kiện:** Môn học song hành: CE308IU – Surveying Practice. Môn học trước: không

Mô tả nội dung môn học: This course covers the basics of surveying. It includes the principles of measurements of distances, elevations, and angles. The students will become familiar with all surveying instruments as well as learn about the different types of surveying including how they are carried out, the data to collect, and how to analyze, interpret, and process the data. It also includes basic error theory in measurement and calculations, and basic principles of map making.

12.42. Surveying Practice, Thực tập trắc địa**Mã môn học:** CE308IU**Số tín chỉ:** 1 thực hành**Điều kiện:** Môn học song hành: CE307IU – Surveying. Môn học trước: không

Mô tả nội dung môn học: This course allows students to practice the surveying operations discussed in the theory course – CE 307IU Surveying. It will familiarize students with the different surveying instruments; allow them to practice different surveying operations like taping, stadia survey, levelling, and control survey in a closed-loop traverse; as well as make adjustments and calculations of coordinates of control stations, perform detail surveying and mapping of points.

12.43. Soil Mechanics, Cơ học đất**Mã môn học:** CE302IU**Số tín chỉ:** 3 lý thuyết**Điều kiện:** Môn học song hành: CE303IU – Soil Mechanics Laboratory. Môn học trước: CE201IU – Mechanics of Materials 1

Mô tả nội dung môn học: The course provides students with a background of soil behaviors, Lateral earth pressure acting on structures, slope stability, bearing capacity of the soil, and settlement of structures above soil mechanics, which are commonly used in civil engineering construction. Properties of soil include soil formation, physical

properties, classification, compaction, permeability, and seepage. Soil mechanics consist of in situ stress, stress in a soil mass, soil compressibility, and soil shear strength. Lateral earth pressures are expressed by pressure at rest based on Rankine and Coulomb, and curved failure surface

12.44. Soil Mechanics Laboratory, Thực hành Cơ học đất

Mã môn học: CE303IU

Số tín chỉ: 1 thực hành

Điều kiện: Môn học song hành: CE302IU - Soil Mechanics. Môn học trước: CE201IU - Mechanics of Materials 1

Mô tả nội dung môn học: The course provides students the knowledge and practical skills in conducting laboratory tests for determining soil properties needed in engineering design such as: the determination of water content and unit weight, particle size distribution, Atterberg limits, compaction test, and direct shear test. The course also provides knowledge on the different testing equipment, general procedures related to each test, and parameters measured in each test.

12.45. Foundation Engineering, Nền móng

Mã môn học: CE309IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE302IU - Soil Mechanics

Mô tả nội dung môn học: This course covers foundation analysis and design concepts for civil engineering students. Topics discussed in the courses include bearing capacity, settlement and structural design of shallow foundations and deep foundations, lateral earth pressure, retaining, and sheet pile walls. Moreover, the students will be introduced to the commercial software (e.g., Plaxis, Pier) that is broadly used in practices for foundation designs and exposed to case studies. Through this course, the students will have the background and basic skills to conduct the basic steps for foundation design, given various working conditions.

12.46. Structural Analysis 1, Cơ học Kết cấu 1

Mã môn học: CE209IU

Số tín chỉ: 2 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE201IU - Mechanics of Materials 1

Mô tả nội dung môn học: This course is an introduction to basic structural engineering concepts. Determine the magnitude of different types of loads in accordance with the related codes. Idealization of structures and loads in relation to real structures. Determine the internal forces and draw diagrams for frames. Understand numerical methods for computing displacements and slopes for beams and frames using integration, virtual work methods, and graph multiplication method. Understand force and displacement methods to solve indeterminate beams, frames, and trusses.

12.47. Structural Analysis 2, Cơ học Kết cấu 2**Mã môn học:** CE301IU**Số tín chỉ:** 3 lý thuyết**Điều kiện:** Môn học tiên quyết: không. Môn học trước: CE209IU - Structural Analysis 1**Mô tả nội dung môn học:** This course introduces computational analysis of structures and the practice of using programs to solve structural problems. Background in finite element analysis is developed. Plastic analysis of frames and slabs is introduced.**12.48. Reinforced concrete 1, Bê tông cốt thép 1****Mã môn học:** CE304IU**Số tín chỉ:** 3 lý thuyết**Điều kiện:** Môn học tiên quyết: không. Môn học trước: CE209IU - Structural Analysis 1**Mô tả nội dung môn học:** Basic design concepts: basic layout of concrete structures, loading; Basic material properties: concrete and reinforcing steel; Analysis of structures: limit state design, simplification of framed structures, moment redistribution; Analysis and design of flexural members; Shear; Bond and anchorage; Serviceability; One-way and two-way slabs; Compression members; Foundation: footings. Current building code and standards are referred to extensively in this course. General concepts of oriented-programming toward designing Rc structures**12.49. Reinforced Concrete 2, Bê tông cốt thép 2****Mã môn học:** CE310IU**Số tín chỉ:** 3 lý thuyết**Điều kiện:** Môn học tiên quyết: không. Môn học trước: CE304IU - Reinforced concrete 1**Mô tả nội dung môn học:** Analysis and design of prestressed concrete members; beam; slabs. Analysis and design of composite slabs. Current building code and standards are referred to extensively in this course.**12.50. Steel Structures, Kết cấu thép****Mã môn học:** CE305IU**Số tín chỉ:** 3 lý thuyết**Điều kiện:** Môn học tiên quyết: không. Môn học trước: CE209IU - Structural Analysis 1**Mô tả nội dung môn học:** Introduction to students the basic principles of reading steel structural plans, elevations and sectional views, distribute loadings on structures based on architecture plans, determine factored loads for design, design structural steel beams and columns, and design bolted and welded connections.**12.51. Construction Engineering, Kỹ thuật thi công****Mã môn học:** CE311IU**Số tín chỉ:** 3 lý thuyết**Điều kiện:** Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course is designed to provide students knowledge about construction engineering, including earthwork, foundation construction, wood construction, concrete construction, masonry construction, and steel construction.

12.52. Construction Management, Quản lý xây dựng

Mã môn học: CE401IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE311IU - Construction Engineering

Mô tả nội dung môn học: This course covers a wide range of subjects, reflecting the breadth of knowledge needed to understand the dynamics of the construction industry. This course focuses on the processes and tasks required for the management of construction projects. Students will work in project teams and perform various tasks associated with construction project administration including, developing construction budgets, record keeping and documentation, interpreting contracts and specifications, and other duties necessary for efficient project operation and successful completion.

12.53. Steel Structure Project, Đồ án thép

Mã môn học: CE312IU

Số tín chỉ: 1 thực hành

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE305IU - Steel Structures

Mô tả nội dung môn học: A practice construction project is carried out, including steel buildings, and water supply or transportation structures. Students are supposed to apply the knowledge in the steel structure course to this project composing of calculating loads, determining internal forces with an analysis structure software, designing with a certain code, and ultimately describing them on a report.

12.54. Reinforced Concrete Project, Đồ án bê tông cốt thép

Mã môn học: CE313IU

Số tín chỉ: 1 thực hành

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: In this course, students are supposed to apply the knowledge in the courses of reinforced concrete design to this project composing of calculating loads, designing reinforced concrete beams, columns and slabs, preparing drawing and writing a report.

12.55. Foundation Project, Đồ án nền móng

Mã môn học: CE402IU

Số tín chỉ: 1 thực hành

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE309IU- Foundation Engineering

Mô tả nội dung môn học: This course provides an organizational and procedural understanding of geotechnical and foundation engineering. Topics covered in this course include subsurface soil investigation and integrated design of building foundations. In

addition, this class will equip students with the knowledge necessary to apply geotechnical and foundation principles in analyzing and designing an economic substructure system.

12.56. Construction Project, Đồ án kỹ thuật thi công

Mã môn học: CE403IU

Số tín chỉ: 1 thực hành

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE311IU - Construction Engineering

Mô tả nội dung môn học: In this course, students are supposed to apply the knowledge in the courses of construction engineering and construction management to this project composing of calculating loads for construction, designing formwork for column, slab and beam, safety measure, preparing the schedule of concrete frame construction (optional), and finally writing a report.

12.57. Dynamics of Structures, Động lực học công trình

Mã môn học: CE404IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE301IU - Structural Analysis 2

Mô tả nội dung môn học: This course covers the fundamental concepts of structural dynamics. Formulations of the equation of motion. Free and forced vibrations of linear, single, and multiple degrees of freedom systems. Damping. Mode superposition. Analysis of dynamic response for structures subjected to time-varying, including earthquake, wind, and blast loading.

12.58. Hydraulics Structures, Công trình thủy

Mã môn học: CE405IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE211IU - Hydrology - Hydraulics

Mô tả nội dung môn học: Water demand for economic development is dramatically increasing; but available water resources is limited. Recently, it tends to be declining as the result of climate change and man-made pollutant. Therefore, a sustainable approach for water resources development and protection is needed. This course will offer students the knowledge to design of some typical hydraulic structures supporting for sustainable water resources engineering. In this course, the application of fluid mechanics, hydrology and open channel hydraulics for designing some common types of water infrastructures are introduced and practiced, which includes storage structures, control structures, energy dissipation structures, coastal protection structures and so forth. Beside of those conventional procedures, students also are provided the sustainable solutions and environmental impact assessment (EIA) practices for the typical structures, which strongly impact on society and natural environment, such as: dam, hydro-power plants, urban drainage systems, and so forth

12.59. Tall Buildings, Thiết kế nhà cao tầng

Mã môn học: CE407IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: The course aims at the development of ability for design of high-rise buildings. It offers the student with an opportunity to gain real life design experience, and to develop the ability to identify and solve civil engineering problems in a feasible and creative way, and to apply design procedures, codes of practice and computer software to design conventional steel and concrete high-rise buildings.

12.60. Bridge Engineering, Thiết kế cầu

Mã môn học: CE406IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE310IU - Reinforced Concrete 2

Mô tả nội dung môn học: The course will introduce a modern method of highway bridge analysis, design, and evaluation based on TCVN 11823:2017 that is referred by on American Association of State Highway and Transportation Officials LRFD Bridge Design Specification, 8th edition 2017. Course topics will include types of bridges, site design overview, Highway bridge loading, bridge analysis, bridge deck slab, prestressed concrete bridge design, and substructures design.

12.61. Building Information Management, Hệ thống thông tin xây dựng

Mã môn học: CM310IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: The aim of the course is to provide students with the insight of Building Information Modeling and its development. The applications of BIM in different partnerships of construction industry are also provided

12.62. Advanced Artificial Intelligence in Civil Engineering and Construction Management, Trí tuệ nhân tạo nâng cao trong kỹ thuật và quản lý xây dựng

Mã môn học: CE412IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE217IU - Artificial Intelligence In Civil Engineering And Construction Management

Mô tả nội dung môn học: The objective of this course is to provide the students with the advanced information of machine learning (ML) and analysis tools with their applications in civil engineering (CE) and construction management (CM). The course will emphasize on 1) traditional supervised algorithms such as support vector machines, 2) ensemble machine learning algorithms including bagging and boosting, 3) deep learning algorithms such as convolution neural networks, 4) fundamentals of tools used to handle large-scale data, and 5) tools used to handle ML algorithms. Fundamentals of these algorithms and tools and their applications in different problems related to CE and CM will be covered along with a course project.

12.63. GIS Applications in Civil Engineering, Hệ thống thông tin địa lý**Mã môn học:** CE413IU**Số tín chỉ:** 3 lý thuyết**Điều kiện:** Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course does not require prior knowledge of GIS. The first part of the course will include introductory concepts and will cover basic topics in GIS including data types and common GIS processing and analysis tools, thematic mapping, etc. In the second part of the course, GIS procedures and techniques that are relevant to Civil Engineering will be covered through a series of case studies and exercises.

12.64. Construction Project Management, Quản lý dự án xây dựng**Mã môn học:** CE414IU**Số tín chỉ:** 3 lý thuyết**Điều kiện:** Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: In this course, students will study roles, responsibilities, and authority of project participants. They also study how to manage project participants, material, safety, waste, and environment. The jobsite layout design and control are also a part of the course.

12.65. Construction Measurement and Cost Estimating, Đo bóc khối lượng và ước tính chi phí xây dựng**Mã môn học:** CM202IU**Số tín chỉ:** 3 lý thuyết

Điều kiện: Môn học trước: CE210IU – Construction Material, CM205 – Introduction to Construction Management. Môn học song hành: CE304IU – Reinforced concrete 1

Mô tả nội dung môn học: In this course, students will study quantity measurement and cost estimation. The measured quantity is used to estimate construction cost and develop procurement and contract documents.

12.66. Construction Procurement and Tendering, Đấu thầu và mua sắm**Mã môn học:** CM302IU**Số tín chỉ:** 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CM202IU – Construction Measurement and Cost Estimating

Mô tả nội dung môn học: This course is designed to provide students knowledge about procurement methods in construction projects. The advantages and disadvantages, procedures, and application of different procurement methods are introduced. The preparation and invitation of tenders are also mentioned in this course.

12.67. Contract Management – FIDIC contracts, Quản lý Hợp đồng – Hợp đồng Fidic**Mã môn học:** CM404IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: CM302 - Construction Procurement and Tendering

Mô tả nội dung môn học: In this course, students will study knowledge of construction contract management and the FIDIC contracts.

12.68. Sustainable Construction, Xây dựng bền vững

Mã môn học: CE415IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course provides students with knowledge of green building, including green building fundamentals, green building assessment, green building design, and green building implementation.

12.69. Principles of Marketing, Nguyên lý Marketing

Mã môn học: BA003IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: The course named “Principles of Marketing” provides the students with necessary information on the basic concepts of marketing and its principles. It focuses on the understanding of Market Demand and Customers Behaviors as well as Marketing strategies developed by firms in terms of Pricing, Product, Place, Promotion, etc. The course also mentions various methods to market research and environmental factors that affects the marketing activities.

12.70. Business Communication, Giao tiếp trong kinh doanh

Mã môn học: BA006IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course is designed to provide students with a strong foundation in communicating at the workplace, focusing on: (1) communicating in the digital-age workplace, (2) developing business writing skills, (3) embracing professionalism at work, (2) developing business presentation skills, (4) preparing for successful job search, resumes, cover letters, and job interviews.

12.71. Business Ethics, Đạo đức kinh doanh

Mã môn học: BA020IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course introduces students to the relevance and importance of ethics and social responsibility in business. It aims to increase student's awareness and

understanding of ethical issues in business and to provide them with useful conceptual tools to guide analysis and decisions. After the completion of the course, students are expected to identify, think critically, and suggest solutions to ethical issues encountered at the individual, organizational, and societal levels.

12.72. Introduction to Business Administration, Dẫn nhập quản trị kinh doanh

Mã môn học: BA115IU

Số tín chỉ: 3 lý thuyết

Mô tả nội dung môn học: Employing the interactive learning and problem-based teaching approach, this course emphasises the interaction between lecturers and students. The lecture materials will be uploaded in Blackboard to help the students to preview the materials and to concentrate on listening and critical thinking during the lecture. This will help students to interact with the lecturer during the classroom. The sessions for presentations and discussions comprise company case studies as well as answering some theoretical and conceptual questions, which help the students to see how the concepts are applied in the real business context. Students will present the case to the class and discuss with the peers. Guest speakers are invited to talk about selected topics or real life experiences.

12.73. Introduction to Social Science, Dẫn nhập khoa học xã hội

Mã môn học: BA116IU

Số tín chỉ: 3 lý thuyết

Mô tả nội dung môn học: Introduction to the Social Sciences is designed to introduce the student to the broad and exciting field of the social sciences which embraces a diverse mixture of disciplines of anthropology, sociology, psychology, economics, history, geography, and political science, ect. The course will focus on the field of sociology and its key themes as they relate to the study of management and business as well as modern society. This facilitates the development of awareness of the language and methodology associated with the study of the social sciences. This course will utilize an interdisciplinary approach to study and understand human behavior and various contemporary social issues.

12.74. Introduction to Microeconomics, Dẫn nhập kinh tế vi mô

Mã môn học: BA117IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: Microeconomics is the introductory course in economics. The course is designed to teach you the basic tools of microeconomic analysis. Microeconomics is the branch of economics that deals with the interaction of households and firms in individual markets. Some of the issues we will study include how prices and output levels are determined, what happens when governments intervene in markets, when do markets “fail”, how do markets produce an “efficient” use of a society’s scarce resources and are market outcomes equitable. Learning “to think like an economist” should make you a more informed student, consumer, worker and voter.

12.75. Introduction to Psychology, Nhập môn tâm lý học**Mã môn học:** BA118IU**Số tín chỉ:** 3 lý thuyết**Điều kiện:** Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: Introduction to Psychology focuses on the application of scientific psychology to human life. Emphasis is on "normal" behavior and its antecedents. Includes the study of broad categories of human behavior through various psychological models, Psychology is an introductory course that studies the foundations of human behaviors, thoughts, and emotions. The course will approach various topics from a scientific perspective, using systematic investigation and critical thinking methods rather than personal impressions and "common sense". The knowledge of Psychology is very useful for students who need to learn people as producers and consumers.

12.76. Introduction to Macroeconomics, Dẫn nhập kinh tế vĩ mô**Mã môn học:** BA119IU**Số tín chỉ:** 3 lý thuyết**Điều kiện:** Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This subject will provide the fundamental macroeconomic theories and concepts of economic as they apply within the contemporary work environment.

12.77. Business Computing Skills, Kỹ năng vi tính kinh doanh**Mã môn học:** BA120IU**Số tín chỉ:** 3 lý thuyết**Điều kiện:** Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course is designed to combine knowledge of business and information technologies. It explores the breadth of Information and Communications Technology (ICT), including business hardware and software, professional computing ethics and behaviors as well as design information systems. Also, students will be knowledgeable about computing terminology, the fundamentals of database management, presentation graphics and an introduction to data analysis. The course will prepare students to work in a variety of industries, involving business administration, economics, finance, and accounting.

12.78. Principles of Management, Quản trị học**Mã môn học:** BA123IU**Số tín chỉ:** 3 lý thuyết**Điều kiện:** Môn học tiên quyết: không. Môn học trước: BA130IU - Organizational Behavior

Mô tả nội dung môn học: This subject will provide the fundamental theories and concepts of management as they apply within the contemporary work environment.

12.79. Organizational Behavior, Hành vi tổ chức

Mã môn học: BA130IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: The course is organized around three determinants of behavior in organizations: 1) individuals, 2) groups/teams, and 3) organizational structure. Particular emphasis will be placed on individual difference, attitude, motivation, job satisfaction, communication, leadership, stress, change, and organizational culture. Vigorous class discussions, presentations, cases, activities, along with group projects and self quizzes will provide the basis for the learning environment in the classroom.

12.80. Management Information Systems, Hệ thống thông tin quản lý

Mã môn học: BA169IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This subject will provide a broad introduction to four key aspects of data science: data retrieval and manipulation, data visualization, statistical computation and machine learning, and presentation and communication.

12.81. Production Management, Quản trị sản xuất

Mã môn học: IS019IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: Introduction to production systems. Production planning and control in decision making. Forecasting. Aggregate production planning. Capacity planning. Materials requirement planning. Advanced techniques and approaches in modern production planning and control for designing production systems.

12.82. Project Management, Quản lý dự án

Mã môn học: IS026IU

Số tín chỉ: 3 lý thuyết

Mô tả nội dung môn học: This course is developed to provide the principal concept on project management which was characterized by the project management body of knowledge guide (PMBOK Guide). This guide emphasizes the five project process groups of initiating, planning, executing, controlling and closing, and the nine knowledge areas of project integration, scope, time, cost, quality, human resources, communication, risk, and procurement management.

12.83. Theoretical Models in Computing, Mô hình lý thuyết trong tính toán

Mã môn học: IT063IU

Số tín chỉ: 4 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course is oriented to those undergraduate students who require a working knowledge of numerical methods

12.84. Computer Networks, Mạng máy tính

Mã môn học: IT091IU

Số tín chỉ: 4 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This subject covers the fundamental knowledge of computer networks.

12.85. Information System Management, Hệ thống thông tin quản lý

Mã môn học: IT094IU

Số tín chỉ: 4 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course covers the concepts of information systems and their applications to business processes

12.86. Entrepreneurship and Small Business Management, Sáng lập doanh nghiệp

Mã môn học: BA154IU

Số tín chỉ: 3 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course aims to provide a hands-on introduction to the scalable venture creation process for students with a strong interest in entrepreneurship. The course is designed for a variety of student interests. It directly addresses the concerns of students wanting to become entrepreneurs in the near or more distant future. It is also useful to anyone who expects to be interacting with entrepreneurs in their business careers. Finally, this course is useful for anybody with a curious mind and a willingness to combine serious analysis with creative thinking.

12.87. C++ Programming, Lập trình C++

Mã môn học: IT116IU

Số tín chỉ: 4 lý thuyết

Điều kiện: Môn học tiên quyết: không. Môn học trước: không

Mô tả nội dung môn học: This course concentrates on learning the basics of programming languages which are the foundations for further studies in IT. The course enables students to get familiar with C programming language. The course covers all basic C data structures, control flows, simple data structures as well as other advanced topics which include pointers, bit operators, file processing, dynamic data types.

12.88. Internship, Thực tập tốt nghiệp

Mã môn học: CE314IU

Số tín chỉ: 3 thực hành

Điều kiện: Môn học tiên quyết: không. Môn học trước: CE305IU – Steel Structures

Mô tả nội dung môn học: This course is an internship and is designed to supplement traditional classroom-based learning with experiential learning. The internship provides students with the opportunity to practically apply knowledge gained in their courses of Civil Engineering.

12.89. Graduation Thesis, Luận văn tốt nghiệp

Mã môn học: CE420IU

Số tín chỉ: 10 thực hành

Điều kiện: Tích lũy ít nhất 128 tín chỉ, điểm trung bình GPA ≥ 50 .

Mô tả nội dung môn học: Students sympathize with knowledge learned in the curriculum of civil engineering major in order to conduct their graduation thesis, representing the design and management of a practical structure via A1-size drawings or a report. Besides, students must research civil engineering problems.

TRƯỞNG KHOA/BỘ MÔN



Nguyễn Hoài Nghĩa

KT. HIỆU TRƯỞNG

PHÓ HIỆU TRƯỞNG

Đình Đức Anh Vũ

Phụ lục 1
NỘI DUNG ĐIỀU CHỈNH
CHƯƠNG TRÌNH ĐÀO TẠO NGÀNH KỸ THUẬT XÂY DỰNG KHÓA
2025 SO VỚI KHÓA 2024

*(Kèm theo Quyết định số /QĐ-ĐHQT ngày tháng năm 2025
của Hiệu trưởng Trường Đại học Quốc tế)*

1. Các môn học loại bỏ khỏi chương trình đào tạo

Không có môn loại bỏ

2. Các môn học bổ sung vào chương trình đào tạo

Không có môn bổ sung mới

3. Các điều chỉnh khác

Thay đổi kế hoạch đào tạo: bỏ 2 tuần kiểm tra giữa kỳ, kết hợp kiểm tra giữa kỳ vào tuần thứ 8 của lịch trình giảng dạy nhằm rút ngắn thời đào tạo để tăng thời lượng của học kỳ hè

4. Hướng xử lý cho các sinh viên khóa cũ khi chưa học các môn học bị loại bỏ khỏi chương trình đào tạo

Không có

ĐẠI HỌC QUỐC GIA
THÀNH PHỐ HỒ CHÍ MINH
TRƯỜNG ĐẠI HỌC QUỐC TẾ

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập – Tự do – Hạnh phúc

Phụ lục 2
ĐỀ CƯƠNG CHI TIẾT CÁC MÔN HỌC

*(Kèm theo Quyết định số /QĐ-ĐHQT ngày tháng năm 2025
của Hiệu trưởng Trường Đại học Quốc tế)*

(Sắp xếp đề cương theo đúng thứ tự môn học theo Bảng 6 - Các môn thuộc CTĐT)

ĐẠI HỌC QUỐC GIA THÀNH PHỐ HỒ CHÍ MINH
KHOA CHÍNH TRỊ - HÀNH CHÍNH

ĐỀ CƯƠNG CHI TIẾT MÔN HỌC
(Dành cho trường Đại học Quốc Tế)

1. Thông tin tổng quát

- Tên môn học:

+ Tiếng Việt

+ Tiếng Anh

Triết học Mác-Lênin

Philosophy of Marxism – Leninism

- Mã số môn học: PE015IU

- Thuộc khối kiến thức/kỹ năng:

☒ Kiến thức cơ bản/giáo dục đại cương

☐ Kiến thức cơ sở ngành

☐ Kiến thức chuyên ngành

☐ Kiến thức khác

☐ Môn học chuyên về kỹ năng chung

☐ Môn học đồ án/luận văn tốt nghiệp

- Số tín chỉ:

03

+ Lý thuyết

30 (trên lớp)

+ Thực hành (thuyết trình)

15 (trên lớp)

90 (về nhà)

- Môn học tiên quyết: Không

- Môn học trước: Không

- Môn học song hành: Không

2. Mô tả môn học

(vị trí của môn học đối với chương trình đào tạo (CTĐT), những mục đích và nội dung chính yếu của môn học)

Môn học thuộc phần kiến thức giáo dục đại cương thuộc mảng lý luận chính trị, trang bị cho sinh viên những kiến thức cơ bản về triết học Mác-Lênin. Môn học nghiên cứu những quy luật vận động, phát triển chung nhất của tự nhiên, xã hội, tư duy; gồm 3 chương: Triết học và vai trò của triết học trong đời sống xã hội, chủ nghĩa duy vật biện chứng và chủ nghĩa duy vật lịch sử.

3. Tài liệu học tập

(Các giáo trình, tài liệu tham khảo, các phần mềm, không quá 5 cuốn)

Giáo trình:

[1] Bộ Giáo dục và Đào tạo (2021), *Giáo trình Triết học Mác – Lênin*, (dùng cho khối không chuyên ngành lý luận chính trị), Nxb. Chính trị quốc gia, Hà Nội.

[2] Bộ Giáo dục và Đào tạo (2012), *Giáo trình Những Nguyên lý cơ bản của chủ nghĩa Mác – Lênin*, Nxb. Chính trị quốc gia, Hà Nội.

[3] Hội đồng Trung ương (2008), *Giáo trình Triết học Mác-Lênin*, Nxb. Chính trị quốc gia, Hà Nội.

Tài liệu khác:

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Phần mềm:

4. Mục tiêu môn học

(các mục tiêu tổng quát của môn học, thể hiện sự liên quan với các chuẩn đầu ra (X.x.x) của CTĐT và trình độ năng lực (TĐNL) được phân bổ cho môn học)

Mục tiêu (1)	Mô tả mục tiêu (2)	CDR của môn học tương ứng CTĐT (3)	TĐNL tương ứng CTĐT (4)
G1	4.1 Về kiến thức Sinh viên hiểu được vai trò của triết học Mác - Lênin trong đời sống xã hội và những nội dung cơ bản về: Chủ nghĩa duy vật biện chứng và chủ nghĩa duy vật lịch sử.		
G2	4.2. Về kỹ năng Sinh viên vận dụng, phân tích được những tri thức cơ bản của triết học Mác - Lênin về chủ nghĩa duy vật biện chứng và chủ nghĩa duy vật lịch sử vào việc nhận thức, lý giải các hiện tượng, quy luật trong đời sống xã hội Việt Nam và thế giới.		
G3	4.3. Về thái độ/năng lực tự chủ và trách nhiệm Sinh viên đánh giá được giá trị, tính khoa học cách mạng và nhân văn của triết học Mác - Lênin đối với thực tiễn Việt Nam và nhân loại		

(1): Ký hiệu mục tiêu của môn học.

(2): Mô tả các mục tiêu bao gồm các động từ chủ động, các chủ đề CDR (X.x.x) và bối cảnh áp dụng tổng quát

(3), (4): Ký hiệu CDR của CTĐT và TĐNL tương ứng được phân bổ cho môn học.

5. Chuẩn đầu ra môn học

(các mục cụ thể hay CDR của môn học và mức độ giảng dạy I, T, U)

CDR (1)	Mô tả CDR (2)	Mức độ giảng dạy (3)
G1.1	Sinh viên hiểu những tri thức cơ bản về triết học nói chung, những điều kiện ra đời của triết học Mác – Lênin. Đồng thời giúp sinh viên phân tích, đánh giá được thực chất cuộc cách mạng trong triết học do C.Mác và Ph.Ăngghen thực hiện và các giai đoạn hình thành, phát triển triết học Mác – Lênin; Vai trò của triết học Mác trong đời sống xã hội và trong thời đại ngày nay.	I, T
G1.2	Sinh viên hiểu được quan điểm của chủ nghĩa duy vật biện chứng về vật chất, các hình thức, phương thức tồn tại của vật chất; nguồn gốc, bản chất của ý thức; mối quan hệ biện chứng giữa vật chất và ý thức.	I.T, U

	Sinh viên hiểu được những nội dung cơ bản của phép biện chứng duy vật; ý nghĩa phương pháp luận trong nhận thức và thực tiễn. Sinh viên hiểu những kiến thức cơ bản về lý luận nhận thức của chủ nghĩa duy vật biện chứng; ý nghĩa phương pháp luận.	
G1.3	Sinh viên hiểu những kiến thức về học thuyết hình thái kinh tế - xã hội; vận dụng ý nghĩa phương pháp luận vào thực tiễn của Việt Nam. Giúp sinh viên hiểu được những quan điểm cơ bản của triết học Mác – Lênin về giai cấp; về nhà nước và cách mạng xã hội; về dân tộc, quan hệ giai cấp - dân tộc – nhân loại; ý nghĩa phương pháp luận trong nhận thức những vấn đề cơ bản của cách mạng Việt Nam. Sinh viên hiểu những quan điểm cơ bản của triết học Mác – Lênin về con người, về ý thức xã hội, sự vận dụng vào cách mạng Việt Nam.	I, T, U
G2.1	Sinh viên phân tích mang tính khái quát hóa để rút ra <i>Từ khóa tri thức</i> đối với mỗi nội dung và tư duy có hệ thống.	U
G2.2	Sinh viên vận dụng trình bày, thuyết minh, phản biện, tranh luận, hùng biện những tri thức lý luận đang học tập, nghiên cứu dựa trên thực tiễn.	U
G2.3	Sinh viên vận dụng trong giao tiếp xã hội, hợp tác và làm việc nhóm, chia sẻ tri thức và kinh nghiệm, khả năng điều hành nhóm làm việc.	U
G3.1	Sinh viên phân tích, đánh giá được những nền tảng khoa học và cách mạng của chủ nghĩa duy vật biện chứng và chủ nghĩa duy vật lịch sử.	U
G3.2	Sinh viên vận dụng lập trường mácxít nhằm đấu tranh chống lại các quan điểm sai trái, xuyên tạc triết học Mác – Lênin.	U

(1): Ký hiệu CDR của môn học

(2): Mô tả CDR, bao gồm các động từ chủ động, các chủ đề CDR ở cấp độ 4 (X.x.x.x) và bối cảnh áp dụng cụ thể.

(3): I (Introduce): giới thiệu; T (Teach): dạy; U (Utilize): sử dụng

6. Đánh giá môn học

(các thành phần, các bài đánh giá, các tiêu chí đánh giá, chuẩn đánh giá, và tỷ lệ đánh giá, thể hiện sự tương quan với các CDR của môn học)

Thành phần đánh giá (1)	Bài đánh giá (2)	CDR môn học (3)	Tỷ lệ % (4)
A1. Đánh giá quá trình	- Chuyên cần (A1.1) - Tham gia học tập trên lớp tích cực, hăng hái phát biểu (A1.2) - Thuyết trình nhóm (A1.3)	G1.1, G1.2- G1.3, G2.1, G2.2- G2.3 G3.1-	30%

		G3.2	
A2. Đánh giá giữa kỳ	Hình thức tự luận hoặc trắc nghiệm (A2.1)	G1.1 G2.1- G2.2, G3.1- G3.2	20%
A3. Đánh giá cuối kỳ	- Hình thức tự luận, sinh viên được sử dụng tài liệu giấy, không sử dụng thiết bị nối mạng khi làm bài thi: 75 phút (A3.1) - Điểm thưởng (tối đa 20% của điểm cuối kỳ)	G1.2- G1.3, G2.1- G2.2, G3.1- G3.2	50%

(1): các thành phần đánh giá của môn học.

(2): các bài đánh giá

(3): các CDR được đánh giá.

(4): tiêu chí đánh giá.

(5): chuẩn đánh giá

(6): Tỷ lệ điểm của các bài đánh giá trong tổng điểm môn học

7. Kế hoạch giảng dạy chi tiết

(các nội dung giảng dạy theo buổi học, thể hiện sự tương quan với các CDR của môn học, các hoạt động dạy và học (ở lớp, ở nhà) và các bài đánh giá của môn học)

Lý thuyết

1	Nội dung (2)	CDR môn học (3)	Hoạt động dạy và học (4)	Bài đánh giá (5)
1/3 tiết	Giới thiệu về môn học Chương 1 TRIẾT HỌC VÀ VAI TRÒ CỦA TRIẾT HỌC TRONG ĐỜI SỐNG XÃ HỘI I. triết học và vấn đề cơ bản của triết học 1. Khái lược về triết học - Nguồn gốc ra đời của triết học 1. Khái lược về triết học	G1.1	Hoạt động dạy: - Giới thiệu đề cương môn học - Giới thiệu nội dung đề tài thuyết trình nhóm) - Trình chiếu, thuyết giảng Hoạt động học: - Chia nhóm - Giới thiệu nhóm học tập - Nghe giảng, phát biểu - Đọc trước mục I, II của chương 1	A1.1, A1.2, A2.1, A3.1
2/3 tiết	Chương 1 TRIẾT HỌC VÀ VAI TRÒ CỦA TRIẾT HỌC TRONG ĐỜI SỐNG XÃ HỘI	G1.1 G2.2 G2.3	Hoạt động dạy: - Trình chiếu, thuyết giảng Hoạt động học:	A1.1, A1.2, A2.1, A3.1

	I. Triết học và vấn đề cơ bản của triết học (tt) 1. Khái lược về triết học - Khái niệm triết học 2. Vấn đề cơ bản của triết học		- Nghe giảng, phát biểu - Phác thảo nội dung thuyết trình nhóm - Đọc trước phần I, mục 3, chương 1.	
3/3 tiết	Chương 1 TRIẾT HỌC VÀ VAI TRÒ CỦA TRIẾT HỌC TRONG ĐỜI SỐNG XÃ HỘI (tiếp theo) I. Triết học và vấn đề cơ bản của triết học (tt) 3. Biện chứng và siêu hình	G1.1 G2.2 G2.3	Hoạt động dạy: - Trình chiếu, thuyết giảng Hoạt động học: - Nghe giảng, phát biểu - Phác thảo nội dung thuyết trình nhóm - Đọc trước phần II chương 1.	A1.1, A1.2, A2.1, A3.1
4/3 tiết	Chương 1 TRIẾT HỌC VÀ VAI TRÒ CỦA TRIẾT HỌC TRONG ĐỜI SỐNG XÃ HỘI (tiếp theo) II. Triết học Mác - Lênin và vai trò của triết học Mác - Lênin trong đời sống xã hội 1. Sự ra đời và phát triển của triết học Mác - Lênin - Giới thiệu nội dung mục 2.3	G1.1 G2.2 G2.3	Hoạt động dạy: - Trình chiếu, thuyết giảng Hoạt động học: - Nghe giảng, phát biểu - Phác thảo nội dung thuyết trình nhóm - Đọc trước phần I chương 1.	A1.1, A1.2, A2.1, A3.1
5/3 tiết	Chương 2 CHỦ NGHĨA DUY VẬT BIỆN CHỨNG I. Vật chất và ý thức 1. Vật chất và các hình thức tồn tại của vật chất 2. Nguồn gốc, bản chất và kết cấu của ý thức	G1.2 G2.1 G2.2 G3.1 G3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng Hoạt động học: - Nghe giảng, phát biểu, làm việc nhóm, thuyết trình. - Đọc trước mục 3 phần I chương 2.	A1.1, A1.2, A2.1, A3.1
6/3 tiết	Chương 2 CHỦ NGHĨA DUY VẬT BIỆN CHỨNG I. Vật chất và ý thức 3. Mối quan hệ giữa vật chất và ý thức II. Phép biện chứng duy vật 1. Hai loại hình biện chứng và phép biện chứng duy vật	G1.2 G2.1 G2.2 G3.1 G3.2 G1.3	- Trình chiếu, thuyết giảng Hoạt động học: - Nghe giảng, phát biểu, làm việc nhóm, thuyết trình. - Đọc trước mục 1,2 phần II chương 2.	A1.1, A1.2, A2.1, A3.1
7/3 tiết	Chương 2 CHỦ NGHĨA DUY VẬT BIỆN	G1.3 G2.1	Hoạt động dạy: - Trình chiếu, thuyết	A1.1, A1.2,



	CHỨNG (tiếp theo) II. Phép biện chứng duy vật 2. Nội dung của phép biện chứng duy vật a. Hai nguyên lý. - Nguyên lý về mối liên hệ phổ biến - Nguyên lý về sự phát triển - Kiểm tra giữa kỳ	G.2.2 G3.1 G3.2	giảng Hoạt động học: - Nghe giảng, phát biểu, làm việc nhóm, thuyết trình. - Đọc trước mục 2 phần II chương 2.	A3.1
8/3 tiết	Chương 2 CHỦ NGHĨA DUY VẬT BIỆN CHỨNG (tiếp theo) II. Phép biện chứng duy vật 2. Nội dung của phép biện chứng duy vật c. Các cặp phạm trù của PBCDV - Phạm trù cái riêng – cái chung - Phạm trù nguyên	G1.3 G2.1 G.2.2 G3.1 G3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng Hoạt động học: - Nghe giảng, phát biểu, làm việc nhóm, thuyết trình. - Đọc trước mục 2 phần II chương 2.	A1.1, A1.2, A3.1
9/3 tiết	Chương 2 CHỦ NGHĨA DUY VẬT BIỆN CHỨNG (tiếp theo) II. Phép biện chứng duy vật 2. Nội dung của phép biện chứng duy vật c. Ba quy luật: - Quy luật Lượng – Chất. - Quy luật thống nhất và đấu tranh của các mặt đối lập	G1.3 G2.1 G.2.2 G3.1 G3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng Hoạt động học: - Nghe giảng, phát biểu, làm việc nhóm, thuyết trình. - Đọc trước phần III chương 2.	A1.1, A1.2, A3.1
10/3 tiết	Chương 2 CHỦ NGHĨA DUY VẬT BIỆN CHỨNG (tiếp theo) III. Lý luận nhận thức 1. Các nguyên tắc của lý luận nhận thức duy vật biện chứng 2. Nguồn gốc, bản chất của nhận thức 3. Thực tiễn và vai trò của thực tiễn đối với nhận thức - Giới thiệu mục 4.5	G1.3 G2.1 G.2.2 G3.1 G3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng Hoạt động học: - Nghe giảng, phát biểu, làm việc nhóm, thuyết trình. - Đọc trước phần I chương 3.	A1.1, A1.2, A3.1
11/3 tiết	Chương 3 CHỦ NGHĨA DUY VẬT LỊCH SỬ I. Học thuyết hình thái kinh tế - xã hội 1. Sản xuất vật chất là cơ sở của sự tồn tại và phát triển xã hội	G1.4 G2.1 G.2.2 G3.1 G3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng Hoạt động học: - Nghe giảng, phát biểu, làm việc nhóm, thuyết trình.	A1.1, A1.2, A3.1

	2. Biện chứng giữa lực lượng sản xuất và quan hệ sản xuất		- Đọc trước mục 3.4 phần I chương 3.	
12/3 tiết	Chương 3 CHỦ NGHĨA DUY VẬT LỊCH SỬ I. Học thuyết hình thái kinh tế - xã hội 3. Biện chứng giữa cơ sở hạ tầng và kiến trúc thượng tầng của xã hội 4. Sự phát triển các hình thái kinh tế - xã hội là một quá trình lịch sử - tự nhiên	G1.4 G2.1 G.2.2 G3.1 G3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng Hoạt động học: - Nghe giảng, phát biểu, làm việc nhóm, thuyết trình. - Đọc trước phần II và phần III chương 3.	A1.1, A1.2, A1.3, A3.1
13/3 tiết	Chương 3 CHỦ NGHĨA DUY VẬT LỊCH SỬ (tiếp theo) -Giới thiệu các khái niệm II. Giai cấp và dân tộc 1. Vấn đề giai cấp và đấu tranh giai cấp 2. Dân tộc 3. Mối quan hệ giai cấp - dân tộc - nhân loại III. Nhà nước và cách mạng xã hội 1. Nhà nước	G1.4 G2.1 G.2.2 G3.1 G3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng Hoạt động học: - Nghe giảng, phát biểu, làm việc nhóm, thuyết trình. - Đọc trước phần IV chương 3.	A1.1, A1.2, A1.3, A3.1
14/3 tiết	Chương 3 CHỦ NGHĨA DUY VẬT LỊCH SỬ (tiếp theo) IV. Ý thức xã hội 1. Khái niệm tồn tại xã hội và các yếu tố cơ bản của tồn tại xã hội 2. Ý thức xã hội và kết cấu của ý thức xã hội	G1.4 G2.1 G.2.2 G3.1 G3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng Hoạt động học: - Nghe giảng, phát biểu, làm việc nhóm, thuyết trình. - Đọc trước phần V chương 3.	A1.1, A1.2, A1.3, A3.1
15/3 tiết	Chương 3 CHỦ NGHĨA DUY VẬT LỊCH SỬ (tiếp theo) V. Triết học về con người 1. Khái niệm con người và bản chất con người - Giới thiệu mục 2.3.4 - Ôn tập thi cuối kỳ	G1.4 G2.1 G.2.2 G3.1 G3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng - Ôn tập thi cuối kỳ Hoạt động học: - Thuyết trình, thảo luận nhóm - Nghe giảng, ôn tập	A1.1, A1.2, A1.3, A3.1

(1): Thông tin về tuần/buổi học.

(2): Liệt kê nội dung giảng dạy theo chương, mục

(3): Liệt kê CDR liên quan của môn học (ghi ký hiệu Gx.x),

(4): Liệt kê các hoạt động dạy và học (ở lớp, ở nhà), bao gồm đọc trước tài liệu

(nếu có yêu cầu)

(5): Liệt kê các bài đánh giá liên quan (ghi ký hiệu Ax.x)

Thực hành

Tuần/Buổi học (1)	Nội dung (2)	CĐR môn học (3)	Hoạt động dạy và học (4)	Bài đánh giá (5)
...	Bài thực hành 1: ...	Gx.x ...	Dạy: ... Học ở lớp: ... Học ở nhà: ...	Ax.x ...

(1): Thông tin về tuần/buổi học. (2): Liệt kê nội dung thực hành theo bài thực hành

(3): Liệt kê CĐR liên quan của môn học (ghi ký hiệu Gx.x),

(4): Liệt kê các hoạt động dạy và học (ở lớp, ở nhà), bao gồm đọc trước tài liệu (nếu có yêu cầu)

(5): Liệt kê các bài đánh giá liên quan (ghi ký hiệu Ax.x)

8. Quy định của môn học

(Các quy định của môn học (nếu có), thí dụ: sinh viên không nộp bài tập và các báo cáo đúng hạn, được coi như không nộp bài; sinh viên vắng 2 buổi thực hành trở lên, không được phép dự thi cuối kỳ ...)

- Quy định về Bài thuyết trình nhóm:

- Thành lập nhóm: Số lượng sinh viên tùy vào sĩ số lớp, do giảng viên quy định. Hạn chót đăng ký đề tài nhóm quản lý trên forum là buổi 2 hoặc trực tiếp nộp cho GV buổi 1.
- Các nhóm thuyết trình theo thứ tự được phân công. Lưu ý các nhóm cần có mặt đủ và mang theo tất cả các tài liệu liên quan khi thuyết trình.
- Hình thức nộp bài: Nộp file và biên bản làm việc nhóm qua mail cho GV

- Quy định về giờ giấc, chuyên cần, kỷ luật trong khóa học: Lên lớp đúng giờ, dự tối thiểu 80% thời gian học trên lớp (chỉ được phép vắng mặt tối đa 20% số tiết học). Nếu vắng quá số tiết quy định thì sẽ bị điểm 0 chuyên cần.

9. Phụ trách môn học

- Khoa/Bộ môn: Bộ môn Lý luận và Khoa học chính trị, Khoa Chính trị - Hành chính

- Địa chỉ và email liên hệ: daotao.spas@vnuhcm.edu.vn

KT. Trưởng Bộ môn
Phó trưởng Bộ môn



TS. Mạch Thị Khánh Trinh

Tp. Hồ Chí Minh, ngày 01 tháng 10 năm 2023

KT. TRƯỞNG KHOA
PHÓ TRƯỞNG KHOA



TS. Nguyễn Đình Quốc Cường

ĐỀ CƯƠNG CHI TIẾT MÔN HỌC

(Dành cho Trường Đại học Quốc tế, ĐHQG-HCM)

1. Thông tin tổng quát

- Tên môn học:

+ Tiếng Việt

+ Tiếng Anh

Kinh tế chính trị Mác - Lênin

Political economics of Marxism and
Leninism

- Mã số môn học:

PE016IU

- Thuộc khối kiến thức/kỹ năng:

☒ Kiến thức cơ bản/giáo dục đại cương

☐ Kiến thức cơ sở ngành

☐ Kiến thức chuyên ngành

☐ Kiến thức khác

☐ Môn học chuyên về kỹ năng chung

☐ Môn học đồ án/luận văn tốt nghiệp

- Số tín chỉ:

02

+ Lý thuyết

21 (trên lớp)

+ Thực hành (thuyết trình)

09 (trên lớp)

60 (về nhà)

- Môn học tiên quyết:

- Môn học trước:

Triết học Mác - Lênin

- Môn học song hành:

2. Mô tả môn học

Môn học này cung cấp cho sinh viên những phân tích của Các Mác về phương thức sản xuất tư bản chủ nghĩa và chỉ ra giới hạn phát triển của phương thức sản xuất này. V.I.Lênin bổ sung học thuyết kinh tế chính trị của Mác trong tình hình mới – giai đoạn chủ nghĩa tư bản độc quyền thống trị. Dựa vào nội dung cơ bản của kinh tế chính trị Mác – Lênin, sinh viên được tìm hiểu về mô hình kinh tế tổng quát của Việt Nam trong thời kỳ quá độ - Kinh tế thị trường định hướng xã hội chủ nghĩa. Bên cạnh đó, môn học này cũng cung cấp cho sinh viên về tính tất yếu phải công nghiệp hóa, hiện đại hóa và hội nhập kinh tế quốc tế trong bối cảnh CMCN lần thứ 4 và toàn cầu hóa diễn ra mạnh mẽ.

3. Tài liệu học tập



3.1. Giáo trình

- [1] Bộ Giáo dục và Đào tạo (2021), *Giáo trình Kinh tế chính trị Mác – Lênin*, (dùng cho khối không chuyên ngành lý luận chính trị) Nxb. Chính trị quốc gia, Hà Nội.
- [2] Bộ Giáo dục và Đào tạo (2012), *Giáo trình Những Nguyên lý cơ bản của chủ nghĩa Mác – Lênin*, Nxb. Chính trị quốc gia, Hà Nội.

3.2. Tài liệu khác

- [3] Các Mác, *Tư bản*, NXB Chính trị quốc gia Sự thật, Hà Nội, 2018
- [4] Klaus Schwab (2018), *Cách mạng công nghiệp lần thứ tư*, NXB Thế giới.
- [5] V.I.Lênin, Toàn tập – tập 27, NXB Chính trị Quốc gia Sự thật, 2005

3.3. Phần mềm: N/A

4. Mục tiêu môn học

(các mục tiêu tổng quát của môn học, thể hiện sự liên quan với các chuẩn đầu ra (X.x.x) của CTĐT và trình độ năng lực (TĐNL) được phân bổ cho môn học)

Mục tiêu (1)	Mô tả mục tiêu (2)	CĐR của môn học tương ứng CTĐT (3)	TĐNL tương ứng CTĐT (4)
G1	4.1 Về kiến thức Sinh viên hiểu được sự vận động và phát triển của phương thức sản xuất tư bản chủ nghĩa và giới hạn của nó theo phân tích của Mác – Lênin. Sinh viên cũng được hiểu rõ về mô hình kinh tế của Việt Nam thời kỳ quá độ lên chủ nghĩa xã hội đó là kinh tế thị trường định hướng xã hội chủ nghĩa. Ngoài ra, sinh viên cũng hiểu rõ về công nghiệp hóa, hiện đại hóa và hội nhập kinh tế quốc tế của Việt Nam.		3.5
G2	4.2. Về kỹ năng Sinh viên vận dụng những kiến thức đã học có thể nhận định, phân tích và đánh giá các vấn đề kinh tế chính trị trong nước và quốc tế. Vận dụng kiến thức kinh tế chính trị Mác – Lênin để		3.0

	đánh giá chủ nghĩa tư bản đương đại cũng như phân tích, đánh giá được mô hình kinh tế của Việt Nam trong thời kỳ quá độ lên chủ nghĩa xã hội. Ngoài ra, sinh viên còn vận dụng kiến thức kinh tế chính trị để phân tích quá trình công nghiệp hóa, hiện đại hóa và hội nhập kinh tế quốc tế của Việt Nam.		
G3	4.3. Về thái độ/năng lực tự chủ và trách nhiệm Vận dụng kiến thức kinh tế chính trị Mác – Lênin để có thái độ tích cực trong việc góp phần vào xây dựng và bảo vệ con đường chủ nghĩa xã hội của Việt Nam. Đấu tranh bác bỏ những luận điệu xuyên tạc, chống phá Chủ nghĩa Mác – Lênin và sự lãnh đạo của Đảng Cộng sản Việt Nam.		4.0

(1): Ký hiệu mục tiêu của môn học. (2): Mô tả các mục tiêu bao gồm các động từ chủ động, các chủ đề CDR (X.x.x) và bối cảnh áp dụng tổng quát

(3), (4): Ký hiệu CDR của CTĐT và TĐNL tương ứng được phân bổ cho môn học.

5. Chuẩn đầu ra môn học

CDR (1)	Mô tả CDR (2)	Mức độ giảng dạy (3)
G1.1	G1.1.1. Hiểu rõ lịch sử của kinh tế chính trị và kinh tế chính trị Mác – Lênin.	I, T
	G1.1.2 Hiểu rõ về mục tiêu, phương pháp và chức năng của KTCT Mác - Lênin	I.T
G1.2	G1.2.1. Hiểu rõ hai thuộc tính của hàng hóa và cấu trúc của giá trị hàng hóa	I.T.U
	G1.2.2. Hiểu về mặt chất và mặt lượng của giá trị hàng hóa và các nhân tố ảnh hưởng đến mặt lượng giá trị hàng hóa	I, T
	G1.2.3. Hiểu rõ mối quan hệ giữa giá trị hàng hóa và tiền tệ	I, T, U
	G1.2.4. Hiểu về thị trường và các quy luật cơ bản của kinh tế thị trường	I, T, U

G1.3	G1.3.1. Hiểu rõ được công thức chung của tư bản và mâu thuẫn của nó	I, T
	G1.3.2. Hiểu rõ được nguồn gốc của giá trị thặng dư TBCN	I, T
	G1.3.3. Hiểu rõ hàng hóa sức lao động và tính chất đặc biệt của nó	I, T
	G1.3.4. Hiểu được bản chất và các hình thức của tiền công	I, T, U
	G1.3.5. Hiểu được các phương pháp sản xuất giá trị thặng dư TBCN	I, T
	G1.3.6. Hiểu rõ ý nghĩa của tuần hoàn và chu chuyển tư bản	I, T
	G1.3.7. Hiểu được mục đích của tích lũy tư bản	I, T, U
	G1.3.8. Hiểu rõ các hình thức biểu hiện của giá trị thặng dư TBCN là mối quan hệ của chúng	I, T
G1.4	G1.4.1. Hiểu rõ hai giai đoạn phát triển của CNTB	I, T
	G1.4.2. Hiểu được nguyên nhân hình thành CNTB độc quyền	I, T
	G1.4.3. Hiểu được 5 đặc điểm của CNTB độc quyền theo phân tích của V.I. Lênin	I, T
	G1.4.4. Hiểu được những nguyên nhân hình thành và đặc điểm của chủ nghĩa tư bản độc quyền nhà nước.	I, T
G1.5	G1.5.1. Hiểu rõ về mô hình kinh tế thị trường định hướng XHCN và các đặc trưng của nó	I, T
	G1.5.2. Hiểu rõ về vai trò của thể chế kinh tế thị trường định hướng XHCN và tại sao cần phải hoàn thiện nó	I, T
	G1.5.3. Hiểu rõ vai trò của lợi ích kinh tế và các quan hệ lợi ích kinh tế trong nền kinh tế thị trường.	I, T
G1.6	G1.6.1. Hiểu rõ lý do tại sao một quốc gia cần phải tiến hành CNH và các quốc gia CNH thành công tiêu biểu	I, T
	G1.6.2. Hiểu rõ lịch sử và đặc trưng của các cuộc CMCN và mối liên hệ giữa CMCN với CNH	I, T, U
	G1.6.3. Hiểu rõ quá trình CNH, HĐH của Việt Nam	I, T
	G1.6.4. Hiểu được tính tất yếu của Việt Nam phải hội nhập kinh tế quốc tế trong bối cảnh toàn cầu hóa	I, T
	G2.1. Vận dụng phương pháp trừu tượng hóa khoa học để phân tích các vấn đề kinh tế chính trị	U
	G2.2. Vận dụng kiến thức kinh tế chính trị Mác -	

G2	Lênin để đánh giá chủ nghĩa tư bản hiện nay và sự lựa chọn con đường tiến lên CNXH của Việt Nam	U
	G2.3.Vận dụng kiến thức về kinh tế thị trường định hướng XHCN để hiểu rõ con đường đi lên CNXH của Việt Nam từ đó đấu tranh chống lại các thế lực chống phá chủ nghĩa Mác - Lênin	U
	G2.4. Vận dụng kiến thức về CNH, HĐH và hội nhập kinh tế quốc tế để phân tích chiến lược phát triển của Việt Nam trong bối cảnh CMCN 4.0 và toàn cầu hóa diễn ra ngày càng sâu rộng	U
G3	G3.1.Vận dụng kiến thức kinh tế chính trị Mác - Lênin, đóng góp vào công cuộc xây dựng chủ nghĩa xã hội	U
	G3.2.Vận dụng kiến thức kinh tế chính trị Mác – Lênin đấu tranh chống lại các luận điệu xuyên tạc chủ nghĩa Mác – Lênin và con đường đi lên CNXH của Việt Nam	U

(1): Ký hiệu CĐR của môn học

(2): Mô tả CĐR, bao gồm các động từ chủ động, các chủ đề CĐR ở cấp độ 4 (X.x.x.x) và bối cảnh áp dụng cụ thể.

(3): I (Introduce): giới thiệu; T (Teach): dạy; U (Utilize): sử dụng

6. Đánh giá môn học

(các thành phần, các bài đánh giá, các tiêu chí đánh giá, chuẩn đánh giá, và tỷ lệ đánh giá, thể hiện sự tương quan với các CĐR của môn học)

Thành phần đánh giá (1)	Bài đánh giá (2)	CĐR môn học (3)	Tỷ lệ % (4)
A1. Đánh giá quá trình	- Chuyên cần (A1.1) - Tham gia học tập trên lớp tích cực, hăng hái phát biểu (A1.2) - Thuyết trình nhóm (A1.3)	G1.1- G1.6; G2.1 - G2.4; G3.1- G3.2	30%
A2. Đánh giá giữa kỳ	Kiểm tra tự luận: 60 phút (A2.1)	G1.1, G1.2, G1.3	20%
A3. Đánh giá cuối kỳ	Tự luận sinh viên được sử dụng tài liệu khi làm bài thi: 60 phút (A3.1)	G1.1 - G1.6; G2.1-G2.4	50%

(1): Các thành phần đánh giá của môn học. (2): Các bài đánh giá

(3): Các CĐR được đánh giá. (4): Tiêu chí đánh giá. (5): Chuẩn đánh giá

(6): Tỷ lệ điểm của các bài đánh giá trong tổng điểm môn học

7. Kế hoạch giảng dạy chi tiết

Tuần/Buổi học (1)	Nội dung (2)	CDR môn học (3)	Hoạt động dạy và học (4)	Bài đánh giá (5)
1/4 tiết	Giới thiệu về môn học Chương 1 ĐỐI TƯỢNG, PHƯƠNG PHÁP NGHIÊN CỨU VÀ CHỨC NĂNG CỦA KINH TẾ CHÍNH TRỊ MÁC – LÊNIN I. Khái quát về sự hình thành và phát triển của kinh tế chính trị Mác – Lênin. II. Đối tượng, mục đích và phương pháp nghiên cứu của kinh tế chính trị Mác – Lênin III. Chức năng của kinh tế chính trị Mác – Lênin Chương 2 HÀNG HÓA, THỊ TRƯỜNG VÀ VAI TRÒ CỦA CÁC CHỦ THỂ THAM GIA THỊ TRƯỜNG I. Lý luận của C. Mác về sản xuất hàng hóa và hàng hóa 1. Sản xuất hàng hóa 2. Hàng hóa - <i>Khái niệm và thuộc tính của hàng hóa.</i> - <i>Tính hai mặt của lao động sản xuất hàng hóa.</i> - <i>Lượng giá trị và các nhân tố ảnh hưởng đến lượng giá trị của hàng hóa.</i>	G.1.1 G.1.2	Hoạt động dạy: - Giới thiệu về môn học, cơ cấu điểm, cách thức giảng dạy và học tập môn Kinh tế chính trị Mác – Lênin - Giới thiệu nội dung đề tài thuyết trình nhóm GHW) - Trình chiếu, thuyết giảng chương 1,2 và giải đáp thắc mắc. Hoạt động học: - Chia nhóm - Giới thiệu nhóm học tập - Nghe giảng, phát biểu, nêu thắc mắc - Đọc trước chương 2 và chương 3	A1.1 A1.2 A2.1 A3.1
	Chương 2 HÀNG HÓA, THỊ TRƯỜNG VÀ VAI TRÒ CỦA CÁC CHỦ THỂ THAM GIA THỊ TRƯỜNG (tiếp theo)		Hoạt động dạy: - Trình chiếu, thuyết giảng, giải đáp thắc	A1.1 A1.2

2/4 tiết	3. Tiền tệ 4. Dịch vụ và quan hệ trao đổi trong trường hợp một số yếu tố khác hàng hóa thông thường ở điều kiện ngày nay II. Thị trường và nền kinh tế thị trường. 1. Khái niệm, phân loại và vai trò của thị trường. 2. Nền kinh tế thị trường và một số quy luật chủ yếu của nền kinh tế thị trường - <i>Nền kinh tế thị trường.</i> - <i>Một số quy luật kinh tế chủ yếu của nền kinh tế thị trường.</i> III. Vai trò của một số chủ thể tham gia thị trường. 1. Người sản xuất 2. Người tiêu dùng 3. Các chủ thể trung gian trong thị trường. 4. Nhà nước.	G.1.2 G.2.1	mắc - Tổng kết nội dung thuyết trình nhóm Hoạt động học: - Nghe giảng, thảo luận, phát biểu, nêu thắc mắc. - Thuyết trình nhóm GHW - Đọc trước chương 3.	A1.3 A2.1 A3.1
3/4 tiết	Chương 3 GIÁ TRỊ THẶNG DƯ TRONG NỀN KINH TẾ THỊ TRƯỜNG I. Lý luận của Các Mác về giá trị thặng dư 1. Nguồn gốc của giá trị thặng dư. - <i>Công thức chung của tư bản</i> - <i>Hàng hóa sức lao động</i> - <i>Sự sản xuất giá trị thặng dư</i> - <i>Tư bản bất biến và tư bản khả biến</i> - <i>Tiền công</i> - <i>Tuần hoàn và chu chuyển tư bản</i> 2. Bản chất của giá trị thặng dư 3. Các phương pháp sản xuất giá trị thặng dư	G.1.3 G.2.2 G.3.1 G.3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng, giải đáp thắc mắc - Tổng kết nội dung thuyết trình nhóm Hoạt động học: - Nghe giảng, thảo luận, phát biểu, nêu thắc mắc. - Thuyết trình nhóm GHW	A1.1 A1.2 A1.3 A2.1 A3.1

			- Đọc trước chương 4.	
4/4 tiết	Chương 3 GIÁ TRỊ THẶNG DƯ TRONG NỀN KINH TẾ THỊ TRƯỜNG (tiếp theo) II. Tích lũy tư bản 1. Bản chất của tích lũy tư bản. 2. Những nhân tố ảnh hưởng đến quy mô tích lũy. 3. Một số hệ quả của tích lũy tư bản. III. Các hình thức biểu hiện của giá trị thặng dư trong nền kinh tế thị trường. 1. Lợi nhuận 2. Lợi tức. 3. Địa tô TBCN	G.1.3 G.2.2 G.3.1 G.3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng, giải đáp thắc mắc - Tổng kết nội dung thuyết trình nhóm Hoạt động học: - Nghe giảng, thảo luận, phát biểu, nêu thắc mắc. - Thuyết trình nhóm GHW - Đọc trước chương 4.	A1.1 A1.2 A1.3 A2.1 A3.1
5/4 tiết	Chương 4 CẠNH TRANH VÀ ĐỘC QUYỀN TRONG NỀN KINH TẾ THỊ TRƯỜNG (tiếp theo) 1. Lý luận của V.I. Lê nin về đặc điểm kinh tế của độc quyền (tt). - <i>Xuất khẩu tư bản trở thành phổ biến</i> - <i>Cạnh tranh để phân chia thị trường thế giới là tất yếu giữa các tập đoàn độc quyền.</i> - <i>Lôi kéo, thúc đẩy các chính phủ vào việc phân định khu vực lãnh thổ ảnh hưởng là cách thức để bảo vệ lợi ích độc quyền.</i> 2. Lý luận của V.I. Lênin về đặc điểm kinh tế của độc quyền nhà nước trong CNTB	G.1.4 G.2.2 G.3.1 G.3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng, giải đáp thắc mắc - Tổng kết nội dung thuyết trình nhóm Hoạt động học: - Nghe giảng, thảo luận, phát biểu, nêu thắc mắc. - Thuyết trình nhóm GHW - Đọc trước chương 5.	A1.1 A1.2 A1.3 A3.1

	- Sự kết hợp nhân sự giữa tổ chức độc quyền và nhà nước. - Sự hình thành, phát triển sở hữu nhà nước. - Độc quyền nhà nước trở thành công cụ để nhà nước điều tiết nền kinh tế. III. Biểu hiện mới của độc quyền, độc quyền nhà nước trong điều kiện ngày nay; vai trò lịch sử của CNTB. 1. Biểu hiện mới của độc quyền 2. Biểu hiện mới của độc quyền nhà nước dưới CNTB 3. Vai trò lịch sử của CNTB			
6/4 tiết	Chương 5 KINH TẾ THỊ TRƯỜNG ĐỊNH HƯỚNG XÃ HỘI CHỦ NGHĨA VÀ CÁC QUAN HỆ LỢI ÍCH KINH TẾ Ở VIỆT NAM I. Kinh tế thị trường định hướng xã hội chủ nghĩa ở Việt Nam 1. Khái niệm về kinh tế thị trường định hướng XHCN ở Việt Nam. 2. Tính tất yếu khách quan của việc phát triển kinh tế thị trường định hướng XHCN ở Việt Nam. 3. Đặc trưng của kinh tế thị trường định hướng XHCN ở Việt Nam. II. Hoàn thiện thể chế kinh tế thị trường định hướng XHCN ở Việt Nam 1. Sự cần thiết phải hoàn thiện thể chế kinh tế thị trường định hướng XHCN ở Việt Nam. 2. Nội dung hoàn thiện thể chế kinh tế thị trường định hướng XHCN ở	G.1.5 G.2.3 G.3.1 G.3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng, giải đáp thắc mắc - Tổng kết nội dung thuyết trình nhóm Hoạt động học: - Nghe giảng, thảo luận, phát biểu, nêu thắc mắc. - Thuyết trình nhóm GHW - Đọc trước chương 6.	A1.1 A1.2 A1.3 A3.1



	Việt Nam. III. Các quan hệ lợi ích kinh tế ở Việt Nam. 1. Lợi ích kinh tế và quan hệ lợi ích kinh tế. - <i>Lợi ích kinh tế</i>			
7/4 tiết	Chương 5 KINH TẾ THỊ TRƯỜNG ĐỊNH HƯỚNG XÃ HỘI CHỦ NGHĨA VÀ CÁC QUAN HỆ LỢI ÍCH KINH TẾ Ở VIỆT NAM (tiếp theo) 1. Lợi ích kinh tế và quan hệ lợi ích kinh tế (tt). - <i>Quan hệ lợi ích kinh tế.</i> 2. Vai trò của nhà nước trong đảm bảo hài hòa các quan hệ lợi ích. - Bảo vệ lợi ích hợp pháp, tạo môi trường thuận lợi cho hoạt động tìm kiếm lợi ích của các chủ thể kinh tế. - Điều hòa lợi ích giữa cá nhân – doanh nghiệp – xã hội. - Kiểm soát, ngăn ngừa các quan hệ lợi ích có ảnh hưởng tiêu cực đối với sự phát triển của xã hội. Chương 6 CÔNG NGHIỆP HÓA, HIỆN ĐẠI HÓA VÀ HỘI NHẬP KINH TẾ QUỐC TẾ CỦA VIỆT NAM I. Công nghiệp hóa, hiện đại hóa của Việt Nam. 1. Khái quát về cách mạng công nghiệp và công nghiệp hóa. - Khái quát về cách mạng công nghiệp - Công nghiệp hóa và các mô hình công nghiệp hóa trên thế giới	G.1.5 G.1.6 G.2.3 G.2.4 G.3.1 G.3.2	Hoạt động dạy: - Trình chiếu, thuyết giảng, giải đáp thắc mắc - Tổng kết nội dung thuyết trình nhóm Hoạt động học: - Nghe giảng, thảo luận, phát biểu, nêu thắc mắc. - Thuyết trình nhóm GHW - Đọc trước chương 6.	A1.1 A1.2 A1.3 A3.1
	Chương 6		Hoạt động dạy:	

8/2 tiết	CÔNG NGHIỆP HÓA, HIỆN ĐẠI HÓA VÀ HỘI NHẬP KINH TẾ QUỐC TẾ CỦA VIỆT NAM (tiếp theo)		- Trình chiếu, thuyết giảng, tổng kết nội dung thuyết trình nhóm.	A1.1
	2. Tính tất yếu khách quan và nội dung công nghiệp hóa, hiện đại hóa ở Việt Nam.		- Giải đáp thắc mắc cho sinh viên	A1.2 A1.3 A3.1
	- <i>Tính tất yếu của công nghiệp hóa, hiện đại hóa ở Việt Nam.</i>	G.1.6		
	- <i>Nội dung CNH, HĐH ở Việt Nam</i>	G.2.4	- Công bố điểm quá trình.	
	II. Hội nhập kinh tế quốc tế của Việt Nam	G.3.1		
	1. Khái niệm và nội dung hội nhập kinh tế quốc tế.	G.3.2	Hoạt động học:	
	2. Tác động của hội nhập kinh tế quốc tế đến quá trình phát triển của Việt Nam		- Nghe giảng	
	3. Phương hướng nâng cao hiệu quả hội nhập kinh tế quốc tế trong phát triển của Việt Nam		- Phát biểu, thảo luận	
	Ôn tập thi cuối kì		- Nêu thắc mắc về môn học.	



(1): Thông tin về tuần/buổi học. (2): Liệt kê nội dung giảng dạy theo chương, mục

(3): Liệt kê CDR liên quan của môn học (ghi ký hiệu Gx.x),

(4): Liệt kê các hoạt động dạy và học (ở lớp, ở nhà), bao gồm đọc trước tài liệu (nếu có yêu cầu)

(5): Liệt kê các bài đánh giá liên quan (ghi ký hiệu Ax.x)

8. Quy định của môn học

- Quy định về Bài thuyết trình nhóm GHW:

+ Thành lập nhóm: 5 sinh viên/nhóm. Hạn chót đăng ký đề tài nhóm Quản lý trên forum là buổi 1 hoặc trực tiếp nộp cho GV.

+ Tuần 2 (buổi thứ 2) thuyết trình theo thứ tự. Lưu ý các nhóm cần có mặt đủ và mang theo tất cả các tài liệu liên quan đến GHW khi đi thuyết trình.

+ Hình thức nộp bài: Nộp file và biên bản làm việc nhóm qua mail cho GV

- Quy định về giờ giấc, chuyên cần, kỷ luật trong khóa học: Lên lớp đúng giờ, dự tối thiểu 80% thời gian học trên lớp (chỉ được phép vắng mặt tối đa 20% số tiết học). Nếu vắng quá số tiết quy định sẽ bị cấm thi theo quy chế. Có đầy đủ điểm kiểm tra, điểm thi kết thúc học phần & nhiệt tình thảo luận, phát biểu xây dựng bài, nghiêm túc trong giờ học.

9. Phụ trách môn học

- Khoa/Bộ môn: Bộ môn Lý luận và Khoa học chính trị, Khoa Chính trị - Hành chính
- Email liên hệ: daotao.spas@vnuhcm.edu.vn.

KT. Trưởng Bộ môn
Phó trưởng Bộ môn



Lê Văn Thông

TP. Hồ Chí Minh, ngày 01 tháng 10 năm 2023

KT. TRƯỞNG KHOA
PHÓ TRƯỞNG KHOA



TS. Nguyễn Đình Quốc Cường

ĐẠI HỌC QUỐC GIA TP. HỒ CHÍ MINH
KHOA CHÍNH TRỊ - HÀNH CHÍNH

ĐỀ CƯƠNG CHI TIẾT MÔN HỌC
(dành cho trường Đại học Quốc Tế)

1. Thông tin tổng quát

Tên môn học:

Tiếng Việt

Tiếng Anh

- Mã số môn học:

Thuộc khối kiến thức/kỹ năng:

☒ Kiến thức cơ bản/giáo dục đại cương

☐ Kiến thức chuyên ngành

☐ Môn học chuyên về kỹ năng chung

- Số tín chỉ:

Lý thuyết

Thực hành

- Môn học tiên quyết:

- Môn học trước:

- Môn học song hành:

Chủ nghĩa xã hội khoa học

Scientific socialism

PA21GEP03

☐ Kiến thức cơ sở ngành

☐ Kiến thức khác

☐ Môn học đồ án/luận văn tốt nghiệp

2 (30 tiết)

30 tiết

Triết học Mác – Lênin

2. Mô tả môn học

(Vị trí của môn học đối với chương trình đào tạo (CTĐT), những mục đích và nội dung chính yếu của môn học)

Môn học thuộc phần kiến thức giáo dục đại cương trong khối kiến thức cơ bản về lý luận chính trị.

Trang bị cho sinh viên những kiến thức cơ bản về chủ nghĩa xã hội khoa học: Đối tượng, phương pháp nghiên cứu, ý nghĩa của việc nghiên cứu chủ nghĩa xã hội khoa học; về sứ mệnh lịch sử của giai cấp công nhân; về chủ nghĩa xã hội và thời kỳ quá độ lên chủ nghĩa xã hội; về dân chủ xã hội chủ nghĩa và nhà nước xã hội chủ nghĩa; về cơ cấu xã hội - giai cấp và liên minh giai cấp, tầng lớp trong thời kỳ quá độ lên chủ nghĩa xã hội; về vấn đề dân tộc và tôn giáo trong thời kỳ quá độ lên chủ nghĩa xã hội.

Môn học có mối quan hệ trực tiếp tới việc giáo dục lập trường, tư tưởng cho sinh viên, cũng như cung cấp kiến thức chuyên sâu cho sinh viên trong cách nhìn nhận các vấn đề chính trị xã hội.

3. Tài liệu học tập

(Các giáo trình, tài liệu tham khảo, các phần mềm, không quá 5 cuốn)

Giáo trình:

- Bộ Giáo dục và Đào tạo (2021), *Giáo trình Chủ nghĩa xã hội khoa học*, (dùng cho



- khối không chuyên ngành lý luận chính trị) Nxb. Chính trị quốc gia, Hà Nội.
- Bộ Giáo dục và Đào tạo (2012), *Giáo trình Những Nguyên lý cơ bản của chủ nghĩa Mác – Lênin*, Nxb. Chính trị quốc gia, Hà Nội.
 - Hội đồng Trung ương (2008), *Giáo trình Chủ nghĩa xã hội khoa học*, Nxb. Chính trị quốc gia, Hà Nội.

Tài liệu khác:

[1] Tên tác giả (năm xuất bản), *Tên giáo trình*. Nơi xuất bản: Tên nhà xuất bản

Phần mềm:

[..] Tên hãng phần mềm (năm phát hành/phần mềm). *Tên phần mềm...*

4. Mục tiêu môn học

(Các mục tiêu tổng quát của môn học, thể hiện sự liên quan với các chuẩn đầu ra (X.x.x) của CTĐT và trình độ năng lực (TĐNL) được phân bổ cho môn học)

Mục tiêu (1)	Mô tả mục tiêu (2)	CĐR của môn học tương ứng CTĐT (3)
G1	Về kiến thức - Sinh viên hiểu một cách có hệ thống những nội dung cơ bản của học phần chủ nghĩa xã hội khoa học. Cùng các môn lý luận chính trị và các môn học khác giúp sinh viên có nhận thức tổng hợp, toàn diện về chủ nghĩa Mác-Lênin, tư tưởng Hồ Chí Minh và con đường đi lên CNXH ở Việt Nam. - Sinh viên hiểu những tri thức khoa học để luận giải sự ra đời tất yếu của chủ nghĩa xã hội, những nhiệm vụ, giải pháp cần thực hiện trong quá trình xây dựng chủ nghĩa xã hội nói chung và ở Việt Nam nói riêng. - Sinh viên hiểu những căn cứ khoa học để chống lại những nhận thức sai lệch và sự chống phá của các thế lực thù địch.	
G2	Về kỹ năng Sinh viên phân tích, đánh giá, giải quyết các vấn đề chính trị xã hội nảy sinh trong thực tiễn. Và vận dụng quan điểm khoa học của chủ nghĩa Mác - Lênin để nhận diện được âm mưu diễn biến hòa bình của các thế lực phản động, thù địch.	
G3	Về thái độ/năng lực tự chủ và trách nhiệm Sinh viên đánh giá được sự cần thiết của việc học tập các môn lý luận chính trị; có niềm tin vào mục tiêu, lý tưởng xã hội chủ nghĩa và con đường đi lên chủ nghĩa xã hội; tin tưởng vào sự thành công của công cuộc đổi mới do Đảng Cộng sản Việt Nam khởi xướng và lãnh đạo.	

(1): Ký hiệu mục tiêu của môn học. (2): Mô tả các mục tiêu bao gồm các động từ chủ động, các chủ đề CĐR (X.x.x) và bối cảnh áp dụng tổng quát

(3), (4): Ký hiệu CDR của CTĐT và TDNL tương ứng được phân bổ cho môn học.

5. Chuẩn đầu ra môn học

(Các mục cụ thể hay CDR của môn học và mức độ giảng dạy I, T, U)

CDR (1)	Mô tả CDR (2)	Mức độ giảng dạy (I, T, U) (3)
G1.1	Sinh viên hiểu những kiến thức cơ bản, hệ thống về sự ra đời, các giai đoạn phát triển; đối tượng, phương pháp nghiên cứu và ý nghĩa của việc học tập, nghiên cứu chủ nghĩa xã hội khoa học. Trên cơ sở đó tạo điều kiện để sinh viên nghiên cứu các phạm trù tiếp theo của chủ nghĩa xã hội khoa học.	I, T
G1.2	Sinh viên hiểu những nội dung cơ bản của lý luận về sứ mệnh lịch sử toàn thể giới của giai cấp công nhân, biểu hiện và ý nghĩa của sứ mệnh đó trong bối cảnh hiện nay.	I, T
G1.3	Sinh viên hiểu những kiến thức cơ bản và hệ thống quan điểm của chủ nghĩa Mác - Lênin về hình thái kinh tế - xã hội cộng sản chủ nghĩa, về chủ nghĩa xã hội, thời kỳ quá độ lên chủ nghĩa xã hội và quá độ lên chủ nghĩa xã hội bỏ qua chế độ tư bản chủ nghĩa ở Việt Nam.	T, U
G1.4	Sinh viên hiểu đầy đủ và đúng bản chất của nền dân chủ xã hội chủ nghĩa và nhà nước xã hội chủ nghĩa, quan điểm của Đảng Cộng sản Việt Nam về việc xây dựng và hoàn thiện nền dân chủ và nhà nước xã hội chủ ở Việt Nam hiện nay.	T, U
G1.5	Sinh viên hiểu những kiến thức nền tảng về cơ cấu xã hội - giai cấp và liên minh giai cấp, tầng lớp trong thời kỳ quá độ lên chủ nghĩa xã hội. Giúp sinh viên hiểu rõ vị trí, vai trò của những giai cấp, tầng lớp cơ bản trong quá trình xây dựng đất nước và nội dung của liên minh giai cấp, tầng lớp trong thời kỳ quá độ lên chủ nghĩa xã hội ở Việt Nam.	T, U
G1.6	Sinh viên hiểu quan điểm cơ bản chủ nghĩa Mác-Lênin về vấn đề dân tộc, tôn giáo. Sinh viên nắm được những nội dung cơ bản của chính sách dân tộc, tôn giáo của Đảng và Nhà nước ta.	T, U
G1.7	Sinh viên hiểu những quan điểm cơ bản của chủ nghĩa Mác - Lênin, tư tưởng Hồ Chí Minh và Đảng Cộng sản Việt Nam về gia đình, xây dựng gia đình trong thời kỳ quá độ lên chủ nghĩa xã hội, xây dựng gia đình ở Việt Nam hiện nay.	T, U
G2.1	Sinh viên phân tích lý luận – thực tiễn về các vấn đề đặt ra trong cuộc sống một cách đúng đắn và nhận diện những biến đổi xã hội ở nước ta	U

CĐR (1)	Mô tả CĐR (2)	Mức độ giảng dạy (I, T, U) (3)
	trong thời kỳ quá độ lên chủ nghĩa xã hội.	
G2.2	Sinh viên vận dụng những nội dung trong bài học để phân tích, giải thích những vấn đề trong thực tiễn một cách khách quan, có cơ sở khoa học.	U
G2.3	Sinh viên vận dụng kiến thức môn học để làm việc nhóm, quản lý nhóm	U
G3.1	Xây dựng và củng cố niềm tin vào lý tưởng cộng sản chủ nghĩa, vào con đường đi lên chủ nghĩa xã hội, góp phần xây dựng thành công chủ nghĩa xã hội ở Việt Nam.	T, U
G3.2	Có ý thức chính trị - xã hội, thái độ kiên định về lập trường, tư tưởng, có tinh thần đấu tranh bảo vệ lẽ phải, bảo vệ những quan điểm, chủ trương, chính sách đúng đắn của Đảng và Nhà nước; chống lại biểu hiện thờ ơ về chính trị và những quan điểm sai trái, thù địch cũng như những biểu hiện tiêu cực trong đời sống xã hội.	U
G3.3	Có năng lực dạy học, tự nghiên cứu các vấn đề liên quan đến chủ nghĩa Mác- Lênin, tư tưởng Hồ Chí Minh, đường lối, sách lược của Đảng, Nhà nước.	U

(1): Ký hiệu CĐR của môn học

(2): Mô tả CĐR, bao gồm các động từ chủ động, các chủ đề CĐR ở cấp độ 4 (X.x.x.x) và bối cảnh áp dụng cụ thể.

(3): I (Introduce): giới thiệu; T (Teach): dạy; U (Utilize): sử dụng

6.Đánh giá môn học

(Các thành phần, các bài đánh giá, các tiêu chí đánh giá, chuẩn đánh giá, và tỷ lệ đánh giá, thể hiện sự tương quan với các CĐR của môn học)

Thành phần đánh giá (1)	Bài đánh giá (2)	CĐR môn học (3)	Tỷ lệ % (6)
A1. Đánh giá quá trình	A1.1. Chuyên cần A1.2. Thuyết trình nhóm, bài tập lớn, thu hoạch...	G1.1 - G1.7, G2.1 - G2.3, G3.1- G3.3	30%
A2. Đánh giá giữa kỳ (Quiz)	A2.1. Trắc nghiệm (đề đóng) hoặc tự luận (được tham khảo tài liệu) thời gian làm bài 45 phút	G1.1 - G1.3, G2.1 - G2.3, G3.1- G3.3	20%
A3. Đánh giá cuối kỳ (FEX)	A3.1. Thi đề chung. Đề thi bao quát toàn bộ nội dung môn học bằng hình thức tự luận (đề mở). Thời gian 60 phút.	G1.1 - G1.7, G2.1 - G2.3, G3.1- G3.3	50%

(1): các thành phần đánh giá của môn học. (2): các bài đánh giá
 (3): các CDR được đánh giá. (4): tiêu chí đánh giá. (5): chuẩn đánh giá
 (6): Tỷ lệ điểm của các bài đánh giá trong tổng điểm môn học

6. Kế hoạch giảng dạy chi tiết

Tuần/Buổi học (1)	Nội dung (2)	Hoạt động dạy và học (3)	CDRMH (4)
1/2 tiết	Giới thiệu về môn học Chương 1: NHẬP MÔN CHỦ NGHĨA XÃ HỘI KHOA HỌC 1. SỰ RA ĐỜI CỦA CHỦ NGHĨA XÃ HỘI KHOA HỌC <i>1.1.. Hoàn cảnh lịch sử sự ra đời của chủ nghĩa xã hội khoa học</i> <i>1.2. Vai trò của C. Mác và Ăngghen</i>	Dạy: - Thông báo quy định giảng dạy, học tập. - Công bố quy định kiểm tra, đánh giá môn học - Giới thiệu nội dung môn học - Giới thiệu nội dung đề tài thuyết trình nhóm, chia nhóm Học ngoài lớp: - Đọc trước tài liệu chương 1. Dạy: thuyết giảng Học ở lớp: Thảo luận và phát biểu trên lớp.	G1.1 G2.1 G2.2 G3.1 G3.1 G3.3
2/2 tiết	Chương 1: NHẬP MÔN CHỦ NGHĨA XÃ HỘI KHOA HỌC 2. CÁC GIAI ĐOẠN PHÁT TRIỂN CƠ BẢN CỦA CHỦ NGHĨA XÃ HỘI KHOA HỌC <i>2.1. C.Mác và Ph.Ăngghen phát triển chủ nghĩa xã hội khoa học</i> <i>2.2. V.I.Lênin vận dụng và phát triển chủ nghĩa xã hội khoa học trong điều kiện mới</i> <i>2.3. Sự vận dụng và phát triển sáng tạo chủ nghĩa xã hội khoa học từ sau khi Lênin qua đời đến nay</i> 3. ĐỐI TƯỢNG, PHƯƠNG PHÁP VÀ Ý NGHĨA CỦA VIỆC NGHIÊN CỨU CHỦ NGHĨA XÃ HỘI KHOA HỌC <i>3.1. Đối tượng nghiên cứu của chủ nghĩa xã hội khoa học</i>	Dạy: thuyết giảng phần 1; 2.1. Hướng dẫn tự đọc phần còn lại. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp: - Phác thảo nội dung thuyết trình nhóm GHW - Đọc trước tài liệu chương 2.	G1.1 G2.1 G2.2 G3.1 G3.1 G3.3



	3.2. Phương pháp nghiên cứu của chủ nghĩa xã hội khoa học 3.3. Ý nghĩa của việc nghiên cứu chủ nghĩa xã hội khoa học		
3/ 2 tiết	Chương 2 SỨ MỆNH LỊCH SỬ CỦA GIAI CẤP CÔNG NHÂN 1. Quan điểm cơ bản của chủ nghĩa Mác - Lênin về giai cấp công nhân và sứ mệnh lịch sử thế giới của giai cấp công nhân 1.1. Khái niệm và đặc điểm của giai cấp công nhân 1.2. Nội dung và đặc điểm sứ mệnh lịch sử của giai cấp công nhân 1.3. Những điều kiện quy định sứ mệnh lịch sử của giai cấp công nhân. 2. Giai cấp công nhân và việc thực hiện sứ mệnh lịch sử của giai cấp công nhân hiện nay 2.1. Giai cấp công nhân hiện nay 2.2. Thực hiện sứ mệnh lịch sử của giai cấp công nhân trên thế giới hiện nay	Dạy: thuyết giảng, phát vấn, chấm phần biện. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp: - Đọc trước tài liệu mục 3, chương 2	G1.2 G2.1 G2.2 G3.1 G3.1 G3.3
4/ 2 tiết	Chương 2: SỨ MỆNH LỊCH SỬ CỦA GIAI CẤP CÔNG NHÂN (tiếp theo) 3. SỨ MỆNH LỊCH SỬ CỦA GIAI CẤP CÔNG NHÂN VIỆT NAM 3.1. Đặc điểm của giai cấp công nhân Việt Nam 3.2. Nội dung sứ mệnh lịch sử của giai cấp công nhân Việt Nam hiện nay 3.3. Phương hướng và một số giải pháp chủ yếu để xây dựng giai cấp công nhân Việt Nam hiện nay	Dạy: thuyết giảng, phát vấn, chấm phần biện. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp: - Đọc trước tài liệu chương 3	G1.2 G2.1 G2.2 G3.1 G3.1 G3.3
5/ 2 tiết	Chương 3: CHỦ NGHĨA XÃ HỘI VÀ THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI 1. CHỦ NGHĨA XÃ HỘI 1.1. Chủ nghĩa xã hội, giai đoạn đầu của hình thái kinh tế - xã hội công sản chủ	Dạy: thuyết giảng, phát vấn, chấm phần biện. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp:	G1.3 G2.1 G2.2 G3.1 G3.1 G3.3

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	nghĩa 1.2. Điều kiện ra đời chủ nghĩa xã hội Những đặt trưng cơ bản của chủ nghĩa xã hội 2. THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI 2.1. Tính tất yếu khách quan của thời kỳ quá độ lên chủ nghĩa xã hội 2.2. Đặc điểm của thời kỳ quá độ lên chủ nghĩa xã hội	- Đọc trước tài liệu mục 3, chương 3	
6/ 2 tiết	Chương 3: CHỦ NGHĨA XÃ HỘI VÀ THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI (tiếp theo) 3. QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI Ở VIỆT NAM 3.1. Quá độ lên chủ nghĩa xã hội bỏ qua chế độ tư bản chủ nghĩa 3.2. Những đặc trưng cơ bản của chủ nghĩa xã hội và phương hướng xây dựng chủ nghĩa xã hội ở Việt Nam hiện nay	Dạy: thuyết giảng, phát vấn, chấm phần biện. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp: - ôn tập, chuẩn bị kiểm tra giữa kỳ	G1.3 G2.1 G2.2 G3.1 G3.1 G3.3
7/ 2 tiết	-Kiểm tra giữa kỳ -Hướng dẫn tự đọc các nội dung của chương 4.5.6	Dạy: Tổ chức kiểm tra giữa kỳ, hướng dẫn tự học Học ở lớp: Làn bài thi Học ngoài lớp: - Đọc trước tài liệu chương 4	G1.1, G1.2, G1.3 G2.1, G2.2, G2.3 G3.1, G3.1, G3.3
8 /2 tiết	Chương 4: DÂN CHỦ XÃ HỘI CHỦ NGHĨA VÀ NHÀ NƯỚC XÃ HỘI CHỦ NGHĨA 1. DÂN CHỦ VÀ DÂN CHỦ XÃ HỘI CHỦ NGHĨA 1.1. Dân chủ và sự ra đời, phát triển của dân chủ 1.2. Dân chủ xã hội chủ nghĩa 2. NHÀ NƯỚC XÃ HỘI CHỦ NGHĨA 2.1. Sự ra đời, bản chất, chức năng của nhà nước xã hội chủ nghĩa 2.2. Mối quan hệ giữa dân chủ xã hội chủ nghĩa và nhà nước xã hội chủ nghĩa	Dạy: thuyết giảng, phát vấn, chấm phần biện. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp: Đọc trước tài liệu mục 3, chương 4	G1.4 G2.1 G2.2 G3.1 G3.1 G3.3

9/ 2 tiết	Chương 4: DÂN CHỦ XÃ HỘI CHỦ NGHĨA VÀ NHÀ NƯỚC XÃ HỘI CHỦ NGHĨA (tiếp theo) 3. DÂN CHỦ XÃ HỘI CHỦ NGHĨA VÀ NHÀ NƯỚC PHÁP QUYỀN XÃ HỘI CHỦ NGHĨA Ở VIỆT NAM 3.1. Dân chủ xã hội chủ nghĩa ở Việt Nam 3.2. Nhà nước pháp quyền xã hội chủ nghĩa ở Việt Nam 3.3. Phát huy dân chủ xã hội chủ nghĩa, xây dựng nhà nước pháp quyền xã hội chủ nghĩa ở Việt Nam hiện nay	Dạy: thuyết giảng, phát vấn, chấm phần biện. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp: Đọc trước tài liệu chương 5	G1.4 G2.1 G2.2 G3.1 G3.1 G3.3
10/ 2 tiết	Chương 5: CƠ CẤU XÃ HỘI - GIAI CẤP VÀ LIÊN MINH GIAI CẤP, TẦNG LỚP TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI 1. CƠ CẤU XÃ HỘI GIAI CẤP TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI 1.1. Khái niệm và vị trí của cơ cấu xã hội - giai cấp trong cơ cấu xã hội 1.2. Sự biến đổi có tính quy luật của cơ cấu xã hội - giai cấp trong thời kỳ quá độ lên chủ nghĩa xã hội 2. LIÊN MINH GIAI CẤP, TẦNG LỚP TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI 2.1. Tính tất yếu của liên minh giai cấp, tầng lớp trong thời kỳ quá độ lên chủ nghĩa xã hội 2.2. Nội dung của liên minh giai cấp, tầng lớp trong thời kỳ quá độ lên chủ nghĩa xã hội	Dạy: thuyết giảng, phát vấn, chấm phần biện. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp: Đọc trước tài liệu mục 3, chương 5	G1.5 G2.1 G2.2 G3.1 G3.1 G3.3
11/ 2 tiết	Chương 5: CƠ CẤU XÃ HỘI - GIAI CẤP VÀ LIÊN MINH GIAI CẤP, TẦNG LỚP TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI (tiếp theo) 3. CƠ CẤU XÃ HỘI - GIAI CẤP VÀ LIÊN MINH GIAI CẤP, TẦNG LỚP	Dạy: thuyết giảng, phát vấn, chấm phần biện. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp: Đọc trước tài liệu	G1.5 G2.1 G2.2 G3.1 G3.1 G3.3

	TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI Ở VIỆT NAM 3.1. Cơ cấu xã hội - giai cấp trong thời kỳ quá độ lên chủ nghĩa xã hội ở Việt Nam. 3.2. Liên minh giai cấp, tầng lớp trong thời kỳ quá độ lên chủ nghĩa xã hội ở Việt Nam.	chương 6	
12/ 2 tiết	Chương 6: VẤN ĐỀ DÂN TỘC VÀ TÔN GIÁO TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI 1. DÂN TỘC TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI 1.1. Chủ nghĩa Mác - Lênin về dân tộc 1.2. Dân tộc và quan hệ dân tộc ở Việt Nam	Dạy: thuyết giảng, phát vấn, chấm phần biện. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp: Đọc trước tài liệu mục 2, 3 chương 6	G1.6 G2.1 G2.2 G3.1 G3.1 G3.3
13/ 2 tiết	Chương 6: VẤN ĐỀ DÂN TỘC VÀ TÔN GIÁO TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI (tiếp theo) 2. TÔN GIÁO TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI 2.1. Chủ nghĩa Mác - Lênin về tôn giáo. 2.2. Tôn giáo ở Việt Nam và chính sách tôn giáo của Đảng, Nhà nước ta hiện nay 3. QUAN HỆ DÂN TỘC VÀ TÔN GIÁO Ở VIỆT NAM 3.1. Đặc điểm quan hệ dân tộc và tôn giáo ở Việt Nam 3.2. Định hướng giải quyết mối quan hệ dân tộc và tôn giáo ở Việt Nam hiện nay.	Dạy: thuyết giảng, phát vấn, chấm phần biện. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp: Đọc trước tài liệu chương 7	G1.6 G2.1 G2.2 G3.1 G3.1 G3.3
14/ 2 tiết	Chương 7: VẤN ĐỀ GIA ĐÌNH TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI 1. KHÁI NIỆM, VỊ TRÍ VÀ CHỨC NĂNG CỦA GIA ĐÌNH 1.1. Khái niệm gia đình 1.2. Vị trí của gia đình trong xã hội 1.3. Chức năng cơ bản của gia đình	Dạy: thuyết giảng, phát vấn, chấm phần biện. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp: Đọc trước tài liệu mục 3, chương 7	G1.7 G2.1 G2.2 G3.1 G3.1 G3.3



	2. CƠ SỞ XÂY DỰNG GIA ĐÌNH TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI 2.1. Cơ sở kinh tế - xã hội 2.2. Cơ sở chính trị - xã hội 2.3. Cơ sở văn hóa		
15/ 2 tiết	Chương 7: VẤN ĐỀ GIA ĐÌNH TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI (tiếp theo) 3. XÂY DỰNG GIA ĐÌNH VIỆT NAM TRONG THỜI KỲ QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI 3.1. Sự biến đổi gia đình Việt Nam trong thời kỳ quá độ lên chủ nghĩa xã hội 3.2. Phương hướng cơ bản xây dựng và phát triển gia đình Việt Nam trong thời kỳ quá độ lên chủ nghĩa xã hội. - Ôn tập thi cuối kỳ	Dạy: thuyết giảng, phát vấn, chấm phản biện. Học ở lớp: Thảo luận và phát biểu trên lớp. Học ngoài lớp: Ôn tập thi cuối kỳ	G1.7 G2.1 G2.2 G3.1 G3.1 G3.3

(Các nội dung giảng dạy theo buổi học, thể hiện sự tương quan với các CĐR của môn học, các hoạt động dạy và học (ở lớp, ở nhà) và các bài đánh giá của môn học)

Lý thuyết

- (1): Thông tin về tuần/buổi học. (2): Liệt kê nội dung giảng dạy theo chương, mục
(3): Liệt kê CĐR liên quan của môn học (ghi ký hiệu Gx.x),
(4): Liệt kê các hoạt động dạy và học (ở lớp, ở nhà), bao gồm đọc trước tài liệu (nếu có yêu cầu)
(5): Liệt kê các bài đánh giá liên quan (ghi ký hiệu Ax.x)

Thực hành

Tuần/Buổi học (1)	Nội dung (2)	CĐR môn học (3)	Hoạt động dạy và học (4)	Bài đánh giá (5)

- (1): Thông tin về tuần/buổi học. (2): Liệt kê nội dung thực hành theo bài thực hành
(3): Liệt kê CĐR liên quan của môn học (ghi ký hiệu Gx.x),
(4): Liệt kê các hoạt động dạy và học (ở lớp, ở nhà), bao gồm đọc trước tài liệu (nếu có yêu cầu)
(5): Liệt kê các bài đánh giá liên quan (ghi ký hiệu Ax.x)

7. Quy định của môn học

- Quy định về Bài thuyết trình nhóm GHW:
- + Thành lập nhóm: Số lượng sinh viên tùy tình hình thực tế của lớp, giảng viên quy định. Hạn chót đăng ký đề tài nhóm Quản lý trên forum là Buổi 2 hoặc trực tiếp nộp cho GV buổi 1.
- + Các nhóm thuyết trình theo thứ tự, giảng viên quy định. Lưu ý các nhóm cần có mặt đủ và mang theo tất cả các tài liệu liên quan đến GHW khi đi thuyết trình.
- + Hình thức nộp bài: Nộp file và biên bản làm việc nhóm qua mail cho GV
- Quy định về giờ giấc, chuyên cần, kỷ luật trong khóa học:
- + Lên lớp đúng giờ, dự tối thiểu 80% thời gian học trên lớp (chỉ được phép vắng mặt tối đa 20% số tiết học). Nếu vắng quá số tiết quy định sẽ bị cấm thi theo quy chế.
- + Có đầy đủ các phần điểm quá trình, điểm kiểm tra giữa kỳ điểm thi kết thúc học phần.
- Khi có các thắc mắc liên quan môn học, sinh viên có thể liên lạc với quản lý Bộ môn Lý luận và khoa học chính trị và Khoa Chính trị - Hành chính qua email: daotao.spas@vnuhcm.edu.vn

8. Phụ trách môn học

- Khoa/Bộ môn: Bộ môn Lý luận và khoa học chính trị - Khoa Chính trị - Hành chính (ĐHQG TP.HCM)
- Địa chỉ và email liên hệ: Tầng 7, nhà Điều hành ĐHQG. Khu phố 1. Phường Linh Trung, TP. Thủ Đức. Đại chỉ mail: daotao.spas@vnuhcm.edu.vn

KT. Trưởng Bộ môn
Phó trưởng Bộ môn (phụ trách)



TS. Mạch Thị Khánh Trinh

Tp. Hồ Chí Minh, ngày 14 tháng 10 năm 2023

KT. TRƯỞNG KHOA
PHÓ TRƯỞNG KHOA




TS. Nguyễn Đình Quốc Cường



ĐỀ CƯƠNG CHI TIẾT MÔN HỌC
(DÀNH CHO TRƯỜNG ĐẠI HỌC QUỐC TẾ, ĐHQG-HCM)

1. THÔNG TIN CHUNG (General information)

- Tên môn học:
- + Tiếng Việt
- + Tiếng Anh
- Mã số môn học:
- Thuộc khối kiến thức/kỹ năng:
- ☒ Kiến thức cơ bản/giáo dục đại cương
- ☐ Kiến thức chuyên ngành
- ☐ Môn học chuyên về kỹ năng chung
- Số tín chỉ:
- + Lý thuyết
- + Thực hành (thuyết trình)
- Môn học tiên quyết:
- Môn học trước:
- Môn học song hành:
- Lịch sử Đảng Cộng sản Việt Nam**
History of Vietnamese communist party
PE018IU
- ☐ Kiến thức cơ sở ngành
- ☐ Kiến thức khác
- ☐ Môn học đồ án/luận văn tốt nghiệp
- 02
- 20 tiết
- 10 tiết (trên lớp)
- 60 tiết (về nhà)
- Không
- Không

2. MÔ TẢ MÔN HỌC (Course description)

Môn học nằm trong khối kiến thức giáo dục đại cương thuộc mảng lý luận chính trị. Môn học với những kiến thức cơ bản, hệ thống về Lịch sử Đảng Cộng sản Việt Nam như: sự ra đời của Đảng Cộng sản Việt Nam, sự lãnh đạo của Đảng trong đấu tranh giành chính quyền, giải phóng dân tộc và xây dựng chủ nghĩa xã hội từ năm 1930 đến năm nay.

3. MỤC TIÊU MÔN HỌC (Course Goals)

Mục tiêu (1)	Mô tả mục tiêu (2)	CDR của môn học tương ứng CTĐT (3)
G1	Về kiến thức Sinh viên hiểu được những tri thức cơ bản, có tính hệ thống về sự ra đời của Đảng Cộng sản Việt Nam (1920-1930), sự lãnh đạo của Đảng đối với cách mạng Việt Nam trong thời kỳ đấu tranh giành chính quyền chính quyền (1930-1945), trong hai cuộc kháng chiến chống thực dân	

	Pháp và đế quốc Mỹ xâm lược (1945-1975), trong sự nghiệp xây dựng, bảo vệ Tổ quốc thời kỳ cả nước quá độ lên chủ nghĩa xã hội, tiến hành công cuộc đổi mới (1975 đến nay).	
G2	Về kỹ năng Sinh viên vận dụng phương pháp tư duy khoa học về lịch sử để lựa chọn, khái quát hóa tài liệu nghiên cứu, học tập môn học; đồng thời sinh viên phân tích, đánh giá, vận dụng kiến thức lịch sử vào công tác thực tiễn.	
G3	Về thái độ/năng lực tự chủ và trách nhiệm Sinh viên đánh giá được sự thật khách quan và nâng cao lòng tự hào, niềm tin đối với sự nghiệp lãnh đạo của Đảng và phê phán những quan niệm sai trái về lịch sử của Đảng.	

4. CHUẨN ĐẦU RA MÔN HỌC (Course learning outcomes)

CDR (1)	Mô tả CDR (2)	Mức độ giảng dạy (3)
G1.1	Hiểu được đối tượng, chức năng, nhiệm vụ nội dung và phương pháp nghiên cứu, học tập môn Lịch sử Đảng Cộng sản Việt Nam	I,U
G1.2	Hiểu được quá trình ra đời của Đảng Cộng sản Việt Nam (1920-1930), nội dung cơ bản, giá trị lịch sử của Cương lĩnh chính trị đầu tiên của Đảng và quá trình Đảng lãnh đạo cuộc đấu tranh giành độc lập, giành chính quyền (1930-1945)	I, T,U
G1.3	Hiểu được quá trình lãnh đạo của Đảng đối với hai cuộc kháng chiến chống thực dân Pháp và đế quốc Mỹ xâm lược, hoàn thành giải phóng dân tộc, thống nhất đất nước thời kỳ 1945-1975	I, T,U
G1.4	Hiểu được quá trình phát triển đường lối và sự lãnh đạo của Đảng để đưa cả nước quá độ lên chủ nghĩa xã hội và tiến hành công cuộc đổi mới từ sau ngày thống nhất đất nước năm 1975 đến nay. Những thành tựu và bài học kinh nghiệm trong quá trình lãnh đạo từ năm 1930 đến nay.	I, T,U
G2.1	Vận dụng kiến thức đã học để nhận thức, hành động theo đường lối của Đảng.	U
G2.2	Vận dụng, phân tích với tư duy độc lập trong nghiên cứu nhằm giải quyết các vấn đề khi làm việc theo nhóm và trình bày kết quả nghiên cứu.	U
G3.1	Đánh giá được sự lãnh đạo đúng đắn của Đảng Cộng sản Việt Nam đối với cách mạng nước ta. Quyết tâm phấn đấu thực hiện đường lối cách mạng của Đảng.	U

G3.2	Đánh giá được tầm quan trọng của sự nghiêm túc trong học tập và nghiên cứu, tự rèn luyện bản thân trở thành người có phẩm chất chính trị và đạo đức tốt.	U

5. ĐÁNH GIÁ MÔN HỌC

Thành phần đánh giá (1)	Bài đánh giá (2)	CDR môn học (3)	Tỷ lệ % (4)
A1. Đánh giá quá trình	- Chuyên cần (A1.1) - Tham gia học tập trên lớp tích cực, hăng hái phát biểu (A1.2) - Thuyết trình nhóm (A1.3)	G1.1, G1.2- G1.3, G2.1, G2.2- G2.3 G3.1-G3.2	30%
A2. Đánh giá giữa kỳ	Kiểm tra giữa kỳ (A2.1)	G1.1 G2.1-G2.2, G3.1-G3.2	20%
A3. Đánh giá cuối kỳ	Thi cuối học kỳ (A3.1)	G1.2-G1.3, G2.1-G2.2, G3.1-G3.2	50%

6. KẾ HOẠCH GIẢNG DẠY CHI TIẾT

Tuần/Buổi học (1)	Nội dung (2)	Hoạt động dạy và học (3)	CDRMH (4)
1/2 tiết	Chương nhập môn ĐỐI TƯỢNG, CHỨC NĂNG, NHIỆM VỤ, NỘI DUNG VÀ PHƯƠNG PHÁP NGHIÊN CỨU, HỌC TẬP LỊCH SỬ ĐẢNG CỘNG SẢN VIỆT NAM I. Đối tượng nghiên cứu của môn học lịch sử Đảng Cộng sản Việt Nam II. Chức năng, nhiệm vụ của môn học lịch sử Đảng Cộng sản Việt Nam III. Phương Pháp nghiên cứu, học tập môn lịch sử Đảng Cộng sản Việt Nam	Hoạt động dạy: - Giới thiệu đề cương môn học - Giới thiệu nội dung đề tài thuyết trình nhóm) - Trình chiếu, thuyết giảng Hoạt động học: - Chia nhóm - Giới thiệu nhóm học tập - Nghe giảng, phát biểu - Đọc trước mục 1, 2 phần I của chương 1	G1.1 G2.1 G2.2 G3.1 G3.2
	Chương 1 ĐẢNG CỘNG SẢN VIỆT NAM RA ĐỜI VÀ LÃNH ĐẠO	Hoạt động dạy: - Trình chiếu, thuyết giảng mục	

TH.
KH
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G A

2/2 tiết	ĐẤU TRANH GIÀNH CHÍNH QUYỀN (1930-1945) I. Đảng cộng sản Việt Nam ra đời và cương lĩnh chính trị đầu tiên của Đảng (tháng 2 – 1930) 1. Bối cảnh lịch sử 2. Nguyễn Ái Quốc chuẩn bị các điều kiện để thành lập Đảng	1,2 phần I của chương 1 - Đặt vấn đề và giải quyết vấn đề Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Đọc trước mục 3,4 phần I của chương 1	G1.2 G2.1 G2.2 G3.1 G3.2
3/2 tiết	Chương 1 (tiếp theo) I. Đảng cộng sản Việt Nam ra đời và cương lĩnh chính trị đầu tiên của Đảng (tháng 2 – 1930) (tt) 3. Thành lập Đảng Cộng sản Việt Nam và Cương lĩnh chính trị đầu tiên của Đảng 4. Ý nghĩa lịch sử của việc thành lập Đảng Cộng sản Việt Nam	Hoạt động dạy: - Trình chiếu, thuyết giảng mục 3,4 phần I của chương 1 - Đặt vấn đề và giải quyết vấn đề Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Đọc trước mục 1, 2 phần II của chương 1	G1.1 G1.2 G2.1 G2.2 G3.1 G3.2
4/2 tiết	Chương 1 (tiếp theo) II. Lãnh đạo đấu tranh giành chính quyền (1930-1945) 1. Phong trào cách mạng 1930-1935 và khôi phục phong trào 1932-1935 2. Phong trào dân chủ 1936-1939	Hoạt động dạy: - Trình chiếu, thuyết giảng mục 1, 2 phần II của chương 1 - Đặt vấn đề và giải quyết vấn đề Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Đọc trước mục 3, 4 phần II của chương 1	G1.2 G2.1 G2.2 G3.1 G3.2

5/2 tiết	II. Lãnh đạo đấu tranh giành chính quyền (1930-1945) (tt) 3. Phong trào giải phóng dân tộc 1939-1945 4. Tính chất, ý nghĩa và kinh nghiệm của Cách mạng Tháng Tám năm 1945	Hoạt động dạy: - Trình chiếu, thuyết giảng mục 3, 4 phần II của chương 1 - Đặt vấn đề và giải quyết vấn đề Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Đọc trước mục 1,2 phần I của chương 2	G1.2 G1.3 G2.1 G2.2 G3.1 G3.2
6/2 tiết	Chương 2 ĐẢNG LÃNH ĐẠO HAI CUỘC KHÁNG CHIẾN, HOÀN THÀNH GIẢI PHÓNG DÂN TỘC, THỐNG NHẤT ĐẤT NƯỚC (1945-1975) I. Lãnh đạo xây dựng, bảo vệ chính quyền cách mạng, kháng chiến chống thực dân Pháp xâm lược 1945-1954 1. Xây dựng và bảo vệ chính quyền cách mạng 1945-1946 2. Đường lối kháng chiến toàn quốc và quá trình tổ chức thực hiện từ năm 1946 đến năm 1950	Hoạt động dạy: - Trình chiếu, thuyết giảng mục 1, 2 phần I của chương 2 - Đặt vấn đề và giải quyết vấn đề Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Đọc trước mục 3, 4 phần I của chương 2	G1.3 G2.1 G2.2 G3.1 G3.2
7/2 tiết	Chương 2 (tiếp theo) I. Lãnh đạo xây dựng, bảo vệ chính quyền cách mạng, kháng chiến chống thực dân Pháp xâm lược 1945-1954 (tt) 3. Đẩy mạnh cuộc kháng chiến đến thắng lợi 1951-1954 4. Ý nghĩa lịch sử và kinh nghiệm của Đảng trong lãnh đạo kháng chiến chống Pháp và can thiệp Mỹ	Hoạt động dạy: - Trình chiếu, thuyết giảng mục 3, 4 phần I của chương 2 - Đặt vấn đề và giải quyết vấn đề Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Đọc trước mục 1 phần II của chương 2	G1.3 G2.1 G2.2 G3.1 G3.2

8/2 tiết	Chương 2 (tiếp theo) II. Lãnh đạo xây dựng chủ nghĩa xã hội ở miền bắc và kháng chiến chống đế quốc Mỹ xâm lược, giải phóng miền nam, thống nhất đất nước (1954-1975) <i>1. Sự lãnh đạo của Đảng đối với cách mạng hai miền Nam – Bắc 1954-1965</i>	Hoạt động dạy: - Trình chiếu, thuyết giảng mục 1 phần II của chương 2 - Đặt vấn đề và giải quyết vấn đề Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Đọc trước mục 2,3 phần II của chương 2	G1.3 G2.1 G2.2 G3.1 G3.2
9/2 tiết	Chương 2 (tiếp theo) II. Lãnh đạo xây dựng chủ nghĩa xã hội ở miền bắc và kháng chiến chống đế quốc Mỹ xâm lược, giải phóng miền nam, thống nhất đất nước (1954-1975) (tt) <i>2. Lãnh đạo cách mạng cả nước giai đoạn 1965-1975</i> <i>3. Ý nghĩa lịch sử và kinh nghiệm lãnh đạo của Đảng thời kỳ 1954-1975</i>	Hoạt động dạy: - Trình chiếu, thuyết giảng mục 2,3 phần II của chương 2 - Đặt vấn đề và giải quyết vấn đề Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Ôn tập nội dung chương 1,2	G1.3 G2.1 G2.2 G3.1 G3.2
10/2 tiết	Chương 3 ĐẢNG LÃNH ĐẠO CẢ NƯỚC QUÁ ĐỘ LÊN CHỦ NGHĨA XÃ HỘI VÀ TIẾN HÀNH CÔNG CUỘC ĐỔI MỚI (1975 ĐẾN NAY) I. Lãnh đạo cả nước xây dựng chủ nghĩa xã hội và bảo vệ tổ quốc (1975-1986) <i>1. Xây dựng chủ nghĩa xã hội và bảo vệ Tổ quốc 1975-1981</i>	Hoạt động dạy: - Trình chiếu, thuyết giảng mục 1 phần I của chương 3 - Đặt vấn đề và giải quyết vấn đề - Tổ chức kiểm tra giữa kỳ Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Thực hiện kiểm tra giữa kỳ - Đọc trước mục 2	G1.4 G2.1 G2.2 G3.1 G3.2

		phần I của chương 3	
11/2 tiết	Chương 3 (tiếp theo) I. Lãnh đạo cả nước xây dựng chủ nghĩa xã hội và bảo vệ tổ quốc (1975-1986) (tt) 1. Xây dựng chủ nghĩa xã hội và bảo vệ Tổ quốc 1975-1981 (tt) 2. Đại hội đại biểu toàn quốc lần thứ V của Đảng và các bước đột phá tiếp tục đổi mới kinh tế 1982-1986	Hoạt động dạy: - Trình chiếu, thuyết giảng mục 1 phần I của chương 3 - Đặt vấn đề và giải quyết vấn đề Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Đọc trước mục 1 phần II của chương 3	G1.4 G2.1 G2.2 G3.1 G3.2
12/2 tiết	Chương 3 (tiếp theo) II. Lãnh đạo công cuộc đổi mới, đẩy mạnh công nghiệp hóa, hiện đại hóa và hội nhập quốc tế (1986 đến nay) 1. Đổi mới toàn diện, đưa đất nước ra khỏi khủng hoảng kinh tế - xã hội 1986-1996	Hoạt động dạy: - Trình chiếu, thuyết giảng mục 1 phần II của chương 3 - Đặt vấn đề và giải quyết vấn đề Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Đọc trước mục 2 phần II của chương 3	G1.4 G2.1 G2.2 G3.1 G3.2
13/2 tiết	Chương 3 (tiếp theo) II. Lãnh đạo công cuộc đổi mới, đẩy mạnh công nghiệp hóa, hiện đại hóa và hội nhập quốc tế (1986 đến nay) (tt) 1. Đổi mới toàn diện, đưa đất nước ra khỏi khủng hoảng kinh tế - xã hội 1986-1996 (tt) 2. Tiếp tục công cuộc đổi mới, đẩy mạnh công nghiệp hóa, hiện đại hóa và hội nhập quốc tế 1996 đến nay	Hoạt động dạy: - Trình chiếu, thuyết giảng mục 1, 2 phần II của chương 3 - Đặt vấn đề và giải quyết vấn đề Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Đọc trước mục 3 phần II của chương 3	G1.4 G2.1 G2.2 G3.1 G3.2

		3	
14/2 tiết	Chương 3 (tiếp theo) II. Lãnh đạo công cuộc đổi mới, đẩy mạnh công nghiệp hóa, hiện đại hóa và hội nhập quốc tế (1986 đến nay) (tt) 2. Tiếp tục công cuộc đổi mới, đẩy mạnh công nghiệp hóa, hiện đại hóa và hội nhập quốc tế 1996 đến nay (tt) 3. Thành tựu, kinh nghiệm của công cuộc đổi mới	Hoạt động dạy: - Trình chiếu, thuyết giảng mục 2,3 phần II của chương 3 - Đặt vấn đề và giải quyết vấn đề Hoạt động học: - Nghe giảng, thuyết trình, thảo luận nhóm. - Đọc trước phần kết luận	G1.4 G2.1 G2.2 G3.1 G3.2
15/2 tiết	KẾT LUẬN 1. Những thắng lợi vĩ đại của cách mạng Việt Nam. 2. Những bài học lớn về sự lãnh đạo của Đảng	Hoạt động dạy: - Hướng dẫn sv tự học - Ôn tập tổng kết môn học - Công bố bảng điểm chi tiết các hoạt động - Giải đáp thắc mắc Hoạt động học: - Nghe giảng, phát biểu - Ôn tập toàn bộ nội dung môn học tại nhà	G1.1 G1.2 G1.3 G1.4 G2.1 G2.2 G3.1 G3.2

7. QUY ĐỊNH CỦA MÔN HỌC (Course requirements and expectations)

- Quy định về Bài thuyết trình nhóm:
 - Thành lập nhóm: Số lượng sinh viên tùy vào sĩ số lớp, do giảng viên quy định. Hạn chót đăng ký đề tài nhóm Quản lý trên forum/Moodle là Buổi 2 hoặc trực tiếp nộp cho GV buổi 1.
 - Các nhóm thuyết trình theo thứ tự được phân công. Lưu ý các nhóm cần có mặt đủ và mang theo tất cả các tài liệu liên quan khi thuyết trình.
 - Hình thức nộp bài: Nộp file và biên bản làm việc nhóm qua mail cho GV
- Quy định về giờ giấc, chuyên cần, kỷ luật trong khóa học: Lên lớp đúng giờ, dự tối thiểu 80% thời gian học trên lớp (chỉ được phép vắng mặt tối đa 20% số tiết học). Nếu vắng quá số tiết quy định sẽ bị điểm 0 chuyên cần.

8. TÀI LIỆU HỌC TẬP, THAM KHẢO (Reference)

Giáo trình:

[1] Bộ Giáo dục và Đào tạo (2021), *Giáo trình Lịch sử Đảng Cộng sản Việt Nam* (dành cho bậc đại học hệ không chuyên lý luận chính trị), NXB. Chính trị Quốc gia Sự Thật, Hà Nội.

Tài liệu khác:

[1] Hội đồng Trung ương chỉ đạo biên soạn giáo trình quốc gia các môn khoa học Mác – Lênin, Tư tưởng Hồ Chí Minh (2019), *Giáo trình Lịch sử Đảng Cộng sản Việt Nam* (tái bản có sửa chữa, bổ sung), Nxb. Chính trị quốc gia, Hà Nội.

[2] Bộ Giáo dục và Đào tạo (2017), *Giáo trình Đường lối cách mạng của Đảng Cộng sản Việt Nam*, Nxb Chính trị quốc gia, Hà Nội.

Tp. Hồ Chí Minh, ngày 01 tháng 01 năm 2023

KT. Trưởng Bộ môn
Phó trưởng Bộ môn



Lê Văn Thông

KT. TRƯỞNG KHOA
PHÓ TRƯỞNG KHOA



TS. Nguyễn Đình Quốc Cường

ĐỀ CƯƠNG CHI TIẾT HỌC PHẦN
(DÀNH CHO TRƯỜNG ĐẠI HỌC QUỐC TẾ)

1. Thông tin về giảng viên (cung cấp cho sinh viên khi giảng dạy)

- Họ và tên:
- Chức danh, học hàm, học vị:
- Đơn vị công tác: **Khoa Chính trị - Hành chính, ĐHQG-HCM**
- Thời gian và địa điểm làm việc:...
- Địa chỉ liên hệ:
- Điện thoại, email:
- Thông tin về trợ giảng (nếu có) (họ và tên, địa chỉ liên hệ, điện thoại, e-mail):

2. Thông tin chung về học phần

- Mã học phần: PE019IU
- Tên học phần: **Tư tưởng Hồ Chí Minh**
- Tên học phần bằng tiếng Anh: **Ho Chi Minh's Thoughts**
- Số tín chỉ: 02 (30 tiết).
- Cấu trúc/cơ cấu học phần:
 - Số tiết lý thuyết: *30 tiết*
 - Số tiết thực hành:
 - Số tiết bài tập:
 - Khác: Số tiết tự học: *60 tiết*
- Loại học phần thuộc khối kiến thức (check vào các ô):
 - Kiến thức đại cương: ☒
 - Kiến thức cơ sở ngành: ☐
 - Kiến thức chuyên ngành: ☐
 - Kiến thức bổ trợ: ☐
 - Khóa luận tốt nghiệp: ☐
 - Đồ án/dự án/seminar tốt nghiệp: ☐
 - Khác:....
- Các học phần tiền quyết: **không** hoặc **có**, nếu **có** thì điền các thông tin sau
- Các học phần học trước học phần này: **không** hoặc **có**, nếu **có** thì điền các thông tin sau
 -
 -
- Học phần song hành: **không** hoặc **có**, nếu **có** thì điền các thông tin sau
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- Các yêu cầu khác (nếu có):.....

- Bộ môn phụ trách học phần: Lý luận và Khoa học chính trị, Khoa Chính trị - Hành chính

3. Mô tả vắn tắt nội dung học phần: (trình bày ngắn gọn vai trò, vị trí học phần/môn học, kiến thức sẽ trang bị cho sinh viên, quan hệ với các học phần/môn học khác trong chương trình đào tạo)

Môn học thuộc phần kiến thức giáo dục đại cương trong khối kiến thức cơ bản về lý luận chính trị Trang bị cho sinh viên những kiến thức cơ bản về: Đối tượng, phương pháp nghiên cứu và ý nghĩa học tập môn tư tưởng Hồ Chí Minh; về cơ sở, quá trình hình thành và phát triển tư tưởng Hồ Chí Minh; về độc lập dân tộc và chủ nghĩa xã hội; về Đảng Cộng sản và Nhà nước Việt Nam; về đại đoàn kết dân tộc và đoàn kết quốc tế; về văn hóa, đạo đức, con người.

4. Mục tiêu của học phần

- **Mục tiêu chung:**

+ Sinh viên **hiểu** được những nội dung cơ bản của tư tưởng Hồ Chí Minh về con đường cách mạng Việt Nam; về độc lập dân tộc gắn liền với chủ nghĩa xã hội; về Đảng Cộng sản Việt Nam; về Nhà nước pháp quyền xã hội chủ nghĩa Việt Nam; về đại đoàn kết dân tộc và đoàn kết quốc tế; về văn hóa, đạo đức và con người...

+ Sinh viên **vận dụng** được những kiến thức cơ bản của tư tưởng Hồ Chí Minh vào trong nhận thức và trong hoạt động thực tiễn của bản thân.

+ Sinh viên **phân tích, đánh giá** được giá trị, tính khoa học cách mạng và nhân văn của tư tưởng Hồ Chí Minh đối với thực tiễn Việt Nam và nhân loại.

- **Mục tiêu cụ thể:**

Ký hiệu mục tiêu của học phần (G)	Mô tả/nội dung mục tiêu học phần	Mức độ năng lực đạt được (theo thang đánh giá Bloom)	Ghi chú
KIẾN THỨC			
G1.1	Sinh viên hiểu những kiến thức cơ bản về khái niệm; cơ sở, quá trình hình thành và phát triển tư tưởng Hồ Chí Minh; tư tưởng Hồ Chí Minh về độc lập dân tộc gắn liền với chủ nghĩa xã hội;	2	
G1.2	Sinh viên hiểu những nội dung cơ bản của tư tưởng Hồ Chí Minh về Đảng Cộng sản Việt Nam; về Nhà nước của nhân dân, do nhân dân, vì nhân dân; về sự vận dụng của Đảng Cộng sản Việt Nam trong cách mạng dân tộc dân chủ và cách mạng xã hội chủ nghĩa, trong công cuộc đổi mới đất nước hiện nay.	2	
G1.3	Sinh viên hiểu những nội dung cơ bản của tư tưởng Hồ Chí Minh về đại đoàn kết dân tộc và đại đoàn kết quốc tế; hiểu những nội dung cơ bản của tư tưởng Hồ Chí Minh về văn hóa, đạo đức và con	2	

	người.		
KỸ NĂNG			
G2.1	Sinh viên vận dụng giá trị của tư tưởng Hồ Chí Minh trong hoạt động lý luận và thực tiễn; Sinh viên phân tích, nhận diện và phản bác những luận điệu xuyên tạc về tư tưởng Hồ Chí Minh về độc lập dân tộc và chủ nghĩa xã hội.	3	
G2.2	Sinh viên phân tích được một cách khoa học những vấn đề về xây dựng Đảng cộng sản Việt Nam và xây dựng Nhà nước pháp quyền xã hội chủ nghĩa của nhân dân, do nhân dân, vì nhân dân trong thời kỳ đổi mới đất nước.	4	
G2.3	Sinh viên vận dụng tư tưởng Hồ Chí Minh về đại đoàn kết dân tộc và đoàn kết quốc tế trong giai đoạn hiện nay; Sinh viên vận dụng được phương pháp tư duy mới trong học tập, nghiên cứu; tự mình biết đào sâu lý luận gắn với thực tiễn với tinh thần độc lập, sáng tạo.	3	
THÁI ĐỘ			
G3.1	Sinh viên vận dụng, học tập và làm theo tư tưởng, đạo đức, phong cách Hồ Chí Minh trong học tập và cuộc sống hằng ngày.	3	
G3.2	Sinh viên đánh giá được bản chất khoa học và cách mạng của tư tưởng Hồ Chí Minh, từ đó có bản lĩnh chính trị vững vàng, có lòng yêu nước nồng nàn, trung thành với mục tiêu lý tưởng của Đảng, của dân tộc. Trung thực, thẳng thắn, xây dựng tập thể đoàn kết. Trân trọng, giữ gìn và phát huy di sản tư tưởng của Hồ Chí Minh trong hoạt động thực tiễn.	5	
G3.3	Sinh viên vận dụng bản chất khoa học và cách mạng của tư tưởng Hồ Chí Minh trong việc đấu tranh chống lại các âm mưu xuyên tạc tư tưởng Hồ Chí Minh, chủ trương, đường lối của Đảng. Có hành vi đạo đức chuẩn mực. Có năng lực học tập, tự nghiên cứu các vấn đề chuyên môn.	3	

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(*) 1. Ghi nhớ (Remembering), 2. Hiểu (Understanding), 3. Vận dụng (Applying), 4. Phân tích (Analyzing), 5. Đánh giá (Evaluating), 6. Sáng tạo (Creating).

5. Chuẩn đầu ra (CDR) của học phần

Thứ tự các	Ký hiệu CDR	Mô tả/nội dung CDR học phần	Mức độ giảng dạy	Liên kết giữa CDR	Liên kết giữa CDR học

CDR	học phần (CHP)		(I, T, U) *	học phần và mục tiêu học phần	phần và CDR chương trình đào tạo
KIẾN THỨC					
1	CHP1	Hiểu được khái niệm, đối tượng, phương pháp nghiên cứu và ý nghĩa học tập môn tư tưởng Hồ Chí Minh.	I	G1.1	
2	CHP2	Hiểu được cơ sở, quá trình hình thành và phát triển tư tưởng Hồ Chí Minh.	I, T, U	G1.1	
3	CHP3	Hiểu được kiến thức cơ bản tư tưởng Hồ Chí Minh về độc lập dân tộc và chủ nghĩa xã hội. Sự vận dụng của Đảng vào trong sự nghiệp cách mạng hiện nay.	I, T,U	G1.1	
4	CHP4	Hiểu được kiến thức cơ bản tư tưởng Hồ Chí Minh về Đảng Cộng Sản Việt Nam và Nhà nước của nhân dân, do nhân dân, vì nhân dân. Sự vận dụng tư tưởng Hồ Chí Minh vào công tác xây dựng Đảng và xây dựng Nhà nước.	I, T,U	G1.2	
5	CHP5	Hiểu được kiến thức cơ bản tư tưởng Hồ Chí Minh về đại đoàn kết toàn dân tộc và đoàn kết quốc tế. Sự vận dụng của Đảng vào trong sự nghiệp cách mạng hiện nay;	I, T,U	G1.3	
6	CHP6	Hiểu được kiến thức cơ bản tư tưởng Hồ Chí Minh về văn hóa, đạo đức, con người. Sự vận dụng tư tưởng Hồ Chí Minh trong việc xây dựng văn hóa, đạo đức, con người Việt Nam hiện nay.	I, T,U	G1.3	
KỸ NĂNG					
7	CHP7	Phân tích mang tính khái quát hóa để rút ra <i>Từ khóa tri thức</i> đối với mỗi nội dung và tư duy có hệ thống.	T, U	G2.1; G2.2; G2.3	
8	CHP8	Vận dụng kiến thức học phần để trình bày, thuyết	U	G2.1; G2.2;	

		minh, phản biện, tranh luận, hùng biện những tri thức lý luận đang học tập, nghiên cứu dựa trên thực tiễn.		G2.3	
9	CHP9	Vận dụng kiến thức học phần để giao tiếp xã hội, hợp tác và làm việc nhóm, chia sẻ tri thức và kinh nghiệm, khả năng điều hành nhóm làm việc.	U	G2.1; G2.2; G2.3	
THÁI ĐỘ					
10	CHP10	Phân tích, đánh giá và có ý thức trách nhiệm bảo vệ tính khoa học, cách mạng, nhân văn của tư tưởng Hồ Chí Minh.	T, U	G3.1 G3.2 G3.3	
11	CHP11	Vận dụng kiến thức đã học gắn với trách nhiệm cá nhân đối với tập thể, cộng đồng.	U	G3.1 G3.2 G3.3	
12	CHP12	Phân tích, đánh giá được sự cần thiết của việc học tập, nghiên cứu suốt đời và vận dụng tư tưởng Hồ Chí Minh trong cuộc sống.	T, U	G3.1 G3.2 G3.3	

(*) I (Introduce): giới thiệu; T (Teach): dạy; U (Utilize): sử dụng

6. Hình thức, phương pháp và trọng số đánh giá kết quả học phần

Hình thức đánh giá	Nội dung chi tiết	Phương pháp đánh giá (đánh dấu X)				Ký hiệu bài đánh giá	Trọng số đánh giá	Ghi chú
		Viết	Trắc nghiệm	Vấn đáp	Khác			
Đánh giá quá trình	- Chuyên cần - Tham gia học tập trên lớp tích cực, hăng hái phát biểu. -Thuyết trình nhóm					ĐG1 (tổng điểm từ ĐG1.1 đến ĐG1.6)	30%	
Điểm kiểm tra giữa kỳ		X	X	X		ĐG1.1	20%	

Đánh giá tổng kết	Điểm cuối học kỳ	X				ĐG2	50%	Điểm bài thi + điểm thường (tối đa 20%=2 điểm)

7. **Thang điểm đánh giá:** theo thang điểm 100.

8. **Kế hoạch giảng dạy chi tiết của học phần :** Ghi chi tiết đến 2 cấp (chương và bài).

STT Buổi (3 tiết/ buổi)	Tên bài giảng của học phần (Ghi chi tiết tên chương và bài giảng của mỗi chương)	Liên kết với CĐR học phần	Hoạt động dạy và học						Phương pháp dạy học (thuyết trình; thảo luận; các phương pháp dạy học tích cực/lấy người học làm trung tâm...)	Bài đánh giá
			Số tiết lên lớp				SV tự nghiên cứu, tự học			
			Lý thuyết	Thực hành/ thực tập	Bài tập	Thảo luận/ khác	Số tiết	Ghi chú (nếu có)		
1/2	Chương 1. Khái niệm, đối tượng, phương pháp nghiên cứu và ý nghĩa học tập môn tư tưởng Hồ Chí Minh		02						Thuyết trình	ĐG1.1; ĐG1.6; ĐG2
2/2	Chương 2. Cơ sở, quá trình hình thành và phát triển tư tưởng Hồ Chí Minh		02						Thuyết trình, thảo luận nhóm	ĐG1.1; ĐG1.3; ĐG1.5; ĐG1.6; ĐG2
3/2	Chương 2 (tiếp)		01			01			Thuyết trình, thảo luận nhóm	ĐG1.1; ĐG1.3; ĐG1.5; ĐG1.6; ĐG2
4/2	Chương 2 (tiếp)		02						Thuyết trình, thảo luận nhóm	ĐG1.1; ĐG1.3; ĐG1.5; ĐG1.6; ĐG2
5/2	Chương 3. Tư tưởng Hồ Chí								Thuyết trình,	ĐG1.1; ĐG1.3;

	Mình về độc lập dân tộc và chủ nghĩa xã hội		02					thảo luận nhóm	ĐG1.5; ĐG1.6; ĐG2
6/2	Chương 3(tiếp)		01			01		Thuyết trình, thảo luận nhóm	ĐG1.1; ĐG1.3; ĐG1.5; ĐG1.6; ĐG2
7/2	Chương 3(tiếp)		01			01			
8/2	Chương 4. Tư tưởng Hồ Chí Minh về Đảng Cộng sản Việt Nam và Nhà nước của nhân dân, do nhân dân và vì nhân dân		02					Thuyết trình, thảo luận nhóm	ĐG1.1; ĐG1.3; ĐG1.5; ĐG1.6; ĐG2
9/2	Chương 4 (tiếp)		02					Thuyết trình, thảo luận nhóm	ĐG1.1; ĐG1.3; ĐG1.5; ĐG1.6; ĐG2
10/2	Chương 4 (tiếp)					02		Thuyết trình, thảo luận nhóm	ĐG1.1; ĐG1.3; ĐG1.5; ĐG1.6; ĐG2
11/2	Chương 5. Tư tưởng Hồ Chí Minh về đại đoàn kết toàn dân tộc và đoàn kết quốc tế		02					Thuyết trình, thảo luận nhóm	ĐG1.1; ĐG1.3; ĐG1.5; ĐG1.6; ĐG2
12/2	Chương 5 (tiếp)		01			01		Thuyết trình, thảo luận nhóm	ĐG1.1; ĐG1.3; ĐG1.5; ĐG1.6; ĐG2
13/2	Chương 6. Tư tưởng Hồ Chí Minh về văn hóa, đạo đức, con người		02					Thuyết trình, thảo luận nhóm	ĐG1.1; ĐG1.3; ĐG1.5; ĐG1.6; ĐG2
14/2	Chương 6 (tiếp)		02					Thuyết trình, thảo luận nhóm	ĐG1.1; ĐG1.3; ĐG1.5; ĐG1.6; ĐG2
15/2	Chương 6 (tiếp)					02		Thuyết trình, thảo	ĐG1.1; ĐG1.3; ĐG1.5;

ĐẠI HỌC CHÍ MINH

									luận nhóm	ĐG1.6; ĐG2
	Tổng cộng số tiết		22	...	...	08	...	...		

9. Tài liệu học tập

STT	Tên tác giả	Năm xuất bản	Tên giáo trình	Tên Nhà xuất bản	Giáo trình chính/Tài liệu tham khảo/Khác	Nơi có thể có tài liệu/trang web
1	Bộ Giáo dục và Đào tạo	2021	<i>Giáo trình Tư tưởng Hồ Chí Minh</i>	Nxb. Chính trị quốc gia Sự thật, Hà Nội.	Giáo trình chính	
2	Hồ Chí Minh	2011	<i>Toàn tập</i>	Nxb. Chính trị quốc gia Sự thật, Hà Nội.	Tài liệu tham khảo	Báo điện tử Đảng Cộng sản Việt Nam, https://hochiminh.vn/tac-pham-cua-ho-chi-minh/ho-chi-minh-toan-tap
3	Hồ Chí Minh	2016	<i>Biên niên tiểu sử</i>	Nxb. Chính trị quốc gia Sự thật, Hà Nội.	Tài liệu tham khảo	

10. Quy định của môn học

- Khi có các thắc mắc liên quan môn học, sinh viên có thể liên lạc với quản lý Bộ môn Lý luận và Khoa học chính trị và Khoa Chính trị - Hành chính qua email: daotao.spas@vnuhcm.edu.vn
- Quy định về Bài thuyết trình nhóm:
 - + Thành lập nhóm: Theo tình hình thực tế của lớp học.
 - + Hạn chót đăng ký đề tài nhóm Quản lý trên forum là Buổi 2.
 - + Bắt đầu từ tuần 4 thuyết trình theo thứ tự. Lưu ý các nhóm cần có mặt đủ và mang theo tất cả các tài liệu liên quan đến bài tập khi đi thuyết trình.
 - + Hình thức nộp bài: Nộp file và biên bản làm việc nhóm qua mail cho GV
- Quy định về đánh giá môn học: theo Quy định về việc giảng dạy và học tập các môn Lý luận chính trị của khoa Chính trị - Hành chính.

KT. Trưởng Bộ môn
Phó trưởng Bộ môn



Lê Văn Thông

Tp. Hồ Chí Minh, ngày 01 tháng 10 năm 2023

KT. TRƯỞNG KHOA
PHÓ TRƯỞNG KHOA



TS. Nguyễn Đình Quốc Cường



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
Department of Mathematics

COURSE SYLLABUS
Course Name: Calculus 1

Course Code: **MA001IU**

1. General information

Course designation	This course equips students with basic concepts of calculus: limits, continuity, differentiation, and integration. Applications of these concepts are extensively discussed.
Semester(s) in which the course is taught	1, 2
Person responsible for the course	
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lectures, assignments
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 120 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60 (lectures) Private study including examination preparation, specified in hours ¹ : 60
Credit points	4
Required and recommended prerequisites for joining the	None

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

course																		
Course objectives	1. To provide students with the main ideas and techniques of calculus. These include limits, continuity, differentiation, and integration. 2. To introduce practical applications of these ideas and techniques, through practical examples taken from many areas of engineering, business, and life sciences. 3. To develop skills in mathematical modelling and problem solving, ability to think logically, and adapt these skilss creatively to new situations																	
Course learning outcomes	Upon the successful completion of this course students will be able to: <table><tr><td>Competency level</td><td colspan="2">Course learning outcome (CLO)</td></tr><tr><td>Knowledge</td><td colspan="2"> CLO1. Have basic knowledge of limits and derivatives (Program outcomes: a) CLO2. Have basic knowledge of definite/indefinite integrals (Program outcomes: a) </td></tr><tr><td>Skill</td><td colspan="2"> CLO3. Can compute often used limits, can define and compute derivatives (Program outcomes: a, j) CLO4. Can compute standard types of integrals. Use integrals in practical situations (Program outcomes: a, j) </td></tr><tr><td>Attitude</td><td colspan="2">CLO5. Confident when dealing with derivatives and integrals. Comfortable with using derivatives and integrals in practical situations. (Program outcome: j, k)</td></tr></table>			Competency level	Course learning outcome (CLO)		Knowledge	CLO1. Have basic knowledge of limits and derivatives (Program outcomes: a) CLO2. Have basic knowledge of definite/indefinite integrals (Program outcomes: a)		Skill	CLO3. Can compute often used limits, can define and compute derivatives (Program outcomes: a, j) CLO4. Can compute standard types of integrals. Use integrals in practical situations (Program outcomes: a, j)		Attitude	CLO5. Confident when dealing with derivatives and integrals. Comfortable with using derivatives and integrals in practical situations. (Program outcome: j, k)				
Competency level	Course learning outcome (CLO)																	
Knowledge	CLO1. Have basic knowledge of limits and derivatives (Program outcomes: a) CLO2. Have basic knowledge of definite/indefinite integrals (Program outcomes: a)																	
Skill	CLO3. Can compute often used limits, can define and compute derivatives (Program outcomes: a, j) CLO4. Can compute standard types of integrals. Use integrals in practical situations (Program outcomes: a, j)																	
Attitude	CLO5. Confident when dealing with derivatives and integrals. Comfortable with using derivatives and integrals in practical situations. (Program outcome: j, k)																	
Content	The description of the contents should clearly indicate the weighting of the content and the level. Weight: lecture session (4 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><td>Topic</td><td>Weight</td><td>Level</td></tr><tr><td>Review: Set theory and mapping. Functions and Graphs, Inverse Functions, Exponential and Logarithmic Functions</td><td>1</td><td>I, T</td></tr><tr><td>Parametric Curves, Limit. One-sided Limits, Laws of Limits</td><td>1</td><td>I, T</td></tr><tr><td>Evaluating Limits. The Squeeze Theorem. Continuity. The Intermediate Value Theorem</td><td>1</td><td>T, U</td></tr><tr><td>Tangent Lines and Velocity Problems. Rates of Change, Derivative.</td><td>1</td><td>T, U</td></tr></table>			Topic	Weight	Level	Review: Set theory and mapping. Functions and Graphs, Inverse Functions, Exponential and Logarithmic Functions	1	I, T	Parametric Curves, Limit. One-sided Limits, Laws of Limits	1	I, T	Evaluating Limits. The Squeeze Theorem. Continuity. The Intermediate Value Theorem	1	T, U	Tangent Lines and Velocity Problems. Rates of Change, Derivative.	1	T, U
Topic	Weight	Level																
Review: Set theory and mapping. Functions and Graphs, Inverse Functions, Exponential and Logarithmic Functions	1	I, T																
Parametric Curves, Limit. One-sided Limits, Laws of Limits	1	I, T																
Evaluating Limits. The Squeeze Theorem. Continuity. The Intermediate Value Theorem	1	T, U																
Tangent Lines and Velocity Problems. Rates of Change, Derivative.	1	T, U																

	Higher-Order Derivatives, Rules of Differentiation. Rates of Change in the Natural and Social Sciences	1	T, U
	Implicit Differentiation, Differentiation of Inverse Functions,	1	T, U
	Logarithmic Differentiation, Linear Approximations. Differentials.	1	T, U
	Related Rates, Maxima and Minima. Critical Point, The Mean Value Theorem.	1	T, U
	The First and Second Derivative Test, Concavity. Shapes of Curves, Curve Sketching	1	T, U
	Indeterminate Forms and l'Hôpital's Rules, Maxima and Minima Problems, Newton's Method	1	T, U
	Anti-derivatives and Indefinite Integrals, The Definite Integral	1	I, T
	Properties of the Definite Integral. The Fundamental Theorem of Calculus, Integration by Substitution	1	I, T, U
	Integration by Parts, Partial Fractions, Numerical Integration,	1	T, U
	Improper Integrals, Areas between Curves Areas Enclosed by Parametric Curves	1	T, U
	Volumes, Arc Length, Applications to Engineering, Economics and Science	1	T, U
Examination forms	Written examination		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.		
Reading list	J. Stewart, <i>Calculus</i> , Thomson Learning, 7 th edition, 2012.		

2. Learning Outcomes Matrix

The relationship between Course Learning Outcomes (CLO) (1-4) and Program/Student Learning Outcomes (PLO) (1-7) is shown in the following table:

	PLO						
CLO	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7
1	4	4					
2	4	3					
3			4	3			
4			3	3			
5							3

3. Planned learning activities and teaching methods

Week	Topics	CLO	Assessment	Teaching and Learning activities
1	Review: Set theory and mapping. Functions and Graphs, Inverse Functions Exponential and Logarithmic Functions	1,3		Lecture
2	Parametric Curves, Limit. One-sided Limits. Laws of Limits.	1,3	Quiz	Lectures and Quiz
3	Evaluating Limits. The Squeeze Theorem. Continuity. The Intermediate Value Theorem	3, 5	Quiz	Lectures and Quiz
4	The Tangent and Velocity Problems. Rates of Change, The Derivative.	3, 5	HW1	Lectures and HW
5	Higher-Order Derivatives, Rules of Differentiation. Rates of Change in the Natural and Social Sciences	3, 5	Quiz	Lectures and Quiz
6	Implicit Differentiation, Differentiation of Inverse Functions,	3, 5	HW2	Lectures and HW
7	Logarithmic Differentiation, Linear Approximations. Differentials.	3, 5	Quiz	Lectures and Quiz
8	Related Rates, Maxima and Minima. Critical Point, The Mean Value Theorem.	3, 5	HW3	Lectures and HW
Midterm Exam				
9	The First and Second Derivative Test, Concavity. Shapes of Curves, Curve Sketching	2, 4	Quiz	Lectures and Quiz
10	Indeterminate Forms and l'Hôpital's Rules, Maxima and Minima Problems, Newton's Method	2, 4	Quiz	Lectures and Quiz
11	Anti-derivatives and Indefinite Integrals, The Definite Integral	4, 5	HW4	Lectures and HW
12	Properties of the Definite Integral.	2, 4	Quiz	Lectures and Quiz

	The Fundamental Theorem of Calculus, Integration by Substitution			
13	Integration by Parts, Partial Fractions, Numerical Integration,	4, 5	Quiz	Lectures and Quiz
14	Improper Integrals, Areas between Curves Areas Enclosed by Parametric Curves	2, 4, 5	HW5	Lectures and HW
15	Volumes, Arc Length, Applications to Engineering, Economics and Science	1, 2, 3, 4, 5	Exercises	
Final Exam		1, 2, 3, 4, 5		

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5
In-class exercises/ quizzes (10%)	Qz1->Qz4 80% Pass	Qz5->Qz8 80%Pass	Qz1->Qz4 80% Pass	Qz5->Qz8 80% Pass	Qz2, 4, 6, 8 70% Pass
Homework exercises (10%)	HW1->H3 70% Pass	HW4, HW5 70%	HW1->HW3 70% Pass	HW4, HW5 70%	HW1->HW5 60% Pass
Midterm exam (30%)	Q1, Q2 80% Pass		Q3, Q4 70% Pass		Q5 50%
Final exam (50%)		Q1, Q2 80%Pass		Q3, Q4 70%Pass	Q5 50%

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Date revised: May 2025

Ho Chi Minh City, 03/06/2025
Department of Mathematics

Pham Huu Anh Ngoc



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
Department of Mathematics

COURSE SYLLABUS
Course Name: Calculus 2

Course Code: **MA003IU**

1. General information

Course designation	This course is a continuation of Calculus 1. Its aim is to equip student with basic concepts of sequence, series, vector functions, functions of several variables, multiple integrals and their applications
Semester(s) in which the course is taught	1, 2
Person responsible for the course	<i>Assoc. Prof. Mai Duc Thanh, Assoc. Prof. Tran Vu Khanh, Dr. Nguyen Minh Quan, Dr. Nguyen Anh Tu, Dr. Ta Quoc Bao.</i>
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lectures, assignments
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 120 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60 (lectures) Private study including examination preparation, specified in hours ¹ : 60
Credit points	4
Pre-courses	Calculus 1

¹ When calculating contact time, each contact hour is counted as a full hour because the organization of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course objectives	1. To provide students with the main ideas and techniques of calculus. These include sequences, series, functions of several variables, optimal problems, multiple integrals, vector calculus. 2. To introduce practical applications of these ideas and techniques, through practical examples taken from many areas of engineering, business, and life sciences. 3. To develop skills in mathematical modeling and problem solving, ability to think logically, and adapt these skills creatively to new situations														
Course learning outcomes	Upon the successful completion of this course students will be able to: <table><tr><td>Competency level</td><td colspan="2">Course learning outcome (CLO)</td></tr><tr><td>Knowledge</td><td colspan="2">CLO1. Have basic knowledge of series, functions of several variables, multiple integrals (Program outcomes: a) CLO2. Have basic knowledge of vector calculus (Program outcomes: a)</td></tr><tr><td>Skill</td><td colspan="2">CLO3. Can compute partial derivatives, multiple integral (Program outcomes: a, j) CLO4. Can show the convergence of a sequence and a series and use power series to simplify computation. Can show the optimal problem using partial derivatives, can find the volume of an object in higher dimension by using the multiple integrals (Program outcomes: i, h)</td></tr><tr><td>Attitude</td><td colspan="2">CLO5. Confident when dealing with partial derivatives, multiple integrals. Comfortable with using partial derivatives and multiple integrals in practical situations. (Program outcome: j, k)</td></tr></table>			Competency level	Course learning outcome (CLO)		Knowledge	CLO1. Have basic knowledge of series, functions of several variables, multiple integrals (Program outcomes: a) CLO2. Have basic knowledge of vector calculus (Program outcomes: a)		Skill	CLO3. Can compute partial derivatives, multiple integral (Program outcomes: a, j) CLO4. Can show the convergence of a sequence and a series and use power series to simplify computation. Can show the optimal problem using partial derivatives, can find the volume of an object in higher dimension by using the multiple integrals (Program outcomes: i, h)		Attitude	CLO5. Confident when dealing with partial derivatives, multiple integrals. Comfortable with using partial derivatives and multiple integrals in practical situations. (Program outcome: j, k)	
Competency level	Course learning outcome (CLO)														
Knowledge	CLO1. Have basic knowledge of series, functions of several variables, multiple integrals (Program outcomes: a) CLO2. Have basic knowledge of vector calculus (Program outcomes: a)														
Skill	CLO3. Can compute partial derivatives, multiple integral (Program outcomes: a, j) CLO4. Can show the convergence of a sequence and a series and use power series to simplify computation. Can show the optimal problem using partial derivatives, can find the volume of an object in higher dimension by using the multiple integrals (Program outcomes: i, h)														
Attitude	CLO5. Confident when dealing with partial derivatives, multiple integrals. Comfortable with using partial derivatives and multiple integrals in practical situations. (Program outcome: j, k)														
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (4 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><td>Topic</td><td>Weight</td><td>Level</td></tr><tr><td>Sequences and Convergence</td><td>1</td><td>I, T</td></tr><tr><td>Series</td><td>1</td><td>I, T</td></tr><tr><td>Tests for Convergence</td><td>1</td><td>T, U</td></tr></table>			Topic	Weight	Level	Sequences and Convergence	1	I, T	Series	1	I, T	Tests for Convergence	1	T, U
Topic	Weight	Level													
Sequences and Convergence	1	I, T													
Series	1	I, T													
Tests for Convergence	1	T, U													

	Power series	1	T, U
	Representations of Functions as Power series	1	T, U
	Taylor and Maclaurin series	1	T, U
	Vector Functions and Space Curves, Limit and continuity of vector functions	1	I, T
	Derivatives and Integrals of vector functions, Length of space curves	1	T, U
	Functions of Several Variables, Limits and Continuity	1	I, T
	Partial Derivatives, Tangent Plane and Linear Approximations	1	T, U
	Chain Rules, Directional Derivatives and Gradient	1	T, U
	Maximum and Minimum Values of Functions of two variables	1	T, U
	Lagrange Multipliers and Applications	1	T, U
	Double Integrals in Rectangles, Iterated Integrals	1	I, T
	Double, Triple Integrals in General regions and Applications	2	T, U
Examination forms	Written examination		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.		
Reading list	J. Stewart, <i>Calculus</i> , Thomson Learning, 7 th edition, 2012.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program/Student Learning Outcomes (SLO) (1-6) is shown in the following table:

	PLO						
CLO	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7
1	4	4					
2	4	3					
3			4	3			
4			3	3			
5							3

3. Planned learning activities and teaching methods

Week	Topics	CLO	Assessment	Teaching and Learning activities
1	Sequences, Series, The Integral Test and Estimates Sums, The comparison Tests	2, 4	HW	Lectures and Quiz
2	Alternating Series, Absolute Convergence and the Ratio and Roots Tests, Strategy for Testing Series	2, 4	HW	Lectures and Quiz
3	Power Series, Representations of Functions as Power Series, Taylor & Maclaurin Series, Applications of Taylor Polynomials	4, 5	Quiz	Lectures and Quiz
4	3D Coordinate Systems, Vectors, The Dot Product, The Cross Product, Equations of Lines and Planes, Functions of Surface.	2, 4	HW	Lectures and Quiz
5	Vector Functions and Space Curves, Derivatives and Integrals of Vector Functions, Arc Length, Parametric Surfaces	4, 5	HW	Lectures and Quiz
6	Functions of Several Variables, Limit and Continuity,	2, 4, 5	Quiz	Lectures and Quiz
7	Partial Derivatives, Tangent Planes and Linear Approximations,	3, 5	HW	Lectures and Quiz
8	Chain Rule, Directional Derivatives and Gradient Vectors,	3, 5	HW	Lectures and Quiz

Midterm Exam				
9	Maximum and Minimum Values, Lagrange Multipliers	2, 4	HW	Lectures and Quiz
10	Double Integrals over Rectangles, Iterated Integrals, Double Integrals over General Regions	2, 4	HW	Lectures and Quiz
11	Double Integrals in Polar Coordinates, Application of Double Integrals.	4, 5	HW	Lectures and Quiz
12	Triple Integrals, Triple Integrals in Cylindrical and Spherical Coordinates. Change of Variables in Multiple Integrals	2, 4	Quiz	Lectures and Quiz
13	Vector Fields, Line Integrals, the Fundamental Theorem for Line Integrals	4, 5	HW	Lectures and Quiz
14	Green's Theorem, Curl and Divergence, Surface Integrals	2, 4, 5	HW	Lectures and Quiz
15	Stokes' Theorem, Divergence Theorem.	1, 2, 3, 4,	Exercises	
Final Exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5
In-class exercises/ quizzes (10%)	Qz1->Qz4 80% Pass	Qz5->Qz8 80%Pass	Qz1->Qz4 80% Pass	Qz5->Qz8 80% Pass	Qz2, 4, 6, 8 70% Pass
Homework exercises (10%)	HW1->H3 70% Pass	HW4, HW5 70%	HW1->HW3 70% Pass	HW4, HW5 70%	HW1->HW5 60% Pass
Midterm exam (30%)	Q1, Q2 80% Pass		Q3, Q4 70% Pass		Q5 50%

Final exam (50%)		Q1, Q2 80%Pass		Q3, Q4 70%Pass	Q5 50%

Note: %Pass: Target that % of students have scores greater than 50 out of 100.

5. Date revised: May 2025

	Ho Chi Minh City, 03/06/2025 Department of Mathematics Pham Huu Anh Ngoc



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
Department of Mathematics

COURSE SYLLABUS
Course Name: Differential Equations

Course Code: **MA024IU**

1. General information

Course designation	This course introduces fundamental mathematical methods and analysis in ordinary differential equations and their applications and a short introduction to partial differential equations.
Semester(s) in which the course is taught	1, 2
Person responsible for the course	
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lectures, assignments
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 170 Contact hours (whether lecture, exercise, laboratory session, etc.): 50 (lectures) Private study including examination preparation, specified in hours ¹ : 120
Credit points	4 credits/6.18 ECTS
Required and recommended prerequisites for joining the course	MA003IU - Calculus 2

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course objectives	1. This course introduces the theory of ordinary differential equations. Topics discussed include first-order differential equations, existence and uniqueness theorems, second-order linear equations, higher-order linear equations, systems of equations, non-linear equations. 2. The relationship between differential equations and linear algebra is emphasized in this course. 3. Applications of differential equations in physics, engineering, biology, and economics are presented. 4. This course also gives a very brief introduction to partial differential equations in particular using separation variables to solve heat equation, wave equation, and Laplace equation.									
Course learning outcomes	Upon the successful completion of this course students will be able to: <table><tr><th>Competency level</th><th>Course learning outcome (CLO)</th></tr><tr><td>Knowledge</td><td>CLO1. Understand the concepts of differential equations and the methods to solve linear first/second differential equations. (Program outcomes: a) CLO2. Understand the method to solve linear n-th order differential equations. Know how to use separation of variable to solve the heat equation, wave equation and Laplace equation (Program outcomes: a)</td></tr><tr><td>Skill</td><td>CLO3. Can solve basic first order differential equations, higher order differential equations with constant coefficients and first order systems. (Program outcomes: a, j) CLO4. Can use partial differential equations to model and study real phenomena (Program outcomes: a, j)</td></tr><tr><td>Attitude</td><td>CLO5. Confident when applying differential equations to practical situations. (Program outcome: j, k)</td></tr></table>		Competency level	Course learning outcome (CLO)	Knowledge	CLO1. Understand the concepts of differential equations and the methods to solve linear first/second differential equations. (Program outcomes: a) CLO2. Understand the method to solve linear n -th order differential equations. Know how to use separation of variable to solve the heat equation, wave equation and Laplace equation (Program outcomes: a)	Skill	CLO3. Can solve basic first order differential equations, higher order differential equations with constant coefficients and first order systems. (Program outcomes: a, j) CLO4. Can use partial differential equations to model and study real phenomena (Program outcomes: a, j)	Attitude	CLO5. Confident when applying differential equations to practical situations. (Program outcome: j, k)
Competency level	Course learning outcome (CLO)									
Knowledge	CLO1. Understand the concepts of differential equations and the methods to solve linear first/second differential equations. (Program outcomes: a) CLO2. Understand the method to solve linear n -th order differential equations. Know how to use separation of variable to solve the heat equation, wave equation and Laplace equation (Program outcomes: a)									
Skill	CLO3. Can solve basic first order differential equations, higher order differential equations with constant coefficients and first order systems. (Program outcomes: a, j) CLO4. Can use partial differential equations to model and study real phenomena (Program outcomes: a, j)									
Attitude	CLO5. Confident when applying differential equations to practical situations. (Program outcome: j, k)									

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (4 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introduction Some Basic Mathematical Models; Direction Fields Solutions of Differential Equations Classification of Differential Equations	1	I, T
	First-order differential equations Linear Equations Method of Integrating Factors Separable Equations Modeling with First Order Equations	1	T, U
	Differences Between Linear and Nonlinear Equations Autonomous Equations and Population Dynamics Exact Equations and Integrating Factors	1	T,U
	Linear second-order differential equations Fundamental solution set of homogeneous equations Linear independence and Wronskian Homogeneous linear second-order differential equations with constant coefficients	2	T, U
	Non-homogeneous equations Method of undermined coefficients Variation of Parameters Mechanical and Electrical Vibrations Forced Vibrations	2	T, U
	Higher Order Linear Equations General Theory of nth Order Linear Equations Homogeneous Equations with Constant Coefficients Method of Undetermined Coefficients Variation of Parameters	2	T, U
	Basic Theory of Systems of First Order Linear Equations Homogeneous Linear Systems with Constant Coefficients	2	T, U
Non-homogeneous systems: Method of undetermined coefficients Variation of parameters	2	T, U	
Partial differential equations Separation of variables Heat conduction in a bar Wave equation, Laplace equation	2		
Examination forms	Written examination		

Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.
Reading list	1. W.E. Boyce, R.C. DiPrime, Elementary Differential Equations and Boudnary Value problems, 8th Edition, John Wiley & Sons. 2. P. Hartman, Ordinary differential equations, SIAM Classics in applied mathematics 38, 2nd edition, Birkhauser, 1982 3. J.K. Hale, Ordinary differential equations, 2nd ed., Robert E. Krieger Publishing Co., Inc., Huntington, New York, 1980.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program Intended Learning Outcomes (ILO) (1-6) is shown in the following table:

	ILO										
CLO	a	b	c	d	e	f	g	h	i	j	k
1	x										
2	x										
3										x	
4										x	
5										x	x

3. Planned learning activities and teaching methods

Week	Topics	CLO	Assessment	Teaching and Learning activities
1	Introduction - Some Basic Mathematical Models, Direction Fields. - Classification of Differential Equations - Solutions to Some Differential Equations First-order differential equations - Linear Equations - Method of Integrating Factors	1,3		Lectures
2	- Separable Equations - Modeling with First Order Equations - Differences Between Linear	1,3	Quiz	Lectures and Quiz

	Nonlinear Equations			
3	Autonomous Equations and Population Dynamics Exact Equations and Integrating Factors	3, 5	Quiz	Lectures and Quiz
4	Second order linear differential equations Solutions of Linear Homogeneous Equations The Wronskian and linear independence.	3, 5	HW1	Lectures and HW
5	Homogeneous Equations with Constant Coefficients Complex Roots of the Characteristic Equation, Repeated Roots	3, 5	Quiz	Lectures and Quiz
6	Nonhomogeneous Equations: Method of Undetermined Coefficients	3, 5	HW2	Lectures and HW
7	Variation of Parameters Mechanical and Electrical Vibrations Forced Vibrations	3, 5	Quiz	Lectures and Quiz
8	Review	3, 5	HW3	Lectures and HW
Midterm Exam				
9	Higher Order Linear Equations General Theory of n -th Order Linear Equations	2, 4	Quiz	Lectures and Quiz
10	Homogeneous Equations with Constant Coefficients	2, 4	Quiz	Lectures and Quiz
11	Non-homogeneous equations: Method of undetermined coefficients Variation of parameters	4, 5	HW4	Lectures and HW
12	Linear systems of first-order differential equations Review of Linear Algebra, Basic Theory of Systems of First Order Linear Equations	2, 4	Quiz	Lectures and Quiz

13	Homogeneous Linear Systems with Constant Coefficients, Complex Eigenvalues and Repeated Eigenvalues	4, 5	Quiz	Lectures and Quiz
14	Method of undetermined coefficients Variation of parameters Review of Fourier Series	2, 4, 5	HW5	Lectures and HW
15	Separation of Variables. Heat Conduction Problems, Wave Equations, Laplace's Equations	1, 2, 3, 4,	Exercises	
Final Exam		1, 2, 3, 4,		

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5
In-class exercises/ quizzes (10%)	Qz1->Qz4 80% Pass	Qz5->Qz8 80%Pass	Qz1->Qz4 80% Pass	Qz5->Qz8 80% Pass	Qz2, 4, 6, 8 70% Pass
Homework exercises (10%)	HW1->H3 70% Pass	HW4, HW5 70%	HW1->HW3 70% Pass	HW4, HW5 70%	HW1->HW5 60% Pass
Midterm exam (30%)	Q1, Q2 80% Pass		Q3, Q4 70% Pass		Q5 50%
Final exam (50%)		Q1, Q2 80%Pass		Q3, Q4 70%Pass	Q5 50%

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Date revised: January 12, 2022

Ho Chi Minh City, dd/mm/yyyy
Head/Dean of Department/School
(Signature)

<Full Name>



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: APPLIED LINEAR ALGEBRA

Course Code: CE215IU

1. General information

Course name	- <i>APPLIED LINEAR ALGEBRA</i> - <i>ĐẠI SỐ TUYẾN TÍNH</i>
Course designation	<i>The course will focus on matrix and vector methods for studying systems of linear equations, with an emphasis on concrete calculations and applications.</i> <i>Specific topics to be covered include matrices, Gaussian elimination, vector spaces, LU decomposition, orthogonality, the Gram–Schmidt process, determinants, inner products, eigenvalue problems, and applications to differential equations and Markov processes.</i>
Course type	☐ <i>General knowledge</i> ☐ <i>Fundamental</i> ☒ <i>Specialized knowledge</i> ☐ <i>Internship/Project/Thesis</i> ☐ <i>Others:</i>
Semester(s) in which the course is taught	4
Person responsible for the course	Prof. Le Van Canh
Language	English
Relation to curriculum	<i>Compulsory</i>
Teaching methods	Lecture, discussion, and assignments.

Workload (incl. contact hours, self-study hours)	Total workload: 85 (Estimated) Contact hours: - lecture: 19 - Discussion: 6 Private study including examination preparation, specified in hours ¹ : 60	
Credit points	2 credits/3.09 ECTS	
Number of periods	Theory: 30 Practice: 0	
Required and recommended prerequisites for joining the course		
Course objectives	To learn important concepts of linear algebra, such as vector spaces, basis, linear transformations, projections, least squares method, eigenvalues, and eigenvectors. To understand the importance of linear algebra and learn its applicability to practical problems, i.e., how the linear equations and eigenvalue problems appear in some practical applications. To enhance your understanding of the above concepts through occasional MATLAB-based homework problems.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. To equip the students with basic understanding of linear algebra, such as vector spaces, basis, linear transformations, projections, least squares method, eigenvalues, and eigenvectors. CLO2. To equip the students with applications of linear algebra in practical engineering problems.
	Skill	CLO3. To enhance your understanding of the above concepts through occasional MATLAB-based homework problems.
	Attitude	

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Linear Equations in Linear Algebra</td><td>2</td><td>T, U</td></tr><tr><td>Matrix Algebra</td><td>2</td><td>T, U</td></tr><tr><td>Determinants</td><td>2</td><td>T, U</td></tr><tr><td>Vector Spaces</td><td>2</td><td>T, U</td></tr><tr><td>Eigenvalues and Eigenvectors</td><td>2</td><td>T, U</td></tr><tr><td>Orthogonality and Least Squares</td><td>2</td><td>T, U</td></tr><tr><td>Symmetric Matrices and Quadratic Forms</td><td>2</td><td>T, U</td></tr></table>	Topic	Weight	Level	Linear Equations in Linear Algebra	2	T, U	Matrix Algebra	2	T, U	Determinants	2	T, U	Vector Spaces	2	T, U	Eigenvalues and Eigenvectors	2	T, U	Orthogonality and Least Squares	2	T, U	Symmetric Matrices and Quadratic Forms	2	T, U
Topic	Weight	Level																							
Linear Equations in Linear Algebra	2	T, U																							
Matrix Algebra	2	T, U																							
Determinants	2	T, U																							
Vector Spaces	2	T, U																							
Eigenvalues and Eigenvectors	2	T, U																							
Orthogonality and Least Squares	2	T, U																							
Symmetric Matrices and Quadratic Forms	2	T, U																							
Examination forms	Constructed-response test																								
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.																								
Reading list	Textbooks: [1] David C. Lay, Stephen R. Lay and Judi J. McDonald. Linear Algebra and Its Applications, 5th edition. Pearson, 2016. References: [2] Carl D. Meyer. Matrix Analysis and Applied Linear Algebra, SIAM, 2000.																								

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-3) and Program Intended Learning Outcomes (ILO) (a-k) is shown in the following table:

	ILO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x	x								x	
2	x	x								x	
3	x	x								x	

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1-2	Linear Equations in Linear Algebra: Linear systems, matrix equation $Ax = b$. Solutions and applications of linear systems. Linear independence and linear transformations.	1, 2, 3	Quiz 1, 2, 3	Lecture, Discussion	[1] Chapter 1
3-4	Matrix Algebra: Matrix operations. Inverse of a matrix and characterization of invertible matrices. Matrix factorization.	1, 2, 3	Quiz 1, 2, 3	Lecture, Discussion	[1] Chapter 2
5-6	Determinants: Determinants, properties of determinants. Cramer's rule, volume and linear transformations.	1, 2, 3	Quiz 1, 2, 3	Lecture, Discussion	[1] Chapter 3
7-9	Vector Spaces: Vector spaces and subspaces; null spaces, column spaces, and linear transformations. The dimension of a vector space; rank. Midterm exam	1, 2, 3	Quiz 1, 2, 3; Midterm exam	Lecture, Discussion, Test	[1] Chapter 4
10	Vector Spaces: Vector spaces and subspaces; null spaces, column spaces, and linear transformations. The dimension of a vector space; rank.	1, 2, 3	Quiz 1, 2, 3	Lecture, Discussion	[1] Chapter 4
11-12	Eigenvalues and Eigenvectors: The characteristic equation, diagonalization. Eigenvectors and linear transformations.	1, 2, 3	Quiz 1, 2, 3	Lecture, Discussion	[1] Chapter 5

	Complex eigenvalues. Applications to differential equations.				
13-14	Orthogonality and Least Squares: Orthogonal sets. Orthogonal projections. Least-squares problems. Application to linear models	1, 2, 3	Quiz 1, 2, 3	Lecture, Discussion	[1] Chapter 6
15-16	Symmetric Matrices and Quadratic Forms: Diagonalization of symmetric matrices. The singular value decomposition.	1, 2, 3	Quiz 1, 2, 3	Lecture, Discussion	[1] Chapter 7
17-18	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
In-class exercises/quizzes/attendance (30%)	Quiz 1 60%Pass	Quiz 2 60%Pass	Quiz 3 60%Pass
Midterm exam (20%)	Q1 50%Pass		Q2 50%Pass
Final exam (50%)		Q1 50%Pass	Q2 50%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Date revised: May 29 2025

Ho Chi Minh City, May 29 2025
**Dean of School of Civil Engineering and
Management**
(Signature)

Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
 School of Civil Engineering and Management

COURSE SYLLABUS
Course Name: Probability and Statistics
 Course Code: CE216IU

1. General information

Course name	- (in English) <i>Probability and Statistics</i> - (in Vietnamese) <i>Xác suất thống kê</i>
Course designation	<i>Probability problems in engineering, conditional probability, discrete and continuous distributions, sampling distribution, interval estimates, hypothesis testing, analysis of variance, regression models and non-parametric testing.</i>
Course type	☒ General knowledge <i>Fundamental</i> ☐ Specialized knowledge <i>Internship/Project/Thesis</i> ☐ Others: ☐ ☐
Semester(s) in which the course is taught	2
Person responsible for the course	Dr. Pham Nguyen Linh Khanh
Language	English
Relation to curriculum	☒ Compulsory Elective ☐
Teaching methods	Lecture, discussion, and assignments.

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 hrs Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 28.5 hrs + 9 hrs Private study, including examination preparation, specified in hours ¹ : 90 hrs	
Credit points	3 credits (Theory: 3 + Practice: 0) 4.64 ECTS (<i>optional</i>)	
Number of periods	Theory: 45 Practice: 0	
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name): None - Corequisites: (Course code – Course name): None - Previous course (Course code – Course name): None	
Course objectives	• Students know how to calculate basic statistics parameters for a given data set • Students know how to calculate probability for a given problem context • Students know how to solve problems regarding random variables • Students understand the relationship between sample and population, the sampling process, and sampling distribution • Students know how to set up statistical hypothesis testing for population mean-variance for single or multiple populations • Students know how to set up and analyze linear regression models for single or multiple variables	
Course learning outcomes	Upon the successful completion of this course, students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Understand the fundamentals of probability and statistics, hypothesis, and concept of regression models
	Skill	CLO2. Conducting data analysis and visualizing the results. CLO3. Performance probability analysis, hypothesis tests, and regression models.
	Attitude	

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction and Descriptive Statistics	1, 3		Lecture, Discussion	
2-4	Probability	2, 3	HW1	Lecture, HW	
5-6	Random Variables and Normal Distribution	3	HW2	Lecture, HW	
7-9	Sampling and sampling distributions, Midterm exam	1, 3	HW2, in-class exercises, and Midterm exam	Lecture, HW, Test	
10-11	Confidence Intervals	1, 3	In-class Exercises	Lecture, Discussion	
12-13	Hypothesis Testing	1, 3	HW3	Lecture, HW	
14	Comparison between two populations	2, 3	In-class Exercises	Lecture, Discussion	
15	Analysis of Variance	2, 3	In-class Exercises	Lecture, Discussion	
16	Regression	1, 3	In-class Exercises	Lecture, Discussion	
17	Nonparametric Testing	1, 3	HW3	Lecture, HW	
18	Review				
19-20	Final exam				

Note: Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities.

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated into 2 components, including progress assessment and final presentation. The contribution of each component (in percentage) is shown in the table below.

Assessment Type	CLO1	CLO2	CLO3
In-class exercises (10%)	Qz 1, 3 60%Pass	Qz 2, 3, 4 60%Pass	Qz 1, 2,3 60%Pass
Homework (20%)	HW 1, 2, 3 50%Pass	HW 1 50%Pass	HW 2, 3 50%Pass
Midterm exam (30%)	Q 1, 2, 3 50%Pass		Q1, 2, 3 50%Pass
Final exam (40%)	Q 1,2 50%Pass		Q 1,2 50%Pass

Note: %Pass: Target that % of students having scores greater than 50% out of question score.

5. Rubrics: None

6. Date revised: May 25, 2025

7. Course Coordinator/Lecturer

- School of Civil Engineering and Management
- Email: pnlkhanh@hcmiu.edu.vn

Ho Chi Minh, May 25, 2025

**DEAN OF SCHOOL OF
CIVIL ENGINEERING AND MANAGEMENT**

(Signature)

Nguyen Hoai Nghia



PHYSICS 1

Course Code: **PH013IU**

1. General information

Course designation	<i>This subject will provide an introduction to mechanics including concepts and principles of kinetics, dynamics, energetics of motion of a particle and a rigid body.</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Assos. Prof. Phan Bảo Ngọc; Dr. Đỗ Xuân Hội; Dr. Phan Hiền Vũ; Dr. Nguyễn Quang
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, assignment.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 85 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): lecture: 25 Private study including examination preparation, specified in hours: 60
Credit points/ECTS	2 credits/ 3.09 ECTS (1 ECTS is equivalent to 27.5 hours)
Required and recommended prerequisites	None
Course objectives	This course will provide students with: • The basic knowledge of general Mechanics Physics • Skills to solve problems in engineering environment by applying both theoretical and experimental techniques • Understanding and skills needed to use physical laws governing real process and to solve them in the engineering environment • Confidence and fluency in discussing physics in English.



Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1. Understand basic knowledge of kinematics, dynamics, and laws of conservation of a mechanical system. CLO2. Apply knowledge of physics to solving problems in science and engineering	
	Skill	CLO3. Apply skills to analyzing and solving problems in science and engineering	
	Attitude	CLO4. Communicate effectively in writing manner	
Content	The description of the contents should clearly indicate the weighting of the content and the level. Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Chapter 1: Bases of Kinematics	3	I, T,U
	Chapter 2: The Law of Motion	2	I, T,U
	Chapter 3: Work and Mechanical Energy	3	I, T,U
	Chapter 4: Linear Momentum and Collisions	2	I, T,U
	Chapter 5: Rotation of a Rigid Object About a Fixed Axis	3	I, T,U
	Chapter 6: Equilibrium and Elasticity	1	I
	Chapter 7: Universal Gravitation	1	I
	Examination forms	Written Examination	
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.		
Reading list	[1] Lecture Notes [2] Halliday D., Resnick R. and Walker, J. (2011) Principles of Physics, 9 th edition, John Willey and Sons, Inc. [3] Alonso M. and Finn E.J. (1992) Physics, Addison-Wesley Publishing Company. [4] Faughn/Serway (2006) Serway's College Physics, Thomson Brooks/Cole.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program/Intended Learning Outcomes (ILO) (1-10) is shown in the following table:

	ILO



CLO	1	2	3	4	5	6	7	8	9	10
1	x									
2	x									
3										
4										

ILO1. Apply knowledge of mathematics, physics, and informatics for solving space engineering problems.

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1-3	Chapter 1: Basis of Kinematics Motion in One Dimension: - Position, Velocity, and Acceleration - One-Dimensional Motion with Constant Acceleration - Freely Falling Objects Motion in Two Dimensions: - Position, Velocity, and Acceleration Vectors - Two-Dimensional Motion with Constant Acceleration. Projectile Motion - Circular Motion. Tangential and Radial Acceleration - Relative Velocity and Relative Acceleration	1-4	Assignment/Quiz Midterm	Lecture, Discussion, Inclass-Quiz	[1] 1 [2] 1, 2, 3, 4
4-5	Chapter 2: Laws of Motion - Newton's First Law and Inertial Frames - Newton's Second Law - Newton's Third Law Some Applications of Newton's Laws: - Gravitational Force and Weight - Forces of Friction - Uniform Circular Motion and Non-uniform Circular Motion	1-4	Assignment//Quiz Midterm	Lecture, Discussion, Inclass-Quiz	[1] 2 [2] 5, 6



	- Motion in the Presence of Resistive Forces - Motion in Accelerated Frames				
6-8	Chapter 3: Work and Mechanical Energy - Work Done by Force. Power - Kinetic Energy and Work. Kinetic Energy Theorem - Potential Energy of a System - Conservation of Mechanical Energy - Conservative and Non-conservative Forces - Changes in Mechanical Energy for Non-conservative Forces - Relationship Between Conservative Forces and Potential Energy	1-4	Assignment//Quiz Final	Lecture, Discussion, Inclass-Quiz	[1] 3 [2] 7, 8
Midterm					
9-10	Chapter 4: Linear Momentum and Collisions - Linear Momentum and Its Conservation - Impulse and Momentum - Collisions in One Dimension and Two Dimensions	1-4	Assignment//Quiz Final	Lecture, Discussion, Inclass-Quiz	[1] 4 [2] 9
11-13	Chapter 5: Rotation of a Rigid Object About a Fixed Axis - Rotational Kinematics. Rotational Motion with Constant Angular Acceleration - Torque and Angular Acceleration - Moments of Inertia - Rotational Kinetic Energy - Rolling Motion of a Rigid Object - Angular Momentum of a Rotating Rigid Object - Conservation of Angular Momentum	1-4	Assignment//Quiz Final	Lecture, Discussion, Inclass-Quiz	[1] 5 [2] 10, 11
14	Chapter 6: Equilibrium and Elasticity The Conditions for Equilibrium The Center of Gravity	1-4	Assignment//Quiz	Lecture, Discussion, Inclass-Quiz	[1] 6 [2] 12



15	Chapter 7: Universal Gravitation Newton's Law of Gravitation Kepler's Laws and the Motion of Planets The Gravitational Field and Gravitational and Potential Energy	1-4	Assignment//Quiz	Lecture, Discussion, Inclass-Quiz	[1] 7 [2] 13
Final exam					

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
In-class exercises/quizzes (10%)	Qz1 60%Pass	Qz2 60%Pass		Qz3 60%Pass
Homework exercises (20%)	HW2 50%Pass		HW1, HW3, HW4 50%Pass	
Midterm exam (30%)		Q3 50%Pass	Q1, Q2 50%Pass	
Final exam (40%)	Part I 50%Pass		Part II.1,2 50%Pass	Part II.3 50%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

6. Date revised: December 26, 2024

Ho Chi Minh City, 26/12/2024

CHAIR OF DEPARTMENT OF PHYSICS

Phan Bảo Ngọc



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
Department of Physics

COURSE SYLLABUS

Course Name: Physics 2 (Fluid Mechanics and Thermal Physics)

Course Code: **PH014IU**

1. General information

Course designation	<i>This subject will provide a basic knowledge of fluid mechanics; macroscopic description of gases; heat and the first law of thermodynamics; heat engines and the second law of thermodynamics; microscopic description of gases and the kinetic theory of gases.</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Assos. Prof. Phan Bảo Ngọc Dr. Phan Hiền Vũ
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, assignment.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 90 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): lecture: 30 Private study including examination preparation, specified in hours ¹ : 60
Credit points	2
Required and recommended prerequisites for joining the course	None

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course objectives	This course will provide students with: 1. The basic knowledge of Fluid Mechanics and Thermal Physics 2. Skills to solve problems in engineering environment by applying both theoretical and experimental techniques 3. Understanding and skills needed to use physical laws governing real process and to solve them in the engineering environment 4. Confidence and fluency in discussing physics in English.		
Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1. Understand basic knowledge of fluid mechanics, laws of thermodynamics, and the kinetic theory of an ideal gas. CLO2. Apply knowledge of physics to solving problems in science and engineering	
	Skill	CLO3. Apply skills to analyzing and solving problems in science and engineering	
	Attitude	CLO4. Communicate effectively in writing manner	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Chapter 1: Fluid Mechanics	2	I, T,U
	Chapter 2: Temperature, Heat, and the First Law of Thermodynamics	4	I, T,U
	Chapter 3: The Kinetic Theory of Gases	5	I, T,U
	Chapter 4: Entropy and the Second Law of Thermodynamics	4	I, T,U
Examination forms	Short-answer questions		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.		

Reading list	[1] Lecture Notes [2] Halliday D., Resnick R. and Walker, J. (2011) <i>Principles of Physics</i> , 9 th edition, John Willey and Sons, Inc. [3] Alonso M. and Finn E.J. (1992) <i>Physics</i> , Addison-Wesley Publishing Company. [4] Faughn/Serway (2006) <i>Serway's College Physics</i> , Thomson Brooks/Cole.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program/Intended Learning Outcomes (ILO) (1-10) is shown in the following table:

	ILO									
CLO	1	2	3	4	5	6	7	8	9	10
1	x									
2	x									
3										
4										

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1-2	Chapter 1: Fluid Mechanics - Fluids at Rest - Ideal Fluids in Motion - Bernoulli's Equation	1, 2	Assignment//Quiz Midterm	Lecture, Discussion, Inclass-Quiz	[1] 1 [2] 14
3-8	Chapter 2: Temperature, Heat, and First Law of Thermodynamics - Temperature and Zero th Law of Thermodynamics - Thermal Expansion - Heat and Absorption of Heat by Solids and Liquids - Work and Heat in Thermodynamic Processes - First Law of Thermodynamics and Its Some Special Cases - Heat Transfer Mechanisms	1, 2	Assignment//Quiz Midterm	Lecture, Discussion, Inclass-Quiz	[1] 2 [2] 18
	Midterm				
9-12	Chapter 3: Kinetic Theory of Gases - Ideal Gases: Experimental Laws, Equation of State - Molecular Model of an Ideal Gas. Mean Free Path - Boltzmann Distribution Law and	3, 4	Assignment//Quiz Final	Lecture, Discussion, Inclass-Quiz	[1] 2 [2] 19

	Distribution of Molecular Speeds - Molar Specific Heats of an Ideal Gas - Equipartition of Energy Theorem - Adiabatic Expansion of an Ideal Gas				
13-15	Chapter 4: Entropy and Second Law of Thermodynamics - Reversible, Irreversible Processes and Entropy - Second Law of Thermodynamics - Entropy in Real World: Engines - A Statistical View of Entropy	3, 4	Assignment//Quiz Final	Lecture, Discussion, Inclass-Quiz	[1] 4 [2] 20
	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
In-class exercises/quizzes (10%)	Qz1 60%Pass	Qz2 60%Pass		Qz3 60%Pass
Homework exercises (20%)	HW2 50%Pass		HW1, HW3, HW4 50%Pass	
Midterm exam (30%)		Q3 50%Pass	Q1, Q2 50%Pass	
Final exam (40%)	Part I 50%Pass		Part II.1,2 50%Pass	Part II.3 50%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:	HW/Assignment:		
Date:	Evaluator:		
	Max.	Score	Comments
Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content	10		
Introduction demonstrates thorough knowledge of relevant background and prior work	15		
Analysis and discussion demonstrate good subject mastery	30		
Summary and conclusions appropriate and complete	5		
Organization (10%)			
Distinct introduction, body, conclusions	5		
Content clearly and logically organized, good transitions	5		
Presentation (20%)			
Correct spelling, grammar, and syntax	10		

Clear and easy to read	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.

Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

6. Date revised: December 27, 2022

Ho Chi Minh City, 27/12/2022
Chair of Department of Physics

A handwritten signature in blue ink, appearing to read 'Phan Bao Ngoc', with a long horizontal stroke extending to the right.

Phan Bảo Ngọc



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
Department of Physics

COURSE SYLLABUS

Course Name: Physics 3 (Electricity and Magnetism)

Course Code: **PH015IU**

1. General information

Course designation	<i>This subject will provide a basic knowledge of electricity and magnetism.</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Assoc. Prof. Phan Bảo Ngọc
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, assignment.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (whether lecture, exercise, laboratory session, etc.): lecture: 37.5 Private study including examination preparation, specified in hours ¹ : 90
Credit points	3 credits/4.64 ECTS
Required and recommended prerequisites for joining the course	-Prerequisites: None - Corequisites: PH016IU - Physics 3 Laboratory - Previous course: PH013IU - Physics 1

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course objectives	This course will provide students with: 1. The basic knowledge of electricity and magnetism such as electric charge, electric potential, magnetic fields, electromagnetic waves, etc. 2. Skills to solve problems in engineering environment by applying both theoretical and experimental techniques. 3. Understanding and skills needed to use physical laws governing real process and to solve them in the engineering environment. 4. Confidence and fluency in discussing physics in English.		
Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1. An ability to understand basic knowledge of electricity and magnetism such as electric charge, electric potential, magnetic fields, electromagnetic waves. CLO2. Examine problem solving in engineering environment	
	Skill	CLO3. Understand and acquire skills needed to use physical laws governing real process and to solve them in the engineering environment	
	Attitude	CLO4. Develop confidence and fluency in discussing physics in English	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Chapter 1: Electric Fields	3	I, T, U
	Chapter 2: Electric Potential and Capacitance	2	I, T, U
	Chapter 3: Current and Resistance. Direct Current Circuits	3	I, T, U
	Chapter 4: Magnetism	2	I, T, U
	Chapter 5: Electromagnetic Induction	2	I, T, U
	Chapter 6: Electromagnetic Oscillations and Alternating Current	2	I, T, U
	Chapter 7: Maxwell’s Equation and Electromagnetic Waves	1	I, T, U
	Examination forms	Short-answer questions	

Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.
Reading list	[1] Halliday D., Resnick R. and Walker, J. (2011) <i>Fundamentals of Physics</i> , 9 th edition, John Wiley and Sons, Inc. [2] Alonso M. and Finn E.J. (1992) <i>Physics</i> , Addison-Wesley Publishing Company. [3] Hecht, E. (2000) <i>Physics: Calculus</i> , 2 nd edition, Brooks/Cole. [4] Faughn/Serway (2006) <i>Serway's College Physics</i> , Thomson Brooks/Cole.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program Intended Learning Outcomes (ILO) (1-10) is shown in the following table:

	ILO									
CLO	1	2	3	4	5	6	7	8	9	10
1	x									
2	x									
3										
4										

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1-3	Chapter 1: Electric Fields	1, 2, 3, 4	Quiz 1/ Assignment Midterm exam	Lecture, Discussion	[1].0. [2].1.
4-5	Chapter 2: Electric Potential and Capacitance	1, 2, 3, 4	Quiz 2/ Assignment Midterm exam	Lecture, Discussion	[1].9.
6-7	Chapter 3: Current and Resistance. Direct Current Circuits	1, 2, 3, 4	Assignment Midterm exam	Lecture, Discussion	[2].2.
8	Chapter 4: Magnetism (Part 1)	1, 2, 3, 4	Assignment Final exam	Lecture, Discussion	[2]. 4. [1]. 18.
9-10	Midterm				
11-12	Chapter 4: Magnetism (Part 2)	1, 2, 3, 4	Quiz 3/ Assignment Final exam	Lecture, Discussion	[2]. 4. [1]. 18.
13-14	Chapter 5: Electromagnetic Induction	1, 2, 3, 4	Quiz 4/ Assignment Final exam	Lecture, Discussion	[3]. 10
15-16	Chapter 6: Electromagnetic Oscillations and Alternating Current	1, 2, 3, 4	Assignment Final exam	Lecture, Discussion	[2]. 4. [1]. 18.

17	Chapter 7: Maxwell's Equation and Electromagnetic Waves	1, 2, 3, 4	Final exam	Lecture	[3]. 10
18-19	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
Attendance + Homework + in-class discussion (15%)				
Quizzes (Qz) / assignment (As) (15%)	Qz1, Qz3/ As.P1 50%Pass	Qz2, Qz4/ As.P2 50%Pass	Qz1, Qz2, Qz3, Qz4 / As.P3 50%Pass	Qz1, Qz2, Qz3, Qz4 / As.P4 50%Pass
Midterm exam (30%)	Q1, Q2, Q3 50%Pass	Q4, Q5 50%Pass	Q3, Q5 50%Pass	Q3, Q5 50%Pass
Final exam (40%)	Q1, Q2, Q3 50%Pass	Q4, Q5 50%Pass	Q3, Q5 50%Pass	Q3, Q5 50%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports				
Student:		HW/Assignment:		
Date:		Evaluator:		
	Max.	Score	Comments	
Technical content (60%)				
Abstract clearly identifies purpose and summarizes principal content	10			
Introduction demonstrates thorough knowledge of relevant background and prior work	15			
Analysis and discussion demonstrate good subject mastery	30			
Summary and conclusions appropriate and complete	5			
Organization (10%)				
Distinct introduction, body, conclusions	5			
Content clearly and logically organized, good transitions	5			
Presentation (20%)				
Correct spelling, grammar, and syntax	10			
Clear and easy to read	10			
Quality of Layout and Graphics (10%)	10			
TOTAL SCORE	100			

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in

	response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

6. Date revised: January 12, 2022

Ho Chi Minh City, dd/mm/yyyy
Head/Dean of Department/School
(Signature)

Phan Bảo Ngọc



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
Department of Physics

COURSE SYLLABUS

**Course Name: Physics 3 Laboratory (Electricity and magnetism
laboratory)**

Course Code: **PH016IU**

1. General information

Course designation	<i>This course provides students with basic knowledge of electricity and magnetism in laboratory, consists of: Ohm's law, LRC circuit, RC circuit, LR circuit, magnetic fields of coils....</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Msc. Lê Thị Quế Msc. Trịnh Thanh Thủy
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, assignment.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 67.5 Contact hours (lecture, exercise, laboratory session, etc.): lecture: 37.5 Private study including examination preparation, specified in hours ¹ : 30
Credit points	1 credit/2.45 ECTS

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Required and recommended prerequisites for joining the course	Physics 3 (PH015IU)		
Course objectives	This course will provide students with: 1. The basic concepts in electricity and magnetism. Have laboratory experiences. 2. Skills to solve problems in engineering environment by applying both theoretical and experimental techniques 3. Skill to present scientific report in writing, and better understand the relations between theory and experiment. 4. Confidence and fluency in discussing physics in English.		
Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1. Understand the basic concepts in electricity and magnetism.	
	Skill	CLO2. Approach and solve problems in Electricity and magnetism experiments CLO3. Write scientific report, have understanding the relations between theory and experiment	
	Attitude	CLO4. An ability to communicate effectively in writing English manner	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: experimental session (4 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Ohm’s law	1	T, U
	Resistances in Circuits	1	T, U
	LRC Circuits	1	T, U
	Kirchhoff’s laws	1	T, U
	RC circuit	1	T, U
	LR circuit	1	T, U
	Magnetic fields of coils	1	T, U
	The e/m experiment	1	T, U
	Examination forms	Short-answer questions, taking experiment, write report	

Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.
Reading list	[1] Halliday D., Resnick R. and Walker, J. (2011) <i>Fundamentals of Physics</i> , 9 th edition, John Wiley and Sons, Inc. [2] Labguide

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program Intended Learning Outcomes (ILO) (1-6) is shown in the following table:

CLO	ILO									
	1	2	3	4	5	6	7	8	9	10
1	x									
2	x									
3										
4										

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Ohm's law	1, 2	Prelab answer, Lab report	Taking experiment	[1]. [2].
2	Resistances in Circuits	1, 2	Prelab answer, Lab report	Taking experiment	[1]. [2].
3	LRC Circuits	1, 2	Prelab answer, Lab report	Taking experiment	[1]. [2].
4	Kirchhoff's laws	1, 2	Prelab answer, Lab report	Taking experiment	[1]. [2].
5	RC circuit	1, 2	Prelab answer, Lab report	Taking experiment	[1]. [2].
6	LR circuit	1, 2	Prelab answer, Lab report	Taking experiment	[1]. [2].
7	Magnetic fields of coils	1, 2	Prelab answer, Lab report	Taking experiment	[1]. [2].
8	The e/m experiment	1, 2	Prelab answer, Lab report	Taking experiment	[1]. [2].
9	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
Prelab (20%)	Prelab1-8 60%Pass			Prelab1-8 60%Pass
Lab report (30%)	Labreport 1-8 50%Pass	Labreport 1-8 50%Pass	Labreport 1-8 50%Pass	Labreport 1-8 50%Pass
Attendance (20%)				
Final exam (30%)	Part I.1 50%Pass	Part I.2 50%Pass	Part II.1,2 50%Pass	Part II.3 50%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:		HW/Assignment:	
Date:		Evaluator:	
	Max.	Score	Comments
Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content	10		
Introduction demonstrates thorough knowledge of relevant background and prior work	15		
Analysis and discussion demonstrate good subject mastery	30		
Summary and conclusions appropriate and complete	5		
Organization (10%)			
Distinct introduction, body, conclusions	5		
Content clearly and logically organized, good transitions	5		
Presentation (20%)			
Correct spelling, grammar, and syntax	10		
Clear and easy to read	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.

Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

6. Date revised: January 12, 2022

Ho Chi Minh City, dd/mm/yyyy
Head/Dean of Department/School
(Signature)

Phan Bảo Ngọc



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Biotechnology

COURSE SYLLABUS

Course Name: Chemistry for Engineers

Course Code: CH011IU

1. General information

Course designation	<i>This one-semester course is designed for students who are pursuing an engineering degree (e.g., information technology, biotechnology, civil, biomedical, electronic, and telecommunication engineering) and chemistry-related ones (e.g., applied chemistry and chemical engineering). The course will introduce the basic principles of chemistry and connect those principles to issues in the engineering profession. The related lab work is not included in this course.</i>
Semester(s) in which the course is taught	1, 2, and summer (optional)
Person responsible for the course	Assoc.Prof. Dr. Huynh Kim Lam Dr. Vũ Bảo Khánh Dr. Phùng Thanh Khoa
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, project, and seminar (optional).
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (lecture, exercise, laboratory session, etc.): 37.5 lectures Private study including examination preparation, specified in hours ¹ : 90 hrs
Credit points	3 credits/4.64 ECTS

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Required and recommended prerequisites for joining the course	-Prerequisites: None - Corequisites: CH012IU - Chemistry Laboratory - Previous course: None
Course objectives	Upon successful completion of this course, the students should be able to demonstrate knowledge of: • The role of chemistry for engineers • Measurements in chemistry • Matter and state of matter • Structure of atoms, molecules and ions • Periodicity • Chemical bonds • Intermolecular forces, liquid and solid • Gases, liquids, solids and their properties • Types and rates of chemical reactions • Chemical equilibrium • Electrolytes, acid-base, pH, buffer • Thermochemistry and thermodynamics
Course learning outcomes	CLO1: Be able to apply mathematics and science knowledge to solve chemistry-related problems and explain many aspects of everyday life using chemistry concepts. CLO2: Be able to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions. CLO3: Be able to acquire and apply new knowledge as needed, using appropriate learning strategies.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introduction to General Chemistry for Engineers	0.2	I, T
	Introduction to Matter	0.3	I, T
	Measurements in Chemistry	0.5	I, T
	Atoms, Molecules and Ions	1	I, T
	Periodicity	1	I, T
	Chemical Bonds	2	I, T
	Intermolecular Forces	1	I, T
	Gases and Their Properties	0.5	I, T
	Solutions and Their Properties	0.5	I, T
	Solids and Their Properties	0.5	I, T
	Chemical Reactions	0.5	I, T
	Chemical Kinetics	1	I, T
Chemical Equilibrium	1	I, T	
Electrolytes, Acid- Base, pH and Buffer	2	I, T	
Thermochemistry and Thermodynamics	2	I, T	
Examination forms	Multiple-choice questions, written test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.		
Reading list	[1] “Chemistry: A Molecular Approach” by Nivaldo J. Tro (2 nd Ed., 2008). Pearson. [2] “General Chemistry” by Darrell Ebbing and Steven D. Gammon (9th Ed., 2010). Brooks/Cole, USA. [3] “Chemistry for Engineers – An Applied Approach” by Mary Jane Shultz (2007). Houghton Mifflin. [4] “Chemistry, Principles and Reactions” by Masterton and Hurley (6th Ed., 2009). Cengage learning, USA.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-3) and Program Intended Learning Outcomes (ILO) (1-8) is shown in the following table:

CLO	ILO							
	1	2	3	4	5	6	7	8
1	x							
2							x	
3		x						

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities
1	Introduction to General Chemistry for Engineers Introduction to Matter Measurements in Chemistry	1		- Lecture - Class discussion
2	Atoms, Molecules and Ions	1,7	Homework/ Quiz	- Lecture - Class discussion
3	Periodicity	1,7	Homework/ Quiz	- Lecture - Class discussion
4, 5	Chemical Bonds	1,7	Homework/ Quiz	- Lecture - Class discussion
6	Intermolecular Forces	2,7	Homework/ Quiz	- Lecture - Class discussion
7	Gases and Their Properties Solutions and Their Properties	2,7	Homework/ Quiz	- Lecture - Class discussion
8	Solids and Their Properties Chemical Reactions	1,2,7	Homework/ Quiz	- Lecture - Class discussion
9-10	Midterm			
11, 12	Chemical Kinetics and Chemical Equilibrium	1,2,7	Homework/ Quiz	- Lecture - Class discussion
13, 14	Electrolytes, Acid-Base, <i>pH</i> and Buffer	1,2,7	Homework/ Quiz	- Lecture - Class discussion
15, 16	Thermochemistry and Thermodynamics	1,2,7	Homework/ Quiz	- Lecture - Class discussion
17	Revision	1,2,7	Homework/ Quiz	- Class discussion
18-20	Final exam			

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
In-class exercises/homework/quizzes (30%)	Qz1, 2, 3, 4, 5 50%Pass	Qz1, 2, 3, 4, 5 50%Pass	Homework 50%Pass
Midterm exam (30%)	Part I 50%Pass	Part II.1 50%Pass	Part II.2 50%Pass
Final exam (40%)	Part I 50%Pass	Part II.1 50%Pass	Part II.2 50%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Date revised: August 10, 2022

Ho Chi Minh City, dd/mm/yyyy
Head/Dean of Department/School
(Signature)

<Full Name>



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Biotechnology

COURSE SYLLABUS

Course Name: Chemistry Laboratory

Course Code: CH012IU

1. General information

Course designation	This one-semester course is designed for engineering students those who are pursuing a nonchemistry engineering degree such as information technology, biotechnology, civil, biomedical, electronic and telecommunication engineering. The course will introduce students to basic laboratory safety, techniques and apparatus, and complement the information gained in lecture. Prior to each lab, students must read the lab manual about the experiment and complete a prelaboratory report. All students must complete mandatory safety training to participate in the course, which will be provided at the first day of the class. Students are expected to come to each lab on time and be prepared to carry out the day's tasks.
Semester(s) in which the course is taught	1, 2, and summer (optional)
Person responsible for the course	
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lab, Lecture
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 67.5 Contact hours (whether lecture, exercise, laboratory session, etc.): 25h for lab, 12.5h for lecture Private study including examination preparation, specified in hours ¹ : 30

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Credit points	1 credit/2.45 ECTS		
Required and recommended prerequisites for joining the course	Previous course: CH011IU - Chemistry for Engineer		
Course objectives	To introduce students to general chemistry laboratory and to provide students with a firm foundation in chemistry laboratory for careers in science and engineering		
Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1: Applying chemical concepts to draw logical conclusions about the applicability of data to real world problems.	
	Skill	CLO2. Being able to perform lab-work: perform experiment, analyze data, answer questions, make conclusion, research assignments, report writing. CLO3: Using collected data to calculate physical or chemical quantities to the experiment being performed.	
	Attitude	CLO4: Developing teamwork skills that include not only the efficient acquisition of experimental data, but also the awareness of safety in the laboratory setting.	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (5 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Chemical Reactions	1	T, U
	pH and buffers	1	T, U
	Redox titration	1	T, U
	Chemical Equilibrium	1	T, U
	Factors affecting reaction rate	1	T, U
Final evaluation	Multiple choice questions		

Study and examination requirements	Attendance: An attendance of 100 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.
Reading list	[1] Lab manual for chemistry laboratory (internal use only)

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program/Student Learning Outcomes (ILO) (1-8) is shown in the following table:

	ILO							
CLO	1	2	3	4	5	6	7	8
1		x						
2							x	
3				x				
4					x			

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Orientations		Pre-lab Experiment performance Report	Short lecture Experiment Class discussion	
2	Chemical Reactions	1-4	Pre-lab Experiment performance Report	Short lecture Experiment Class discussion	
3	pH and buffers	1-4	Pre-lab Experiment performance Report	Short lecture Experiment Class discussion	
4	Redox titration	1-4	Pre-lab Experiment performance Report	Short lecture Experiment Class discussion	
5	Chemical Equilibrium	1-4	Pre-lab Experiment performance Report	Short lecture Experiment Class discussion	
6	Factors affecting reaction rate	1-4	Pre-lab Experiment performance Report	Short lecture Experiment Class discussion	

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
In-class exercises/pre-lab (10%)		Prelab 1, 2, 3, 4, 5 50%Pass	Prelab 1, 2, 3, 4, 5 50%Pass	
Lab report (60%)	Report 1, 2, 3, 4, 5 50%Pass	Report 1, 2, 3, 4, 5 50%Pass	Report 1, 2, 3, 4, 5 50%Pass	Report 1, 2, 3, 4, 5 50%Pass
Final exam (30%)	Q1 50%Pass	Q2 50%Pass	Q3 50%Pass	

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:		HW/Assignment:	
Date:		Evaluator:	
	Max.	Score	Comments
Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content			
Introduction demonstrates thorough knowledge of relevant background and prior work			
Analysis and discussion demonstrate good subject mastery			
Summary and conclusions appropriate and complete			
Organization (10%)			
Distinct introduction, body, conclusions			
Content clearly and logically organized, good transitions			
Presentation (20%)			
Correct spelling, grammar, and syntax			
Clear and easy to read			
Quality of Layout and Graphics (10%)			
TOTAL SCORE			

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

6. Date revised: August 10, 2022

	<i>Ho Chi Minh City, dd/mm/yyyy</i> <i>Head/Dean of Department/School</i> <i>(Signature)</i> <i><Full Name></i>



VIETNAM NATIONAL UNIVERSITY HCMC INTERNATIONAL UNIVERSITY

COURSE SYLLABUS

General Law

PE021IU

1. General information

Department	Office of Academic Affairs
Course classification	Foundation course
Course designation	Face to face
Semester(s) in which the course is taught	All semesters in each academic year
Person responsible for the course	Dr. Vo Tuong Huan LLM. Bui Doan Danh Thao
Language	English
Relation to curriculum	Compulsory
Teaching methods	Student-centred approach
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 hours Contact hours (lecture, in class discussions): 37.5 hours (=45 periods) Private study including examination preparation, specified in hours ¹ : 90 hours
Credit points	3
Required and recommended prerequisites for joining the course	N/A

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course objectives	The overarching aims of this course are to: • Provide essential knowledge of Vietnamese legal system through integrated technology and real cases for social and cultural sustainability. • Raise awareness of responsibility toward others and how to stand for ending all types of legal violations, especially corruption in various social contexts. • Practice necessary skills to act as an ambassador to ensure social fairness and global equitable rights. • Use integrated online legal resources and communication tools to help the community to identify issues and develop countermeasures.	
Course learning outcomes	Upon the successful completion of this course, students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Apply appropriate legal knowledge in the Vietnamese legal system to solve legal issues in various social contexts for a fair sustainable lifelong being. CLO1.1. Apply general knowledge on state and law to solve legal issues in various social contexts for a fair sustainable lifelong being. CLO1.2. Apply principle legal norms in some law branches such as constitution, civil, criminal, labor and administrative law to solve legal issues in various social contexts for a fair sustainable lifelong being.
	Skill	CLO2. Communicate knowledge in the Vietnamese legal system to encourage people to raise their legal rights aiming for fair social/cultural moves. CLO3. Integrate ICTs to solve legal issues in various social contexts.
Content	Attitude	CLO4. Detect the responsibility to ensure social and cultural fairness, including ending corruption, in various social contexts through understanding importance of law in social contexts. CLO5. Respond to the base for coexistence in various social contexts.
	The course will introduce students to Vietnamese legal systems. In particular, students will understand their rights and obligations in the Constitution, Criminal law, administrative law, civil law, labor law and enterprise law of Vietnam. From this, students will raise awareness towards their responsibility to ensure justice, including ending corruption , in society.	
Examination forms	Multiple choice questions Case-based exams Essay exams Oral exams	

Study and examination requirements

To pass this course, the students must:

- Achieve a composite mark of at least 50; and
- Make a satisfactory attempt at all assessment tasks (see below).

GRADING POLICY

Grades can be based on the following:

Assignment	20%
Midterm examination	30%
Final examination	50%
Total	100%

COURSE POLICIES**Attendance**

Regular and punctual attendance at lectures and seminars is expected in this course. University regulations indicate that if students attend less than eighty percent of scheduled classes they may be refused final assessment. Exemptions may only be made on eligible medical grounds.

Workload

It is expected that the students will spend at least *six* hours per week studying this course. This time should be made up of reading, research, working on exercises and problems, and attending classes. In periods where they need to complete assignments or prepare for examinations, the workload may be greater.

Over-commitment has been a cause of failure for many students. They should take the required workload into account when planning how to balance study with part-time jobs and other activities.

General Conduct and Behaviour

The students are expected to conduct themselves with consideration and respect for the needs of fellow students and teaching staff. Conduct which unduly disrupts or interferes with a class, such as ringing or talking on mobile phones, is not acceptable and students will be asked to leave the class. The use of laptops is also encouraged during law lessons only to search for materials online. More information on student conduct is available on [the university webpage](#).

Keeping informed

The students should take note of all announcements made in lectures or on the course's Blackboard, and another announced mean of communications. From time to time, the university will send important announcements to their university e-mail addresses without providing a paper copy. The students will be deemed to have received this information.

Academic honesty and plagiarism

Plagiarism is the presentation of the thoughts or work of another as one's own. Students are also reminded that careful time management is an important part of the study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and

	the proper referencing of sources in preparing all assessment items. The university regards plagiarism as a form of academic misconduct and has very strict rules regarding plagiarism. Special consideration Requests for special consideration (for final examination only) must be made to the Office of Academic Affairs within one week after the examination. General policy and information on special consideration can be found at the Office of Academic Affairs. Absence on the Mid-term is not allowed, or in special cases approved by Lecturer can be replaced with relevant Assignment. Meeting up with the lecturers after classes Students must make an appointment via emails if they want to meet up with the lecturer after classes and be on time. If there are any changes to the scheduled time, students must inform the lecturer immediately.
Reading list	Please note that it is very important to gain familiarity with the subject matter in the readings and cases available on Blackboard and the internet <i>before</i> attendance in classes. Required Course Texts and Materials <u>Legal Texts:</u> 1. Constitution of Vietnam - 2013 2. Civil Code of Vietnam - 2015 3. Criminal Code of Vietnam – 2015 (amended in 2017) 4. Law on Law on Handling of Administrative Violations 2012 5. Law on Enterprises – 2020 6. Labour Code 2019 7. Law on anti-corruption 2018 Available at https://luatvietnam.vn/ or Blackboard <u>Books:</u> • PGS.TS. Phan Trung Hien, <i>Giáo trình Pháp Luật Đại cương</i>, NXB Chính Trị Quốc Gia Sự Thật 2022. • Mai Hong Quy (Chief Editor) (2nd 2017), <i>Introduction to Vietnamese Law</i>, Hong Duc Publishing House. <u>Additional materials provided in Blackboard</u> The lecturer will attempt to make lecture notes and additional reading available on Blackboard. However, this is not an automatic entitlement for students doing this subject. Note that this is not a distance learning course, and you are expected to attend lectures and take notes. This way, you will get the added benefit of class interaction and demonstration. Optional Course Texts and Materials <u>Recommended Internet sites</u> UNCTAD (United Nations Conference on Trade and Development) WTO (World Trade Organization) MOIT - Vietnam (Official website of Ministry of Industry and Trade) MPI - Vietnam (Official website of Ministry of Planning and Investment)

	Other Resources, Support and Information Additional learning assistance is available for students in this course and will be made available on Blackboard. Academic journal articles are available through connections via the VNU - Central Library. Recommended articles will be duly informed to the students. Books: • Nguyen Phu Trong, <i>Kiên quyết, kiên trì đấu tranh phòng, chống tham nhũng, tiêu cực, góp phần xây dựng đảng và nhà nước ta ngày càng trong sạch, vững mạnh</i>, NXB Chính Trị Quốc Gia Sự Thật 2023. • University of Law Ho Chi Minh City, <i>Giáo trình luật Hiến pháp Việt nam</i>, NXB Hồng Đức 2023. • University of Law Ho Chi Minh City, <i>Giáo trình Luật hành chính</i>, NXB Hồng Đức 2022. • University of Law Ho Chi Minh City, <i>Giáo trình Luật hình sự Việt Nam</i>, NXB Hồng Đức 2022. • University of Law Ho Chi Minh City, <i>Giáo trình Luật dân sự Việt Nam</i>, NXB Hồng Đức 2022. • University of Law Ho Chi Minh City, <i>Giáo trình Luật lao động Việt Nam</i>, NXB Hồng Đức 2022. • University of Law Ho Chi Minh City, <i>Giáo trình pháp luật về chủ thể kinh doanh</i>, NXB Hồng Đức 2022.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (SLO) (1-5) and Program/Student Learning Outcomes (PLO/SLO) (1 - 10) is shown in the following table:

	PLO/SLO									
SLO	1	2	3	4	5	6	7	8	9	10
1	R,M					R,M	R,M	R,M	R,M	R,M
2			R,M							
3			R,M							
4				R,M						
5					R,M					

R: Reinforced

M: Mastery

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction to State • What is State? • Nature of state • Forms of state • Functions of state • Introduction to structure of Vietnamese state	1-5 (level 1 - introduced)	Tests Peer evaluations Class-performance evaluations	Discussions Case studies	PPT - Introduction to Vietnamese legal system available on Blackboard

2	Introduction to law? • What is law? • Nature of law • Forms of law • Structure of law • Categorization of legal system. • Enforcement • Breach of law and liabilities for breach of law • Introduction to structure of Vietnamese legal system	1-5 (level I - introduced)	Tests Peer evaluations Class-performance evaluations	Discussions Case studies	PPT - Introduction to Vietnamese legal system available on Blackboard
3	Constitutional Law • General introduction on Vietnamese Constitution and its nature and basic principles. • Political, economic and other regimes of Vietnam • Basic rights and responsibilities of citizens. Relationship between citizens and the State. • Structure, functions and duties of Vietnamese state, especially in prevention of corruption	1-5 (Level R - reinforced)	Tests Peer evaluations Class-performance evaluations	Discussions Case studies	PPTs – Constitutional law available on Blackboard Constitution 2013 available on Blackboard
4	Constitutional Law (Cont) • Structure and functions and duties of Vietnamese state • Duties of the state in prevention of corruption	1-5 (Level R - reinforced)	Tests Peer evaluations Class-performance evaluations	Discussions Case studies	PPTs – Constitutional law available on Blackboard Constitution 2013 available on Blackboard
5	Administrative Law • Definition and nature of administrative law • Administrative law violations • Liabilities for breach of administrative law, exemption from the liability	1-5 (Level R - reinforced)	Tests Peer evaluations Class-performance evaluations	Discussions Case studies and law on anti-corruption	PPT– Administrative law available on Blackboard Law on handling administrative violations 2012, and Law on anti-corruption 2018 available on Blackboard
6	Criminal Law • Definition and nature of criminal law	1-5 (Level R - reinforced)	Tests Peer evaluations Class-performance	Discussions Case studies, especially cases related	PPT– Criminal law available on Blackboard

	- Crimes - Punishments		evaluations	to corruption	Criminal code 2015 available on Blackboard
7	Criminal Law (Cont) - Crimes related to corruption - Punishments for corruption	1-5 (Level R - reinforced)	Tests Peer evaluations Class-performance evaluations	Discussions Case studies, especially cases related to corruption	PPT– Criminal law available on Blackboard Criminal code 2015 available on Blackboard
8	Revision for mid-term exam		Quizzes Projects		
9	Civil Law (Part I) - Definition and nature Civil law relationship - Subject of civil law - Property and ownership - Civil transactions	1-5 (Level R - reinforced)	Tests Peer evaluations Class-performance evaluations	Discussions Case studies	PPT– Civil law available on Blackboard Civil code 2015 available on Blackboard
10	Civil Law (Part II) - Contracts - Definitions - Formation of contracts - Validity of contracts - Liability for breach of contracts	1-5 (Level M - Mastery)	Tests Peer evaluations Class-performance evaluations	Discussions Case studies	PPT– Civil law available on Blackboard Civil code 2015 available on Blackboard
11	Civil Law (Part III) - Inheritance - Testamentary inheritance - Intestacy	1-5 (Level M - Mastery)	Tests Peer evaluations Class-performance evaluations	Discussions Case studies	PPT– Civil law available on Blackboard Civil code 2015 available on Blackboard
12	Law on Enterprises - Introduction to law on enterprises - Introduction to forms, features, establishment, reorganization and dissolution of an enterprise	1-5 (Level I - Introduced)	Tests Peer evaluations Class-performance evaluations	Discussions Case studies	PPT– Law on enterprises available on Blackboard Law on enterprises 2020 available on Blackboard
13	Labor Law - Definition, and nature of labour law - Employees and employers - Working time, and resting time - Salary (including salary for overtime working hours)	1-5 (Level M - Mastery)	Tests Peer evaluations Class-performance evaluations	Discussions Case studies	PPT– Labor law available on Blackboard Labor code 2019 available on Blackboard
14	Labour Law (Cont.)	1-5 (Level M -	Tests Peer evaluations	Discussions Case studies	PPT– Labor law available on

	• Employment contracts • Labor disciplines • Dispute settlements	Mastery)	Class-performance evaluations		Blackboard Labor code 2019 available on Blackboard
15	Revision/ Tutoring classes		Quizzes Projects		

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5
In class evaluation (20%)	70% pass	80% pass	100% pass	100% pass	100% pass
Midterm examination (30%)	70% pass	80% pass	100% pass	100% pass	100% pass
Final examination (50%)	70% pass	80% pass	100% pass	100% pass	100% pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics

No.	CLOs	Criteria	COMPLETELY FAIL Below 30%	INADEQUATE 30% – 49%	ADEQUATE 50% - 69%	ABOVE AVERAGE 70% - 89%	EXEMPLARY ≥ 90%
1	CLO 1	Organisation and clarification	No evidence of organization and coherence	Does not organise ideas logically and with clarification Limited evidence of coherence Ideas lack consistence	Generally organised logically, with evidence of progression Occasionally, there may be a lack of focus or ideas may be tangential	Clear organization and progression. Responds appropriately and relevantly, although some ideas are underdeveloped	Response is focused, detailed and non-tangential. Shows a high degree of attention to logic and reasoning of points. Clearly leads the reader to the conclusion and stirs thought regarding the topic
2		Originality and usefulness of the analysis	Shows no ability to identify legal issues or a clear inability to gather the facts	Demonstrates an incomplete grasp of the task. There is no overall sense of creative coherence. Arguments are addressed incompletely.	Shows ability to identify legal issues, gather the facts and develop claims. Argument are addressed well but no links with evidence	Shows strong ability to identify legal issues, gather the fact and develop claims as well as link claims with evidence. Overall, an acceptable solution is offered and explained	Shows strong ability to identify legal issues, gather the facts and develop claims as well as link claims with evidence. Satisfactory solutions are offered and supported
3		Use of data/information	Shows no effort to incorporate information from primary and secondary sources	Shows little information from sources. Poor handling of sources	Shows moderate amount of source information incorporated. Some key points supported by sources. Quotations may be poorly integrated into paragraphs. Some possible problems with source citations	Draws upon sources to support most points. Some evidence may not support arguments or may appear where inappropriate. Quotations integrated well into paragraphs. Sources cited correctly	Draws upon primary and secondary source information in useful and illuminating ways to support key points. Excellent integration of quoted material into paragraphs. Source cited correctly
4	CLO2	Use of frameworks	Shows no effort to structure	Shows limited ability to structure	Shows effort to link problems with the theoretical	Shows ability to structure problems in	Shows ability to structure problems in correspondence to

			problems in correspondence to theoretical frameworks	problems in correspondence to theoretical frameworks	frameworks. There are still some mistakes	correspondence to theoretical frameworks correctly. Minor mistakes in resolving problems	theoretical frameworks correctly. The problems are well resolved
5		Quality of arguments	Shows no effort to construct logical arguments. Fails to support analysis	Shows little attempt to offer support for key claims or to relate evidence to analysis. Reasons offered are irrelevant.	Shows argument of poor quality. Weak, undeveloped reasons are offered to support key claims	Shows clear, relevant and logical arguments.	Shows identifiable, reasonable and sound arguments. Clear reasons are offered to support key claims.

Ho Chi Minh City, May 2023
Head of Office of Academic Affairs

Huỳnh Khả Tú



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Construction
Management

COURSE SYLLABUS

Course Name: Engineering Ethics and Critical Thinking

Course Code: PE022IU

1. General Information

Course name	PE020IU – Engineering Ethics and Critical Thinking PE020IU – Đạo đức nghề nghiệp và tư duy phản biện
Module designation	This course is designed to introduce engineering students to the concepts, theory and practice of engineering ethics. It will allow students to explore the relationship between ethics and engineering, and apply classical moral theory and decision making for engineering issues encountered in academic and professional careers. Further, this course also provides the nature and techniques of thought as a basis for our claims, beliefs, and attitudes about the world. Specifically, the course includes the theory and practice of presenting arguments in oral and written forms, making deductive and inductive arguments, evaluating the validity or strength of arguments, detecting fallacies in arguments, and refuting fallacious arguments.
Course type	☐ <i>General knowledge</i> ☐ <i>Fundamental</i> ☒ <i>Specialized knowledge</i> ☐ <i>Internship/Project/Thesis</i> ☐ <i>Others:.....</i>
Semester(s) in which the module is taught	3
Person responsible for the module	Dr. Nguyen, Hoai Nghia, Dr. Huynh, Vo Trung Dung
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, and assignments.

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (lecture, exercise, laboratory session, etc.): 37.5 Private study including examination preparation, specified in hours ¹ : 90		
Credit points	3 credits (Theory: 03 + Practice: 00) 4.64 ECTS		
Number of periods	Theory: 45 Practice: 00		
Required and recommended prerequisites for joining the module	- Prerequisites: - Corequisites: - Previous course:		
Module objectives/intended learning outcomes	Overall objectives are to equip IU students with knowledge about the philosophies of ethics, professional practice, and world culture. Students who complete the course will be able to perform the following tasks: (1) Having knowledge of the definition of engineering ethics, codes of ethics, ethic philosophies, intellectual property, copyright, fair use of copyrighted materials and research data, and critical thinking. (2) Using different problem-solving techniques to solve ethical dilemmas in considering social, environmental, legal aspects, safety and sustainability issues of engineering activities. (3) Identify, construct, and evaluate deductive and inductive arguments in spoken and written forms to avoid barriers to critical thinking in various contexts. (4) Develop professional skills including team working, presentation, and critical thinking to defend personal/group beliefs in respectful manners		
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize)		
	Topic	Weight	Level

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

	Introduction to engineering professionalism and ethics Engineers in Society	1	I
	Moral choices and codes of ethics	1	T, U
	Philosophical ethics Ethical problem-solving techniques	2	I, T, U
	Engineers at the Workplaces - Leadership	1	T, U
	Truth in actions and words in Academic and Research Ethics	1	T
	Internet ethics, Privacy Issues and Intellectual Property Rights Commitment to Safety	2	T
	Environmental ethics Sustainable engineering	1	T
	Introduction to critical thinking	1	T
	Basic logical concepts	1	T, U
	Logical fallacies	1	T, U
	Recognizing, analyzing, evaluating arguments	2	T, U
Examination forms	Constructed-response test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.		
Reading list	Textbook: [1] M. W. Martin and R. Schinzinger (2010). <i>Introduction to engineering ethics</i> McGraw-Hill Education 2nd edition [2] Bassham, Irwin, Nardone, and Wallace, <i>Critical Thinking: A Student's Introduction</i> , 6th edition, McGraw-Hill Education, 2020 References: [1] C. B. Fleddermann. (2011). <i>Engineering Ethics</i> , Pearson 4th edition [2] Moore, B.N. et al. (2009). <i>Critical Thinking</i> , 9th ed. McGraw-Hill.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-3) and Program/Student Learning Outcomes (a-k) is shown in the following table:

- (1) CLO1: Having knowledge of the definition of engineering ethics, codes of ethics, ethic philosophies, intellectual property, copyright, fair use of copyrighted materials and research data, and critical thinking.
- (2) CLO2: Using different problem-solving techniques to solve ethical dilemmas in considering social, environmental, legal aspects, safety and sustainability issues of engineering activities.
- (3) CLO3: Identify, construct, and evaluate deductive and inductive arguments in spoken and written forms to avoid barriers to critical thinking in various contexts.
- (4) CLO4: Develop professional skills including team working, presentation, and critical thinking to defend personal/group beliefs in respectful manners.

No.	Program Learning Outcome										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
CLO1				x							
CLO2				x	x		x			x	
CLO3				x						x	
CLO4				x	x		x				

Program Learning Outcome:

- (a) Understanding the physical world and using knowledge of mathematics and natural sciences to represent it in pursuing and establishing research by the use of quantitative and quantitative methods.
- (b) Understanding the fundamentals of the civil engineering field (e.g., construction geology, material science, construction physics, surveying, structural theory, technical design, construction informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction)
- (c) Ability to analyze and prepare investment projects and understand their economic, environmental, and social impacts
- (d) Awareness of professional and ethical responsibilities of a civil engineer; ability to make rational decisions based on an ethical argumentation, think critically in order to find innovative and effective solutions for interdivision aqualitative and quantitative problems.
- (e) Ability to function as a member of a multidisciplinary team (including multi-national and mixed-gender teams) as well as having good knowledge of management and organization to be able to take on leadership roles
- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies emerge regularly, as well as take part in developing new technologies by engaging in research works having the ability to interpret and use empirical datasets, integrate technical literature and databases to solve specific civil engineering problems or fill knowledge gaps.

- (g) Ability to communicate matters related to civil engineering to colleagues in the same profession or the general public, effectively using oral, written, and other forms of communication.
- (h) A broad education necessary to understand the impacts of civil engineering solutions in a global and social context
- (i) A broad understanding of contemporary issues in civil engineering in the national, regional, and global level
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and daily life situations

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction to engineering professionalism and ethics Engineers in Society	1		Lecture, Discussion	[1] Chapter 1, 4
2	Moral choices and codes of ethics	1	HW1 and/or Quiz1	Lecture, HW1 and/or Quiz1	[1] Chapter 2
3, 4	Philosophical ethics Ethical problem-solving techniques	1, 2	HW2 and/or Quiz2	Lecture, Presentation1	[1] Chapter 3, 4
5	Engineers at the Workplaces - Leadership	1	Quiz3	Lecture, Discussion Quiz3	[1] Chapter 6
6	Truth in actions and words Academic and Research Ethics	1, 2	Quiz4	Lecture, Quiz4	[1] Chapter 7
7, 8	Internet Ethics, Privacy Issues and Intellectual Property Rights Commitment to Safety Midterm exam	1	Quiz5 Presentation 1 Midterm exam	Lecture, Discussion Quiz5 Test	[1] Chapter 5, 6, 13
9	Environmental ethics Sustainable engineering	1	Quiz6	Lecture, Discussion Quiz6	[1] Chapter 9
10	Introduction to critical thinking	1,3	Quiz7	Lecture, Discussion Quiz7	[2] Chapter 1
11	Basic logical concepts	1,3	Quiz8	Lecture, Discussion Quiz8	[2] Chapter 3

12	Logical fallacies	3, 4	Quiz9	Lecture, Discussion Quiz9	[2] Chapter 5, 6
13, 14	Recognizing, analyzing, evaluating arguments	3, 4	Quiz10 Presentation 2	Lecture, Discussion Quiz10	[2] Chapter 2, 7, 8
15	Review				
16	Reservation week				
17-18	FINAL EXAM				

Note: Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities.

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
In-class exercises/quizzes (10%)	Qz1, Qz3,Qz5, Qz6 50%Pass	Qz2, Qz4 50%Pass	Qz5, Qz6, Qz7, Qz8, 50%Pass	Qz5, Qz6, Qz7, Qz8, 50%Pass
Homework exercises/ Presentation (20%)	Presentation 1 50%Pass	Presentation 2 50%Pass		
Midterm exam (20%)	MCQ, Case study 50% Pass	MCQ, Case study 50% Pass		
Final exam (50%)			MCQ, Case study 50% Pass	

Note: %Pass: % students have scores greater than 50 out of 100.

5. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025

**Dean of School of Civil Engineering and
Management**

(Signature)

Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
 School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Introduction to Civil Engineering

Course Code: **CE100IU**

1. General information

Course name	- (in English) <i>Introduction to Civil Engineering</i> - (in Vietnamese) <i>Khái niệm ngành Kỹ thuật Xây dựng</i>
Course designation	<i>The course provides an outline of the long history, present status and future challenges of civil engineering. Ethics and professional responsibility and a description of different fields of civil engineering are presented. The course provides an overview of different works, and relationships between different disciplines of civil engineering such as construction materials, structural engineering, water resources engineering, geotechnical engineering, surveying, transportation, environmental and urban engineering, and construction technology.... An overview of the design process of a project such as buildings, bridges, dams, roads is provided. The national strategy and great plans for developing the infrastructure system and urban development of Vietnam are presented with related important decisions of the Government..</i>
Course type	☒ <i>General knowledge</i> <i>Fundamental</i> ☐ <i>Specialized knowledge</i> <i>Internship/Project/Thesis</i> ☐ <i>Others:</i> ☐ ☐
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Assoc. Prof. Pham Ngoc, Msc. Pham Nhan Hoa, Dr. Pham Nguyen Linh Khanh
Language	English

Relation to curriculum	☒ Compulsory Elective ☐									
Teaching methods	Lecture, lesson, homework, discussion									
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 67.5 hrs Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 30 hrs Private study including examination preparation, specified in hours ¹ : 37.5 hrs									
Credit points	1 credits (Theory: 0 + Practice: 1) 2.45 ECTS (<i>optional</i>)									
Number of periods	Theory: 0 Practice: 15									
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name): None - Corequisites: (Course code – Course name): None - Previous course (Course code – Course name): None									
Course objectives	• Provides an overview of civil engineering, the construction industry, and the profession. • Provides an understanding of the relationship between different fields in civil engineering practice and different subjects within the curriculum of civil engineering. • Provides an understanding of national strategy and plans to develop infrastructure systems and urban development.									
Course learning outcomes	Upon the successful completion of this course students will be able to: <table border="1" style="width: 100%;"> <thead> <tr> <th>Competency level</th> <th>Course learning outcome (CLO)</th> </tr> </thead> <tbody> <tr> <td>Knowledge</td> <td> CLO1. Interpret an overview of civil engineering, the construction industry, and the profession. CLO2. Interpret the relationship between different fields in civil engineering practice and different subjects within the curriculum of civil engineering. </td> </tr> <tr> <td>Skill</td> <td></td> </tr> <tr> <td>Attitude</td> <td>CLO3. Work independently and professionally</td> </tr> </tbody> </table>		Competency level	Course learning outcome (CLO)	Knowledge	CLO1. Interpret an overview of civil engineering, the construction industry, and the profession. CLO2. Interpret the relationship between different fields in civil engineering practice and different subjects within the curriculum of civil engineering.	Skill		Attitude	CLO3. Work independently and professionally
Competency level	Course learning outcome (CLO)									
Knowledge	CLO1. Interpret an overview of civil engineering, the construction industry, and the profession. CLO2. Interpret the relationship between different fields in civil engineering practice and different subjects within the curriculum of civil engineering.									
Skill										
Attitude	CLO3. Work independently and professionally									

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Civil Engineering: In the past, at present, and in the future.</td><td>1</td><td>I, T, U</td></tr><tr><td>Civil Engineering is a composite of different fields</td><td>1</td><td>I, T, U</td></tr><tr><td>Buildings and Design process of building’s elements</td><td>1</td><td>I, T, U</td></tr><tr><td>Transportation and Bridges Engineering</td><td>1</td><td>I, T, U</td></tr><tr><td>Water Resource Engineering</td><td>1</td><td>I, T, U</td></tr></table>	Topic	Weight	Level	Civil Engineering: In the past, at present, and in the future.	1	I, T, U	Civil Engineering is a composite of different fields	1	I, T, U	Buildings and Design process of building’s elements	1	I, T, U	Transportation and Bridges Engineering	1	I, T, U	Water Resource Engineering	1	I, T, U
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Transportation and Bridges Engineering	1	I, T, U																	
Water Resource Engineering	1	I, T, U																	
Examination forms	presentation: Show information about one project of tall buildings, bridges, hydraulic structures, and so on.																		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have a GPA of more than 50/100 points overall to pass this course.																		

Reading list	<i>Textbooks:</i> [1] C P Kaushik, S S Bhavikatti, Anubha Kaushik, "Basic Civil and Environmental Engineering", New Age International (P) Ltd., Publishers, 2010. [2] Pham Nhan Hoa, "Lecture Note,: STRUCTURAL ANALYSIS AND DESIGN WITH CIVIL ENGINEERING SOFTWARE", Sep 2019 [3] R.C. Hibbeler, "Structural Analysis", 9th Edition, Pearson Prentice Hall, US [4] W. H. Mosley, J. H. Bungey and R. Hulse, "Reinforced concrete design to Eurocode 2", PALGRAVE MACMILLAN, 7th Edition, 2012. [4.1] Eurocode 2: Design of Concrete Structures - Part 1-1: General rules and rules for buildings [5] Trahair, NS.; Bradford MA.; Nethercot DA. and Gardner, L. "The Behavior Design of Steel Structures to EC 3", 4th Edition, Taylor and Francis, 2007. [5.1] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-1: Design of Steel Structures - GENERAL RULES and RULES OF BUILDINGS, British Standards Institution, London, UK. [5.2] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-5: General rules - PLATED STRUCTURAL ELEMENTS, British Standards Institution, London, UK. [5.3] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-8: Design of Steel Structures - DESIGNS OF JOINS, British Standards Institution, London, UK. [11] Ed. Wai-Fah Chen and Lian Duan, Bridge Engineering Handbook, Boca Raton: CRC Press, 2000. [12] Novak P., Moffat A.I.B., Nalluri C, and Narayanan, Hydraulic structures (4th Edition), Taylor & Francis Group. 2007.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

	PLO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x	x									
2	x	x									
3						x					

*Use Bloom's Taxonomy

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments activities	Learning activities	Resources
1	Topic 1: - Overview Civil Engineering (CE) - Career path in CE - Application of AI (or artificial intelligence), Green building, and	1,2,3	Attendance Q&A	Reading materials Discussion;	[1-10]

	Building Information Modeling (BIM)				
2	Topic 2: Buildings and Design process of building's elements	1,2,3	Attendance Q&A	Reading materials Discussion;	[1-10]
3	Topic 2: Buildings and Design process of building's elements	1,2,3	Attendance Q&A	Learning at the construction site by acceptance of assignment from the Construction Project Manager;	[1-10]
4	Topic 3: Transportation and Bridges Engineering	1,2,3	Attendance Q&A	Reading materials Discussion;	[11]
5	Topic 4: Transportation and Bridges Engineering	1,2,3	Attendance Q&A	Learning at the construction site by acceptance of assignment from the Construction Project Manager;	[11]
6	Topic 5: Water Resource Engineering	1,2,3	Attendance Q&A	Reading materials Discussion;	[12]
	Topic 5: Water Resource Engineering	1,2,3	Attendance Q&A	Learning at the construction site by acceptance of assignment from the Construction Project Manager;	[12]
			Final presentation		

Note: Regarding the articulation/ twinning program, the teaching methods and learning activities can be a combination of project-based methods and in-class activities.

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated into 2 components, including progress assessment and final presentation. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3
1	Progress assessment (PA, 30%)			
1.1	Class attendance (50% of PA)			Attended 80%Pass
1.2	Work-site Activities (50% of PA)	Q&A 50%Pass	Q&A 50%Pass	Q&A 50%Pass
2	Final presentation (Fin, 70%)	Q&A 50%Pass	Q&A 50%Pass	Q&A 50%Pass

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics: None

6. Date revised: May 25, 2025

7. Course Coordinator/Lecturer

- School of Civil Engineering and Management
- Email: pnlkhanh@hcmiu.edu.vn

Ho Chi Minh, May 25, 2025

**DEAN OF SCHOOL OF
CIVIL ENGINEERING AND MANAGEMENT**

(Signature)

A handwritten signature in blue ink, consisting of stylized, overlapping loops and a long horizontal stroke extending to the right.

Nguyen Hoai Nghia



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Languages**

**COURSE SYLLABUS
Course Name: Writing AE1
Course Code: EN007IU**

1. General information

Course name	- (in English) WRITING AE1 (Academic Writing) - (in Vietnamese) <i>Viết học thuật</i>
Course designation	<i>This course provides students with comprehensive instructions and practice in essay writing, including transforming ideas into different functions of writing such as process, cause-effect, comparison-contrast, and argumentative essays.</i>
Semester(s) in which the course is taught	1, 2, 3
Person responsible for the course	Lecturers of School of Languages
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, project
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 90 Contact hours (lecture, exercise): 30 Private study including examination preparation, specified in hours ¹ : 60
Credit points	2 credits (Theory: 2 + Practice: 0) 3.08 ECTS (<i>optional</i>)
Required and recommended prerequisites for joining the course	None

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course objectives	Throughout the whole course, students are required to read university-level texts to develop the ability to read critically and to respond accurately, coherently and academically in writing. Through providing them with crucial writing skills such as brainstorming, paraphrasing, idea developing, revising, and editing, this course prepares the students for research paper writing in the next level of AE2 writing.		
Course learning outcomes	Upon the successful completion of this course, students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1. Follow different steps in the writing process to produce a complete essay	
	Skill	CLO2. Use signal language that are specific for different functions (describe a process, discuss the causes and effects, compare and contrast, and make arguments) CLO3. Construct a complete essay including appropriately written thesis statement, topic sentences, and restatement CLO4. Provide a counter-argument and a rebuttal in an argumentative essay.	
	Attitude	CLO5. Display discipline, responsibilities, and ethical practices as an individual and a team member in attending class regularly and actively participating in class activities	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	The process of Academic Writing	1	I, T, U
	Paraphrasing	1	T, U
	From Paragraph to Essay	4	T, U
	Process Essays	4	T, U
	Cause/Effect Essays	4	T, U
	Comparison/ Contrast Essays	6	T, U
	Argumentative Essays	6	T, U
	Test, Review & Correction	4	U
Examination forms	Essay writing		
Study and examination requirements	<i>Attendance</i> Regular on-time attendance in this course is expected. A student will be allowed no more than three absences. It is compulsory that the students attend at least 80% of the course to be eligible for the final examination.		

	<i>Missed Tests</i> Students are not allowed to miss any of the tests (both Mid-term and Final). There are very few exceptions. Only with extremely reasonable excuses (eg. certified paper from doctors), students may re-take the examination. <i>Class Behaviors</i> Students are required to treat their studying in college as a full-time job and spend an adequate amount of time for this Writing AE1 course with approximately 8-10 hours per week (both in class and self-study). Accordingly, students are supposed to follow the obligations below: - Prepare thoroughly for each class in accordance with the course syllabus and complete home assignments as the instructor's request. - Participate fully and constructively in all course activities and discussions (if any). - Display appropriate courtesy to all involved in the class. - Provide constructive feedback to faculty members regarding their performance. <i>Plagiarism</i> Students are warned not to copy from other books or from their peers for all assessment tasks. Committing plagiarism will result in 0 point for the task. Students who plagiarize twice will be prohibited from sitting the final examination. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.
Reading list	[1] Oshima, A., & Hogue, A. (2017). <i>Longman Academic Writing Series, Level 4: Essays</i> (5th ed.). New Jersey, NJ: Pearson Longman. [2] Oshima, A., & Hogue, A. (2006). <i>Longman Academic Writing Series, Level 4: Essays</i> (4th ed.). New Jersey, NJ: Pearson Longman.

2. Learning Outcomes Matrix (optional)

3. Planned learning activities and teaching methods

Week	Topic	CLO	Learning activities	Assessments	Resources
1	The process of Academic Writing Step 1: Creating (Prewriting) Step 2: Planning (Outlining) Step 3: Writing Step 4: Polishing Using Outside Sources Paraphrasing	1, 5	Lecture Group work Individual writing	Ongoing assessment & Midterm test	[2] pp. 265-279 [1] pp. 58- 65

Week	Topic	CLO	Learning activities	Assessments	Resources
	Plagiarism and how to avoid plagiarism				
2 & 3	From Paragraph to Essay The introductory paragraph: • General statements & Introductory techniques • Thesis statements & Logical division of ideas Body paragraphs: • Topic sentences The concluding paragraph: • Restatement Final thoughts Outlines of essays	1,3,5	Lecture Group work Individual writing	Ongoing assessment & Midterm test	[1] pp. 74– 100
4	Process Essays Introduction Analyzing the models Thesis statements for process essays Transitional signals	2,3,5	Lecture Group work Individual writing	Ongoing assessment & Midterm test	[1] pp. 101-115
5	Process Essays (Cont'd) In-class Assignment 1 Review/ Correction: Lecturer gives feedback to one or two students' writings in class.	2,3,5	Lecture Group work Individual writing	Ongoing assessment & Midterm test	[1] pp. 101-115
6	Cause/ Effect Essays Introduction Analyzing the models Organization Signal words and phrases	2,3,5	Lecture Group work Individual writing	Ongoing assessment & Midterm test	[1] pp. 116-132
7	Cause/ Effect Essays (Cont'd) In-class practice Review/ Correction: Lecturer gives feedback to students' writings in class.	2,3,5	Lecture Group work Individual writing	Ongoing assessment & Midterm test	[1] pp. 116 - 132
8	MIDTERM TEST				
9	Comparison/ Contrast Essays Introduction Analyzing the models Organization: • Points of comparison	2,3,5	Lecture Group work Individual writing	Ongoing assessment & Final exam	[1] pp. 133-151

Week	Topic	CLO	Learning activities	Assessments	Resources
	- Point-by-point organization - Block organization Comparison and Contrast signal words				
10	Comparison/ Contrast Essays (Cont'd) In-class practice Review/ Correction: Lecturer gives feedback to students' writings in class.	2,3,5	Lecture Group work Individual writing	Ongoing assessment & Final exam	[1] pp. 133-151
11	Comparison/ Contrast Essays (Cont'd) In-class Assignment 2 Review/ Correction: Lecturer gives feedback to one or two students' writings in class.	2,3,5	Lecture Group work Individual writing	Ongoing assessment & Final exam	[1] pp. 133-151
12	Argumentative Essays Introduction Analyzing the model Organization: Block vs. Point-by-point pattern The elements of an argumentative essay: - An explanation of the issue - A clear thesis statement - A summary of the opposing arguments - Rebuttals to the opposing arguments - Your own arguments The introductory paragraph: Thesis Statement Statistics as support	2,3,4,5	Lecture Group work Individual writing	Ongoing assessment & Final exam	[1] pp. 152-168
13	Argumentative Essays (Cont'd): In-class practice: - A summary of the opposing arguments - Rebutting an argument - Timed writing	2,4	Lecture Group work Individual writing	Ongoing assessment & Final exam	[1] pp. 152-168

Week	Topic	CLO	Learning activities	Assessments	Resources
14	Argumentative Essays (Cont'd) Review/ Correction: Lecturer gives feedback to one or two students' writings in class.	2,3,4,5	Lecture Group work Individual writing	Ongoing assessment & Final exam	[1] pp. 152-168
15	Sample final examination	2,3,4,5	Individual writing	Ongoing assessment & Final exam	

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5
Ongoing assessment (30%)	60% Pass	60% Pass	60% Pass	60% Pass	60% Pass
Midterm test (20%)	60% Pass	60% Pass	60% Pass		
Final exam (50%)	60% Pass	60% Pass	60% Pass	60% Pass	

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Midterm test rubrics (100 points)

TASK 1: Write 3 topic sentences and the restatement from a thesis statement: 40 points

Parts/ Points	Answers/ Criteria	CLO
Topic sentence 1 10 pts	○ The topic sentence introduces the topic and the controlling idea (1), starting with a transition signal*.	CLO 3
Topic sentence 2 10 pts	○ The topic sentence introduces the topic and the controlling idea (2), starting with a transition signal*.	CLO 3
Topic sentence 3 10 pts	○ The topic sentence introduces the topic and the controlling idea (3), starting with a transition signal*.	CLO 3
Restatement 10 pts	○ The 3 subtopics are well paraphrased: different words and structures while the meaning kept the same.	CLO 3

Notes:

The students are supposed to use **a variety of connecting devices (single word, phrase, clause, or sentence) to show their flexibility and expertise in writing.*

TASK 2: Write a Cause/Effect essay: 60 points

Answers/ Criteria	Parts/ Points	CLO
Language use and Mechanics A wide variety of sentence patterns and vocabulary are presented correctly. Language used for <i>Cause-Effect Essay</i> is good and Meaning is clear. Spelling, capitalization, punctuations are correct.	10	CLO 2

Answers/ Criteria	Parts/ Points	CLO
Content The essay fulfills the requirements of the assignment & the topic is fully addressed. (15) The essay is interesting to read and originally written by the student. (5)	20	CLO 3
Organization Introduction: The introduction ends with a thesis statement. (10) Body: Each paragraph discusses a particular point and begins with a clear topic sentence. (5) Each paragraph has specific supporting details (fact, examples, etc.) (5) Each paragraph has cohesion and coherence. (5) Conclusion: The conclusion summarizes the main points/paraphrases the thesis statement, begins with a conclusion signal, and leaves the readers with the writer's thoughts on the topic. (5)	30	CLO 1,3,5
Total	60	

5.2. Final exam rubrics: Write an argumentative essay: 100 points

Criteria/ word count	300-350 words (100%)	CLO
Language use and mechanics (20) A wide variety of sentence patterns and vocabulary are presented correctly. Language control is good, and meaning is clear. Spelling, capitalization and punctuation are correct.	20	CLO 2
Content: (20) The essay fulfills the task requirements, and the topic is fully addressed. The content is originally created by the students.	20	CLO 3
Organization: (60) Introduction: The introduction has a thesis statement. (10) Body: At least one paragraph discusses the counter-arguments. (10) Each paragraph discusses a particular point and begins with a clear topic sentence. (10) Each paragraph has specific supporting details (fact, examples, etc.). There are no sentences that are off-topic. (10) Each paragraph has cohesion and coherence. There are transition signals to show	10 10 10 10	CLO 1,3,4

the relationship among ideas and to link paragraphs. (10)		
Conclusion: The conclusion summarizes the main points and paraphrases the thesis statement, begins with a conclusion signal, and leaves the readers with the writer's final thought on the topic. (10)	10 10	
Total	100	

Revised date: June 5th, 2025

Ho Chi Minh City, June 6th, 2025
Vice Dean of School of Languages
(Signature)



Dr. Vu Hoa Ngan



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Languages

COURSE SYLLABUS

Course Name: Listening AE1

Course Code: **EN008IU**

1. General information

Course name	- <i>(in English)</i> LISTENING AE1 (Listening and Note-taking) - <i>(in Vietnamese)</i> <i>Nghe AE1 (Nghe và ghi chú)</i>
Course designation	<i>The course is designed to prepare students for effective listening and note-taking skills, so that they can pursue the courses in their majors without considerable difficulty. The course is therefore lecture-based in that the teaching and learning procedure is built up on lectures on a variety of topics such as business, science, and humanities.</i>
Semester(s) in which the course is taught	1, 2, 3
Person responsible for the course	Lecturers of School of Languages
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lectures, lesson Individual practice Discussion Pair work Group work
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 90 Contact hours (lecture, exercise): 30 Private study including examination preparation, specified in hours ¹ : 60
Credit points	2 credits (Theory: 2 + Practice: 0) 3.08 ECTS (<i>optional</i>)
Number of periods	Theory: 30 Practice: 0

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Required and recommended prerequisites for joining the course	None								
Course objectives	There are a number of objectives embedded in various teaching activities in Listening AE1 course: - Pre-listening activities: aim to activate students' current knowledge of the topic, and to provide them with lecture language and effective strategies in listening and note-taking to prepare themselves for the coming lecture. These activities include reading (this can be done before class meetings), discussing and reviewing what they have learned from the reading. - While-listening and post-listening activities: aim to enable students to put their newly activated knowledge and acquired strategies into work by taking notes on the lecture, using the outline given by the teacher or prepared by themselves. They are later on asked to assess their understanding based on their notes and discuss them with their classmates. Finally, as an optional activity, depending on time and students' needs, students are asked to summarize the lecture. - Follow-up activities: students are required to discuss the lecture topic and to prepare arguments for or against the topic in the debate. The purpose is to enhance students' comprehension of the lecture, and to allow them to put their acquired academic language into practice, and to experience the atmosphere of a university lecture class.								
Course learning outcomes	Upon the successful completion of this course, students will be able to: <table border="1"> <thead> <tr> <th>Competency level</th><th>Course learning outcome (CLO)</th></tr> </thead> <tbody> <tr> <td>Knowledge</td><td>CLO1. Apply knowledge of lecture language in listening comprehension via giving accurate information</td></tr> <tr> <td>Skill</td><td>CLO2. Demonstrate appropriate listening strategies and note-taking skills in taking organized notes of academic lectures. CLO3. Perform listening comprehension in writing a summary of a lecture.</td></tr> <tr> <td>Attitude</td><td>CLO4. Display discipline, responsibilities, and ethical practices as an individual and a team member in attending class regularly and actively participating in class activities</td></tr> </tbody> </table>	Competency level	Course learning outcome (CLO)	Knowledge	CLO1. Apply knowledge of lecture language in listening comprehension via giving accurate information	Skill	CLO2. Demonstrate appropriate listening strategies and note-taking skills in taking organized notes of academic lectures. CLO3. Perform listening comprehension in writing a summary of a lecture.	Attitude	CLO4. Display discipline, responsibilities, and ethical practices as an individual and a team member in attending class regularly and actively participating in class activities
Competency level	Course learning outcome (CLO)								
Knowledge	CLO1. Apply knowledge of lecture language in listening comprehension via giving accurate information								
Skill	CLO2. Demonstrate appropriate listening strategies and note-taking skills in taking organized notes of academic lectures. CLO3. Perform listening comprehension in writing a summary of a lecture.								
Attitude	CLO4. Display discipline, responsibilities, and ethical practices as an individual and a team member in attending class regularly and actively participating in class activities								

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Orientation & Introduction of strategies and techniques in note-taking</td><td>2</td><td>I, T, U</td></tr><tr><td>Chapter 1: New Trends in Marketing Research</td><td>3</td><td>T, U</td></tr><tr><td>Chapter 2: Business Ethics</td><td>3</td><td>T, U</td></tr><tr><td>Chapter 3: Trends in Children’s Media Use</td><td>2</td><td>T, U</td></tr><tr><td>Chapter 4: The Changing Music Industry</td><td>2</td><td>T, U</td></tr><tr><td>Chapter 5: The Placebo Effect</td><td>2</td><td>T, U</td></tr><tr><td>Midterm Sample Test & Review</td><td>2</td><td>T, U</td></tr><tr><td>Chapter 6: Intelligent Machines</td><td>3</td><td>T, U</td></tr><tr><td>Chapter 7: Sibling Relationships</td><td>3</td><td>T, U</td></tr><tr><td>Chapter 8: Multiple Intelligences</td><td>3</td><td>T, U</td></tr><tr><td>Chapter 9: The Art of Graffiti</td><td>3</td><td>T, U</td></tr><tr><td>Final Sample Test & Review</td><td>2</td><td>T, U</td></tr></table>	Topic	Weight	Level	Orientation & Introduction of strategies and techniques in note-taking	2	I, T, U	Chapter 1: New Trends in Marketing Research	3	T, U	Chapter 2: Business Ethics	3	T, U	Chapter 3: Trends in Children’s Media Use	2	T, U	Chapter 4: The Changing Music Industry	2	T, U	Chapter 5: The Placebo Effect	2	T, U	Midterm Sample Test & Review	2	T, U	Chapter 6: Intelligent Machines	3	T, U	Chapter 7: Sibling Relationships	3	T, U	Chapter 8: Multiple Intelligences	3	T, U	Chapter 9: The Art of Graffiti	3	T, U	Final Sample Test & Review	2	T, U
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Chapter 3: Trends in Children’s Media Use	2	T, U																																						
Chapter 4: The Changing Music Industry	2	T, U																																						
Chapter 5: The Placebo Effect	2	T, U																																						
Midterm Sample Test & Review	2	T, U																																						
Chapter 6: Intelligent Machines	3	T, U																																						
Chapter 7: Sibling Relationships	3	T, U																																						
Chapter 8: Multiple Intelligences	3	T, U																																						
Chapter 9: The Art of Graffiti	3	T, U																																						
Final Sample Test & Review	2	T, U																																						
Examination forms	Paper-based tests: True-False questions, short-answer questions, open-ended questions (such as writing a summary paragraph)																																							
Study and examination requirements	<i>Attendance</i> Regular on-time attendance in this course is expected. It is compulsory that students attend atleast 80% of the course to be eligible for the final examination. <i>Missed tests</i> Students are not allowed to miss any of the tests (both on-going assessment and final test). There are very few exceptions. (Only with extremely reasonable excuses, e.g. certified paper from doctors, may students re-take the tests.) <i>Class behavior</i> Students are supposed to: • prepare thoroughly for each class in accordance with the syllabus and complete all assignments upon the instructor’s request • participate fully and constructively in all class activities (and discussions if any) • display appropriate courtesy to all involved in the class • provide constructive feedback to faculty members regarding their performance Assignments/Examination: Students must have more than 50/100 points overall to pass this course.																																							

Reading list	[1] Frazie, L., & Leeming, S. (2013). <i>Lecture ready 3</i>. Oxford: Oxford University Press. References: [2] Frazie, L., & Leeming, S. (2013). <i>Lecture ready 1, 2</i>. Oxford: Oxford University Press.

2. Learning Outcomes Matrix (optional)

3. Planned learning activities and teaching methods

Week	Topic	CLO	Learning activities	Assessments	Resources
1	ORIENTATION Chapter 1 New Trends in Marketing Research Recognizing topic introducing and lecture plan presenting expressions Organizing ideas by outlining	1, 2, 4	Lecture Group work Individual task	Ongoing assessment Midterm test	[1] p.2-13
2	Chapter 2 Business Ethics Recognizing transition expressions Using symbols and abbreviations	1, 2, 4	Lecture Group work Individual task	Ongoing assessment Midterm test	[1] p.14-25
3	REVIEW	1, 2, 4		Ongoing assessment Midterm test	Designed by lecturer
4	Chapter 3 Trends in Children's Media Use Recognizing generalization and support expressions	1, 2, 4	Lecture Group work Individual task	Ongoing assessment Midterm test	[1] p.28-39
5	Chapter 4 The Changing Music Industry Recognizing expressions for clarification or emphasis Organizing notes by using a split-page format	1, 2, 4	Lecture Group work Individual task	Ongoing assessment Midterm test	[1] p.40-52
6	Chapter 5 The Placebo Effect Recognizing cause and effect expressions	1, 2, 4	Lecture Group work	Ongoing assessment Midterm test	[1] p.54-65

Week	Topic	CLO	Learning activities	Assessments	Resources
	Noting causes and Effects		Individual task		
7	REVIEW SAMPLE MIDTERM EXAM + CORRECTION	1, 2, 4		Ongoing assessment Midterm test	Designed by lecturer
8	MIDTERM TEST				
9	<u>Chapter 6</u> Intelligent Machines Recognizing expressions used to predict causes and effects Using arrows to show the relationship between causes and effects	1-4	Lecture Group work Individual task	Ongoing assessment Final exam	[1] p.66-78
10	<u>Chapter 7</u> Sibling Relationships Recognizing expressions of comparison and contrast Noting comparison and contrast	1-4	Lecture Group work Individual task Lecture Group work Individual task	Ongoing assessment Final exam	[1] p.80-91
11	REVIEW <u>In-class assignment</u>	1-4 1, 2, 4		Ongoing assessment Final exam	Designed by lecturer
12	<u>Chapter 8</u> Multiple Intelligences Recognizing non-verbal signals indicating important information Representing information in list form	1-4	Lecture Group work Individual task	Ongoing assessment Final exam	[1] p.92-104
13	<u>Chapter 9</u> The Art of Graffiti Recognizing expressions of definition Reviewing and practicing all note taking strategies	1-4	Lecture Group work Individual task	Ongoing assessment Final exam	[1] p.105-117
14	REVIEW	1-4		Ongoing assessment Final exam	Designed by lecturer

Week	Topic	CLO	Learning activities	Assessments	Resources
15	<u>Sample final exam + Correction</u>	1-4		Ongoing assessment Final exam	
FINAL EXAMINATION					

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
Ongoing assessment (30%)	60% Pass	60% Pass		60% Pass
Midterm test (20%)	Part 1 60% Pass	Part 2 60% Pass		
Final exam (50%)	Part 1 60% Pass	Part 2 60% Pass	Part 3 60% Pass	

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Rubrics for Midterm test

Part	Task	CLO
1	Listen to part of a lecture and decide whether these statements are TRUE or FALSE. (40 pts)	1
2	Listen to a talk and fill in the summary notes (60 pts)	2

5.2. Rubrics for Final exam

Part	Task	CLO
1	Listen to part of a lecture and decide whether these statements are TRUE or FALSE. (30 pts)	1
2	Listen to a talk and fill in the summary notes (50 pts)	2
3	Write a short paragraph summarizing the main ideas. (20 pts.)	3

Evaluative criteria for Part 3

- Content accuracy (16 pts):** All statements are accurate and relevant. Summary includes main idea and important details of the given lecture.
- Organization & Grammar (4 pts):** The summary is in the form of a paragraph. No/minor punctuation/grammatical/spelling errors.

Revised date: June 5th, 2025

Ho Chi Minh City, June 6th, 2025
Vice Dean of School of Languages
(Signature)

Dr. Vu Hoa Ngan



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Languages

COURSE SYLLABUS
Course Name: Writing AE2
Course Code: **EN011IU**

1. General information

Course name	- (in English) WRITING AE2 (Research Paper Writing) - (in Vietnamese) <i>Viết AE2 (Viết bài nghiên cứu)</i>
Course designation	<i>This course introduces basic concepts in research paper writing, especially the role of generalizations, definitions, classifications, and the structure of a research paper to students who attend English- medium college or university. It also provides them with methods of developing and presenting an argument, a comparison or a contrast.</i>
Semester(s) in which the course is taught	1, 2, 3
Person responsible for the course	Lecturers of School of Languages
Language	English
Relation to curriculum	☒ Compulsory ☐ Elective
Teaching methods	Lectures, lesson Individual practice Discussion Pair work Group work Project
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 90 Contact hours (lecture, exercise): 30 Private study including examination preparation, specified in hours ¹ : 60
Credit points	2 credits (Theory: 2 + Practice: 0) 3.08 ECTS (<i>optional</i>)

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Required and recommended prerequisites for joining the course	Previous course: Writing AE1 (EN007IU)	
Course objectives	Students are required to work on the tasks selected to maximize their exposure to written communication and are expected to become competent writers in the particular genre: the research paper. As writing is part of an integrated skill of reading and writing where reading serves as input to trigger writing, this course is designed to familiarize non-native students with academic literature in their major study by having them read and critically respond to texts of a variety of topics ranging from natural sciences such as biology to social sciences and humanities like education, linguistics and psychology.	
Course learning outcomes	Upon the successful completion of this course, students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Apply knowledge about conceptual categories-classifications, the structure of a research paper and appropriate academic language in writing a research paper
	Skill	CLO2: Perform skills and strategies for reading critically, analyzing, and annotating academic texts in written summary CLO3. Demonstrate research writing skills to present an argument, a comparison, or a contrast in their academic study.
	Attitude	CLO4. Display discipline, responsibilities, and ethical practices as an individual and a team member in attending class regularly and actively participating in class activities

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (2 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Unit 1: The Academic Writing Process Introduction	4	I, T, U
	Unit 2: Researching and Writing	2	T, U
	Unit 3: Fundamentals & Feedback	2	T, U
	Unit 4: Definitions, Vocabulary & Clarity	2	T, U
	Unit 5: Generalizations, Facts and Honesty	4	T, U
	Unit 6: Seeing Ideas and Sharing Texts	2	T, U
	Unit 7: Description, Methods & Reality	2	T, U
	Unit 8: Results, Discussion & Relevance	2	T, U
	Unit 9: The Whole Academic Text	2	T, U
Unit 10: Creating the Whole Text	4	T, U	
Course Review	2	U	
Examination forms	Open-ended questions; Essay writing		

Study and examination requirements	<i>Attendance</i> Regular on-time attendance in this course is expected. A student will be allowed no more than three absences. It is compulsory that the students attend at least 80% of the course to be eligible for the final examination. <i>Assignment (Literature review)</i> Purpose: Students will use the knowledge of paraphrasing, summarising, developing arguments, and APA styles to write a 1,000-word literature review on a research scope of their choice. Task: – Follow guidelines on how to write a literature review. – Use relevant academic writing skills such as paraphrasing, summarising, developing arguments, and APA 7th Style Guidelines – see https://www.apastyle.org/ – Develop arguments in relation to the research scope and identify the research gap Notes: All papers should be typed, double-spaced, in 13-pt font, and with 1-inch margins. All papers must be original for this class. Criterion-referenced grading is used in this course. <i>Missed Tests</i> Students are not allowed to miss any of the tests (both Mid-term and Final). There are very few exceptions. Only with extremely reasonable excuses (eg. certified paper from doctors), students may re-take the examination. <i>Class Behaviors</i> Students are required to treat their studying in college as a full-time job and spend an adequate amount of time for this Writing AE2 course with approximately 8-10 hours per week (both in class and self- study). Accordingly, students are supposed to follow the obligations below: - Prepare thoroughly for each class in accordance with the course syllabus and complete home assignments as the instructor's request. - Participate fully and constructively in all course activities and discussions (if any). - Display appropriate courtesy to all involved in the class. - Provide constructive feedback to faculty members regarding their performance. <i>Plagiarism</i> All forms of plagiarism and unauthorised collusion are seriously regarded and could result in penalties. Plagiarism occurs when students copy or reproduce people's words or ideas and then present them as students' own work without proper acknowledgement, including when students copy the work of their fellow students. Plagiarism in student submissions can be detected by: • some web-based programs such as SafeAssign or Turnitin, or • examiner's judgments with evidence of originals

	The rater will review the paper to check if citations or references are provided properly. Penalties due to improper citations or references include: <table border="1"> <thead> <tr> <th>Degree of magnitude</th><th>Description</th></tr> </thead> <tbody> <tr> <td>Below 15%</td><td>Marked as it is.</td></tr> <tr> <td>15% - 25%</td><td>The score is deducted by 25%.</td></tr> <tr> <td>25% - 40%</td><td>The score is deducted by 50%</td></tr> <tr> <td>Over 40%</td><td>The score is 0.</td></tr> </tbody> </table> Notes: Part of the test is marked as it is if no plagiarism is detected. Students who plagiarize over 40% <u>twice</u> will be prohibited from sitting the final examination. <i>Assignments/Examination:</i> Students must have more than 50/100 points overall to pass this course.	Degree of magnitude	Description	Below 15%	Marked as it is.	15% - 25%	The score is deducted by 25% .	25% - 40%	The score is deducted by 50%	Over 40%	The score is 0 .
Degree of magnitude	Description										
Below 15%	Marked as it is.										
15% - 25%	The score is deducted by 25% .										
25% - 40%	The score is deducted by 50%										
Over 40%	The score is 0 .										
Reading list	[1] Hamp-Lyons, L., & Heasley, B. (2006). <i>Study Writing</i>. Cambridge, UK: Cambridge University Press [2] Articles and Essays taken from <i>The Allyn and Bacon Guide to Writing</i> by Ramage et al (2009), Pearson Longman. [3] Cormack, J. & Slaughter, J. (2009). <i>English for academic study: Extended writing and research skills</i>. Cambridge: Cambridge University Press. Garnet Education [4] Folse, K. S. & Pugh, T. (2010). <i>Great writing 5: Greater essays</i>. Boston: Heinle, Cengage Learning. [5] Keezer, S. (Ed.) (2003). <i>Write your research report: A real-time guide</i>. New Jersey: Pearson Learning Group. [6] Kumar, R. (2019). <i>Research methodology: A step-by-step guide for beginners</i>. Sage Publications										

2. Learning Outcomes Matrix (optional)

3. Planned learning activities and teaching methods

Week	Topic	CLO	Learning activities	Assessments	Resources
1	Orientation of the Course Unit 1: The Academic Writing Process Introduction Thinking about writing processes Distinguishing between academic and personal styles of writing Grammar of academic discourse	1, 3	Lecture Group work Individual task	Ongoing assessment & Midterm test	[1] pp. 15-22

Week	Topic	CLO	Learning activities	Assessments	Resources
2	Unit 2: Researching and Writing Recognizing categories and classification The language of classification The structure of a research paper	1, 3	Lecture Group work Individual task	Ongoing assessment & Midterm test	[1] pp. 25-31
3	Unit 3: Fundamentals & Feedback Exploring comparison and contrast structures The language of comparison and contrast Using comparisons and contrasts to evaluate and recommend	1, 3	Lecture Group work Individual task	Ongoing assessment & Midterm test	[1] pp. 35-44
4	Unit 3: Fundamentals & Feedback (Cont.) The research paper Identifying a research gap The writing process	1, 3	Lecture Group work Individual task	Ongoing assessment & Midterm test	[1] pp. 45-49
5	Unit 4: Definitions, Vocabulary & Clarity The clarity principle The language of definition The place of definition in academic text The writing process	1, 2, 3	Lecture Group work Individual task	Ongoing assessment & Midterm test	[1] pp. 50-59
6	Unit 5: Generalizations, Facts and Honesty Honesty principle The language of generalization	1, 2, 3	Lecture Group work Individual task	Ongoing assessment & Midterm test	[1] pp. 60-68
7	Unit 5: Generalizations, Facts and Honesty (Cont.) Writing a literature review The writing process Brainstorming and clustering APA 7th Style Guidelines – see https://www.apastyle.org/ Sample midterm exam + Correction	1, 2, 3		Ongoing assessment & Midterm test	[1] pp. 69-74
8	MIDTERM TEST				
9	Unit 6: Seeing Ideas and Sharing Texts Writing about events in time Connecting events Reading and writing about visuals	1, 3	Lecture Group work Individual task	Ongoing assessment & Final exam	[1] pp. 75-88

Week	Topic	CLO	Learning activities	Assessments	Resources
	Learning about peer reviews				
10	<u>Unit 7: Description, Methods & Reality</u> Describing processes and products The language for writing about processes Writing the Methods section Giving and getting formal peer feedback	1, 3	Lecture Group work Individual task	Ongoing assessment & Final exam	[1] pp. 89-103
11	<u>Unit 8: Results, Discussion & Relevance</u> What is an argument? The language of argument The Results and Discussion sections Finding an academic voice	1, 3	Lecture Group work Individual task	Ongoing assessment & Final exam	[1] pp. 104-118
12	<u>Unit 9: The Whole Academic Text</u> S-P-S-E: Focus on structure S-P-S-E in the introduction The language of coherence and connection Teacher evaluation	1, 2, 3	Lecture Group work Individual task	Ongoing assessment & Final exam	[1] pp. 119-133
13	<u>Unit 10: Creating the Whole Text</u> Structure of the research paper Creating your own research	1, 2, 3	Lecture Group work Individual task	Ongoing assessment & Final exam	[1] pp. 134-139
14	<u>Unit 10: Creating the Whole Text</u> Plagiarism Creating citations Paraphrase and summary Authorial identity	1-4	Lecture Group work Individual task	Ongoing assessment & Final exam	[1] pp. 140-148
15	<u>Sample final exam + Correction</u>	1-4		Ongoing assessment & Final exam	
FINAL EXAMINATION					

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
Ongoing assessment (30%)	60% Pass	60% Pass	60% Pass	60% Pass
Midterm test (20%)	Part 1 60% Pass		Part 2 60% Pass	
Final exam (50%)		Part 1 60% Pass	Part 2 60% Pass	

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Rubrics for Midterm test

Part 1: (30 pts) Read a given text and create a graphic display or an outline that categorises the two-level classifications made in the text. (CLO1)

Part 2: (70 pts) Write a comparison/ contrast essay of about 350 words on ONE of the given topics. Pay attention to the use of academic language and a clear text structure.

Content	All main points relevant to the topic The essay question fully answers	20	CLO 3
Organization	Topic and purpose of the essay discussed in the introduction Each main point discussed in a paragraph All main points summarized and rephrased in the conclusion	20	CLO 3
Coherence	Paragraphs are ordered in a systematic manner based on, for example, importance, priority, etc. Compare/contrast transitions are properly used.	15	CLO 3
Style and Tone	Formal writing with full forms Polite writing Academic vocabulary	15	CLO 3

5.2. Rubrics for Final Exam

Part 1: (30 pts) Write a summary of a given text.

CATEGORIES	CRITERIA	POINTS	CLO
Accuracy and completeness of the content (10 pts)	– The summary contains all of the key ideas in the original, reflecting complete and accurate information about the source.	10	CLO2
Paraphrasing (10 pts)	– All sentences should reveal students' ability in varying the language to avoid repetition.	10	CLO2
Organization (5 pts)	– The summary starts with a general evaluation and includes several sub-topics that explain key ideas from the original.	3	CLO2
	– The summary is organized and coherent.	2	

Grammar, usage and mechanics (5 pts)	– All sentences are clear, accurate and complete. – The summary contains one or two minor errors, but these do not obscure the meaning.	3 2	CLO2
Total		30	

Part 2: (70 pts) Write an argumentative essay of about 350 words on ONE of the given topics. Pay attention to the use of academic language and a clear text structure.

Content	All main points relevant to the topic The essay question fully answers	20	CLO 3
Organization	Topic and purpose of the essay discussed in the introduction Each main point discussed in a paragraph All main points summarized and rephrased in the conclusion	20	CLO 3
Coherence	Paragraphs are ordered in a systematic manner based on, for example, importance, priority, etc. Compare/contrast transitions are properly used.	15	CLO 3
Style and Tone	Formal writing with full forms Polite writing Academic vocabulary	15	CLO 3

Date revised: 2 June, 2025

Ho Chi Minh City, 6 June, 2025
Vice Dean of School of Languages
(Signature)



Dr. Vũ Hoa Ngân



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Languages

COURSE SYLLABUS

Course Name: Speaking AE2

Course Code: **EN012IU**

1. General information

Course name	- (in English) SPEAKING AE2 (Effective Presentations) - (in Vietnamese) Nói AE2 (Bài thuyết trình hiệu quả)
Course designation	<i>Giving presentations today becomes a vital skill for students to succeed not only in university but also at work in the future. Speaking AE2, therefore, provides students with the knowledge and skills needed to deliver effective presentations (informative and persuasive presentations).</i>
Semester(s) in which the course is taught	1, 2, 3
Person responsible for the course	Lecturers of School of Languages
Language	English
Relation to curriculum	☒ Compulsory ☐ Elective
Teaching methods	Lecture, lesson, mini presentations
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 90 Contact hours (lecture, exercise): 30 Private study including examination preparation, specified in hours ¹ : 60
Credit points	2 credits (Theory: 2 + Practice: 0) 3.08 ECTS (<i>optional</i>)
Required and recommended prerequisites for joining the course	- Previous courses: None

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course objectives	Speaking AE2 aims at introducing many aspects of giving a presentation: building up confidence, preparing and planning, using the appropriate language, applying effective visual aids, applying delivery techniques, dealing with questions and responding, performing body language, and so on.		
Course learning outcomes	Upon the successful completion of this course, students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1: Apply effective visual aids in preparing and planning well-organized academic presentations	
	Skill	CLO2: Use appropriate language for academic presentations CLO3: Perform delivery techniques, body language and other para-linguistic elements in academic presentation CLO4: Demonstrate techniques to handle audience questions	
	Attitude	CLO5: Display discipline, responsibilities, and ethical practices as an individual and a team member in attending class regularly and actively participating in class activities	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (2 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Orientation & Introduction Needs analysis	2	I, T, U
	Building up confidence	2	T, U
	The first few minutes	2	T, U
	Organizing what you want to say	2	T, U
	Summarizing and concluding	2	T, U
	Using equipment	2	T, U
	Delivery techniques: Putting it all together	2	T, U
	Group presentations for the instructor’s evaluation and advice	2	U
	Introduction to persuasive speeches	2	T, U
	Methods of persuasion	2	T, U
	Maintaining interest	2	T, U
	Dealing with problems and questions	2	T, U
	Body language	2	T, U
	Individual presentations for the instructor’s evaluation and advice	4	U

Examination forms	Oral Presentations
Study and examination requirements	<i>Attendance</i> Regular on-time attendance in this course is expected. A student will be allowed no more than three absences. It is compulsory that the students attend at least 80% of the course to be eligible for the final examination. <i>Missed Tests</i> Students are not allowed to miss any of the tests (both Mid-term and Final). There are very few exceptions. Only with extremely reasonable excuses (e.g. certified paper from doctors), students may re-take the examination. <i>Class Behaviors</i> Students are required to treat their studying in college as a full-time job and spend an adequate amount of time for this Speaking AE2 course with approximately 8-10 hours per week (both in class and self-study). Accordingly, students are supposed to follow the obligations below: • Prepare thoroughly for each class in accordance with the course syllabus and complete home assignments as the instructor's request. • Participate fully and constructively in all course activities and discussions (if any). • Display appropriate courtesy to all involved in the class. • Provide constructive feedback to faculty members regarding their performance. <i>Plagiarism</i> Students are warned not to copy from other books or from their peers for all assessment tasks. Committing plagiarism will result in 0 point for the task. Students who plagiarize twice will be prohibited from sitting the final examination. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.
Reading list	[1] Lowe, S, & Pile, L. (2011). <i>Presenting</i>. Singapore: Cengage Learning [2] Comfort, J. (1996). <i>Effective presentations</i>. Oxford: Oxford University Press [3] Lucas, S. (2019). <i>The art of public speaking</i> (13th ed.). New York: McGraw-Hill Education. [4] Suzy Siddons. (2008). <i>The Complete Presentation Skills Handbook</i>, U.S. U.K.

2. Learning Outcomes Matrix (optional)

3. Planned learning activities and teaching methods

Week	Topic	CLO	Learning activities	Assessments	Resources
1	1. Orientation & Introduction 2. Needs analysis 3. Instructions for video making of self-introduction	1, 5	Lecture	Ongoing assessment Midterm test	[1] Presenting, p. 5 [3]* The Art of Public Speaking, Chapter 6 + videos of introductory speeches
2	Introduction to informative speeches Unit 1: The first few minutes	1, 2, 5	Lecture, Group work	Ongoing assessment Midterm test	[1] Presenting, pp. 8-13 [2] Effective Presentations: p.7 + video clip; p.13+ video clip [3] The Art of Public Speaking, Chapter 10 [3]* The Art of Public Speaking, Chapter 15
3	Unit 3: Organizing what you want to say	1, 2, 5	Lecture, Group work	Ongoing assessment Midterm test	[1] Presenting, pp. 22-27) [2] Effective Presentations: p.19 + video clip [3]* The Art of Public Speaking, Chapters 8+9
4	Unit 6: Summarizing and concluding	1, 2, 3, 5	Lecture, Group work	Ongoing assessment Midterm test	[1] Presenting, pp. 40-45 [2] Effective Presentations: p.41 + video clip [3]* The Art of Public Speaking, Chapters 10
5	Unit 2: Using equipment	1, 2, 3, 5	Lecture	Ongoing assessment Midterm test	[1] Presenting, pp. 14-21) [2] Effective Presentations: p.31 + video clip [3]* The Art of Public Speaking, Chapters 14
6	Delivery techniques: Putting it all together	1, 2, 3, 5	Lecture, Group work	Ongoing assessment Midterm test	[2] Effective Presentations: p.50 + video clip Assignment: Topic(s) for group presentation) [3]* The Art of Public Speaking, Chapters 13

Week	Topic	CLO	Learning activities	Assessments	Resources
7	Group practice <u>or</u> reserved week for midterm exam (big class)	1, 2, 3, 5	Group work Individual work	Ongoing assessment Midterm test	
8 + 9	MIDTERM TEST: Individual informative presentation (4-6 minutes)				
10	Introduction to persuasive speeches	1, 5	Lecture, Group work	Ongoing assessment Final exam	[3] The art of public speaking, Chapter 15 (Handout given by the instructor)
11	Methods of persuasion	1, 2, 3, 5	Lecture, Group work	Ongoing assessment Final exam	[3] The art of public speaking, Chapter 16 (Handout given by the instructor)
12	Unit 4: Maintaining interest	1, 2, 3, 5	Lecture, Group work	Ongoing assessment Final exam	[1] Presenting: pp. 28-33) [2] Effective Presentations: p.25 + video clip)
13	Unit 5: Dealing with problems and questions	4, 5	Lecture, Group work	Ongoing assessment Final exam	[1] Presenting: pp. 34-39) [2] Effective Presentations: p.44 (Question time) [3]* The Art of Public Speaking, Chapters 13
14	Unit 6: Body language	3, 5	Lecture, Group work	Ongoing assessment Final exam	[2] Effective Presentations: pp.36-39 [3]* The Art of Public Speaking, Chapters 13
15	Practice Wrap-up	1-5	Group work	Ongoing assessment Final exam	
	FINAL EXAM: Individual persuasive presentation (6-8 minutes)				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5
Ongoing assessment (30%)	60% Pass	60% Pass	60% Pass	60% Pass	60% Pass
Midterm test (20%)	Criteria 4-7 60% Pass	Criteria 1-2 60% Pass	Criterion 3 60% Pass		
Final exam (50%)	Criteria 4-6 60% Pass	Criteria 1-2 60% Pass	Criterion 3 60% Pass	Criterion 4 60% Pass	

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics

5.1. Rubrics for Midterm test

No	Criteria	CLO
1	Pronunciation & Voice Techniques (Pause, Volume, Speed Change, Stress, Tone, etc.) (15 pts)	2
2	Language use: Grammar & Vocabulary (usage and appropriateness for audience) (15 pts)	2
3	Body Language: Gestures, Eye contact, Facial expressions, Appearance (10 pts)	3
4	Organization: Intro, Body, Ending, Coherence (20 pts)	1
5	Content: Relevance, Accuracy (20 pts)	1
6	Visual aids: Appropriateness, Clarity (10 pts)	1
7	Overall effectiveness (10 pts)	1

5.2. Rubrics for Final exam

No	Criteria	CLO
1	Pronunciation & Voice Techniques (Pause, Volume, Speed Change, Stress, Tone, etc.) (15 pts)	2
2	Language use: Grammar & Vocabulary (usage and appropriateness for audience) (10 pts)	2
3	Body Language: Appearance, Posture, Gestures, Eye contact, Facial expression (15 pts)	3
4	Organization: Intro, Body, Ending, Coherence (15 pts)	1
5	Content: Relevant, Accurate, Informative and Persuasive (20 pts)	1
6	Visual aids: Appropriateness, Clarity (15 pts)	1
7	Question response (10 pts)	4

Revised date: June 2nd, 2025

Ho Chi Minh City, June 6, 2025

Vice Dean of School of Languages



Dr. Vũ Hoa Ngân



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: INTRODUCTION TO COMPUTING FOR ENGINEERS

Course Code: CE102IU

1. General information

Course name	- <i>Introduction To Computing For Engineers</i> - <i>Tin học cho Kỹ sư</i>
Course designation	<i>This course is an introduction to the key principles of programing along with the use of the available math functions given in language MATLAB. This course also covers the way of establishing and solving civil engineering problems with the help of EXCEL, and VBA</i>
Course type	☐ <i>General knowledge</i> ☒ <i>Fundamental</i> ☐ <i>Specialized knowledge</i> ☐ <i>Internship/Project/Thesis</i> ☐ <i>Others:</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	<i>Phạm Nhân Hòa (Msc)</i>
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, discussion, and assignments

Workload (incl. contact hours, self- study hours)	Total workload: 127.5 (Estimated) Contact hours: - Lecture: 28.5 - Discussion: 9 Private study including examination preparation, specified in hours: 90	
Credit points	3 credits (Theory: 3Cr + Practice: 0)/4.64 ECTS	
Number of periods	Theory: 45 Practice: 0	
Required and recommende d prerequisites for joining the course	None	
Parallel course	None	
Course objectives	The aim of this course is to provide - students' understanding of the concept Computers and Programming, apply the concept of Vectors and Arrays, Execution Control, Functions, Character Strings, Cell Arrays and Structures, and Matrices to solve engineering problems - problem solving skills using the software in civil engineering problems by using Microsoft-EXCEL software with standard tools and VBA in EXCEL	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Categories	Course learning outcome (CLO)/ Competency
	Knowledge	CLO1: become proficient in programming with environment MATLAB CLO2: enhance problem solving skills using the software in civil engineering problems with EXCEL and, VBA
	Skills	
	Attitude	CLO3: Work independently and professionally

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	MATLAB		
	Introduction, Vectors and Arrays in MATLAB	1	I,T,U
	Execution Control	1	I,T,U
	Functions	1	I,T,U
	Character Strings	1	I,T,U
	Cell Arrays and Structures	1	I,T,U
	Plotting	1	I,T,U
	Symbolic	1	I,T,U
	Matrix	1	I,T,U
	EXCEL AMD VBA		
	Introduction EXCEL and WORKSHEET - Mathematical operations	1	I,T,U
	Functions	1	I,T,U
	Graphs - Predict and Forecast tools Goal Seek and Solver Tools	1	I,T,U
Curve Fitting and 1-way and 2-way Interpolation	1	I,T,U	
User defined Forms	1	I,T,U	
Examination forms	Constructed-response test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have GPA more than 50/100 points overall to pass this course.		
Reading list and Media employed	<u>Textbooks:</u> 1. MATLAB Programming for Engineers (Stephen J. Chapman), Thompson Books. 2. Excel 2010 Introduction: Part I and II, Stephen Moffat <u>Additional references:</u> 3. MATLAB online help. (http://www.mathworks.com)		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Intended Learning Outcomes (ILO) is shown in the following table:

	ILO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x	x									
2	x	x									
3						x					

3. Planned learning and assessment activities

Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities

Week	Topic	CLO	Assessments activities	Learning activities	Resources
1-3	Introduction, Vectors and Arrays in MATLAB	1,3	Attendance Q&A Homework 1	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 1,2,3
4	Execution Control	1,3	Attendance Q&A Homework 1	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 4
5-6	Functions	1,3	Attendance Q&A Homework 2	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 5
7	Character Strings	1,3	Attendance Q&A Homework 3	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 6
	Cell Arrays and Structures	1,3	Attendance Q&A Homework 3	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 7
	Plotting	1,3	Attendance Q&A Homework 4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 8
8	Symbolic	1,3	Attendance Q&A Homework 5	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 9
	Matrix	1,3	Attendance Q&A Homework 5	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 10
	Midterm Examination		Midterm Examination	Test	
9-10	Introduction EXCEL and WORKSHEET - Mathematical operations	2,3	Attendance Q&A Homework 6	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[2] Chapter 1,2
11	Functions	2,3	Attendance Q&A Homework 6	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[2] Chapter 3
12-13	Graphs - Predict and Forecast tools Goal Seek and Solver Tools	2,3	Attendance Q&A Homework 7	Reading materials before class;	[2] Chapter 4

14-15	Curve Fitting and 1-way and 2-way Interpolation	2,3	Attendance Q&A Homework 7	Doing the lecture; Discussion; and doing Quiz in class,	[2] Chapter 5
	User defined Forms	2,3	Attendance Q&A Homework 8	Doing the lecture; Discussion; and doing Quiz in class,	[2] Chapter 6
16-17			WRITING		

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3
1	Progress Assessment (PA, 30%)			
1.1	Class attendance (25% of PA)			Attended 80%Pass
1.2	In-class activity: Discussion and doing Quizzes in class (25% of PA)			Participated in class Q&A 60%Pass
1.3	Homeworks (50% of PA)			HW1-8, Submitted 80%Pass
2	Midterm exam (Mid, 30%)	Q1-4, 60%Pass		
3	Final exam (Fin, 40%)		Q5-7, 60%Pass	

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics (optional)

- No

6. Date revised: May 27, 2025

Ho Chi Minh City, 27/5/2025

**Dean of School of Civil Engineering and
Management**

(Signature)

PhD. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
 School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: COMPUTATIONAL METHODS FOR CIVIL ENGINEERING

Course Code: CE213IU

1. General information

Course name	- <i>COMPUTATIONAL METHODS FOR CIVIL ENGINEERING</i> - <i>PHƯƠNG PHÁP TÍNH TRONG XÂY DỰNG</i>
Course designation	<i>Application of computational methods to civil engineering problems. Overview of numerical methods including engineering differential equations, systems of linear and nonlinear equations, numerical differentiation, integration and interpolation. Solving differential equations by finite element method. Introduce optimization problems in civil engineering, and optimization solvers, machine learning concept and algorithms.</i>
Course type	☐ General knowledge ☒ Fundamental ☐ Specialized knowledge ☐ Internship/Project/Thesis ☐ Others:
Semester(s) in which the course is taught	3, 4
Person responsible for the course	<i>Nguyễn Bá Quang Vinh (PhD)</i>
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, discussion, and assignments; Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities.

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 37.5 Private study including examination preparation, specified in hours ¹ : 90	
Credit points	3 credits/ 4.64 ECTS	
Number of periods	Theory:45 Practice: 0	
Required and recommended prerequisites for joining the course		
Course objectives	The aim of this course is to - Give an introduction to fundamental numerical methods and apply to solve various engineering differential equations. - Developing structured computer programming using Python. - Give an introduction to modern approximation techniques. - Give students an opportunity to hone their skills in programming and problem solving. - Analyzing and solving the problems using AI tools.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Show the fundamental numerical methods and apply to solve various engineering differential equations. CLO2. Apply numerical methods to obtain approximate solutions to mathematical problems.
	Skill	CLO3. Demonstrate an ability to develop structured computer programming using Python. CLO4. Demonstrate an ability to identify, formulate, and solve CE or CM problems by means of ML.
	Attitude	CLO5. Work independently and professionally.

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)																																						
	<table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Introduction</td><td>1</td><td>I</td></tr><tr><td>Matrices</td><td>1</td><td>T, U</td></tr><tr><td>Solutions of Equations in One Variable</td><td>1</td><td>T, U</td></tr><tr><td>System of Linear Equations</td><td>2</td><td>T, U</td></tr><tr><td>Numerical Solution of Nonlinear systems of equations</td><td>1</td><td>T, U</td></tr><tr><td>Interpolation</td><td>2</td><td>T, U</td></tr><tr><td>Regression</td><td>1</td><td>T, U</td></tr><tr><td>Machine learning</td><td>2</td><td>T, U</td></tr><tr><td>Numerical differentiation and integration</td><td>1</td><td>T, U</td></tr><tr><td>System of ordinary differential equations</td><td>1</td><td></td></tr><tr><td>Optimization</td><td>1</td><td>T, U</td></tr></table>	Topic	Weight	Level	Introduction	1	I	Matrices	1	T, U	Solutions of Equations in One Variable	1	T, U	System of Linear Equations	2	T, U	Numerical Solution of Nonlinear systems of equations	1	T, U	Interpolation	2	T, U	Regression	1	T, U	Machine learning	2	T, U	Numerical differentiation and integration	1	T, U	System of ordinary differential equations	1		Optimization	1	T, U		
Topic	Weight	Level																																					
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Numerical differentiation and integration	1	T, U																																					
System of ordinary differential equations	1																																						
Optimization	1	T, U																																					
Examination forms	Constructed-response test																																						
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have GPA more than 50/100 points overall to pass this course.																																						
Reading list	<u>Textbooks:</u> [1] Kiusalaas, J. (2013). <i>Numerical methods in engineering with Python 3</i> . Cambridge univ [2] Raschka, S., & Mirjalili, V. (2017). <i>Python machine learning: Machine learning and deep learning with python. Scikit-Learn, and TensorFlow</i> . Second edition ed, 3.ersity press. <u>Additional references:</u> [1] S.C. Chapra, “ <i>Applied Numerical Methods with Matlab for Engineers and Scientists</i> ”, 3rd edition, McGraw-Hill, NY, 2012.																																						

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-...) and Program Intended Learning Outcomes (ILO) (a -k) is shown in the following table:

	ILO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x	x									
2	x	x									
3	x	x				x					

4	x	x				x					
5	x	x					x				

Program Intended Learning Outcome:

- (a) Understanding the physical world and using knowledge of mathematics and natural sciences to represent it in pursuing and establishing research by the use of quantitative and quantitative methods.
- (b) Understanding the fundamentals of the civil engineering field (e.g., construction geology, material science, construction physics, surveying, structural theory, technical design, construction informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction)
- (c) Ability to analyze and prepare investment projects and understand their economic, environmental, and social impacts
- (d) Awareness of professional and ethical responsibilities of a civil engineer; ability to make rational decisions based on an ethical argumentation, think critically in order to find innovative and effective solutions for interdivision aqualitative and quantitative problems.
- (e) Ability to function as a member of a multidisciplinary team (including multi-national and mixed-gender teams) as well as having good knowledge of management and organization to be able to take on leadership roles
- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies emerge regularly, as well as take part in developing new technologies by engaging in research works having the ability to interpret and use empirical datasets, integrate technical literature and databases to solve specific civil engineering problems or fill knowledge gaps.
- (g) Ability to communicate matters related to civil engineering to colleagues in the same profession or the general public, effectively using oral, written, and other forms of communication.
- (h) A broad education necessary to understand the impacts of civil engineering solutions in a global and social context
- (i) A broad understanding of contemporary issues in civil engineering in the national, regional, and global level
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and daily life situations.

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction	1,2,3,4,5	Attendance Q&A Homework 1	Reading materials before class;	[1] Chapter 1 [2] Chapter 1

				Attending the lecture; Discussion;	
2	Matrices	1,2,3,4,5	Attendance Q&A Homework 2	Reading materials before class; Attending the lecture; Discussion;	[1] Chapter 2, 8
3	Solutions of Equations in One Variable	1,2,3,4,5	Attendance Q&A Homework 3	Reading materials before class; Attending the lecture; Discussion;	[1] Chapter 4
4	System of Linear Equations	1,2,3,4,5	Attendance Q&A Homework 4	Reading materials before class; Attending the lecture; Discussion;	[1] Chapter 2
5	System of Linear Equations (cont.)	1,2,3,4,5	Attendance Q&A Homework 5	Reading materials before class; Attending the lecture; Discussion;	[1] Chapter 2
6	Numerical Solution of Nonlinear systems of equations	1,2,3,4,5	Attendance Q&A Homework 6	Reading materials before class; Attending the lecture; Discussion;	[1] Chapter 4
7-8	Interpolation Midterm Exam	1,2,3,4,5	Attendance Q&A Homework 7 Midterm exam	Reading materials before class; Attending the lecture; Discussion; Test	[1] Chapter 3
9	Regression	1,2,3,4,5	Attendance Q&A Homework 11	Reading materials before class; Attending the lecture; Discussion;	[1] Chapter 3
10	Machine learning	1,2,3,4,5	Attendance Q&A Homework 12	Reading materials before class; Attending the lecture; Discussion;	[2] Chapter 1, 2, 3
11	Machine learning (cont.)	1,2,3,4,5	Attendance Q&A Homework 13	Reading materials before class; Attending the lecture; Discussion;	[2] Chapter 1, 2, 3

12	Numerical differentiation and integration	1,2,3,4,5	Attendance Q&A Homework 14	Reading materials before class; Attending the lecture; Discussion;	[1] Chapter 5, 6
13	System of ordinary differential equations	1,2,3,4,5	Attendance Q&A Homework 15	Reading materials before class; Attending the lecture; Discussion;	[1] Chapter 7
14	Optimization	1,2,3,4,5	Attendance Q&A Homework 16	Reading materials before class; Attending the lecture; Discussion;	[1] Chapter 10
15	Project Presentations	1,2,3,4,5	Attendance Q&A Presentation		
16-17	Final examination		Writing		

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3	CLO4	CLO5
1	Progress Assessment (PA, 30%)					
1.1	Class attendance (25% of PA)					Attended 80%Pass
1.2	In-class activity: Discussion and doing Quizzes in class (25% of PA)					Participated in class Q&A 60%Pass
1.3	Homeworks (50% of PA)			HW1-15, Submitted 80%Pass	HW1-15, Submitted 80%Pass	HW1-15, Submitted 80%Pass
2	Midterm exam (Mid, 30%)	Q1-5, 60%Pass	Q1-5, 60%Pass		Q1-5, 60%Pass	
3	Final exam (Fin, 40%)	Q1-5, 60%Pass	Q1-5, 60%Pass		Q1-5, 60%Pass	

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

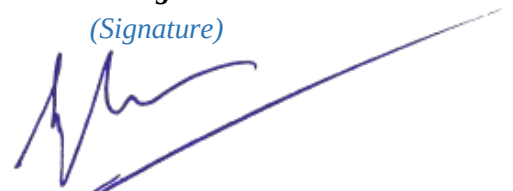
- No

6. Date revised: May 24 2025

Ho Chi Minh City, May 24 2025

***Head of School of Civil Engineering and
Management***

(Signature)

A handwritten signature in blue ink, consisting of stylized, overlapping loops and a long horizontal stroke extending to the right.

Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Engineering Mechanics – Statics

Course Code: **CE101IU**

1. General information

Course name	- <i>Engineering Mechanics – Statics</i> - <i>Cơ kỹ thuật-Tĩnh học</i>
Course designation	<i>Forces, moments, and couples; resultants of force systems; equilibrium analysis and free-body diagrams; analysis of forces acting on members of trusses, frames, etc.; Coulomb friction; centroids, center of mass, resultant of a distributed force system, moment of inertia, parallel-axis theorem, rotated-axis theorem, internal force diagrams of beams.</i>
Course type	☐ <i>General knowledge</i> ☒ <i>Fundamental</i> ☐ <i>Specialized knowledge</i> ☐ <i>Internship/Project/Thesis</i> ☐ <i>Others:</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	<i>Phạm Nhân Hòa (Msc)</i>
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, discussion, and assignments

Workload (incl. contact hours, self- study hours)	Total workload: 127.5 (Estimated) Contact hours: - Lecture: 28.5 - Discussion: 9 Private study including examination preparation, specified in hours: 90	
Credit points	3 credits (Theory: 3Cr + Practice: 0)/4.64 ECTS	
Number of periods	Theory: 45 Practice: 0	
Required and recommende d prerequisites for joining the course	Calculus 2 and Physics 1	
Parallel course	None	
Course objectives	The aim of this course is to provide - Analyze and apply how to solve equilibrium problems involving trusses, frames and machines. - Obtain knowledge of the laws of dry friction and apply it to solve equilibrium problems involving static friction - Apply properties of areas and be able to calculate centroids and inertia moments of an area. - Apply the concept of internal forces in members, and be able to draw shear and bending-moment diagrams for beams.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Categories	Course learning outcome (CLO)/ Competency
	Knowledge	CLO1: Ability to analyze engineering problems, involving equilibrium equations and to determine the internal forces and draw diagrams for beams and trusses. CLO2: An ability to calculate centroids and moments of inertia of various cross sections.
	Attitude	CLO3: Work independently and professionally

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)																				
	<table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>- Fundamental concepts - Systems of Units, - Vector overview: operations, projections</td><td>1</td><td>I</td></tr><tr><td>- Forces as vectors, Two-dimensional force systems, and Three-dimensional force systems. - System of forces, moment and couples - Equivalent systems.</td><td>1</td><td>T</td></tr><tr><td>- Conditions for equilibrium, Free-body diagrams, and Equilibrium equations for 2D and 3D. - Friction - Trusses, The method of joints, and The method of sections - Frames</td><td>1</td><td>T, U</td></tr><tr><td>- Center of gravity and mass - Centroid for a body - Resultant of a distributed force system - Moments of inertia for areas - Parallel-axis theorem - Rotated-axis theorem</td><td>1</td><td>T, U</td></tr><tr><td>- Internal forces in beams - Shear force and bending moment diagrams</td><td>1</td><td>T, U</td></tr></table>	Topic	Weight	Level	- Fundamental concepts - Systems of Units, - Vector overview: operations, projections	1	I	- Forces as vectors, Two-dimensional force systems, and Three-dimensional force systems. - System of forces, moment and couples - Equivalent systems.	1	T	- Conditions for equilibrium, Free-body diagrams, and Equilibrium equations for 2D and 3D. - Friction - Trusses, The method of joints, and The method of sections - Frames	1	T, U	- Center of gravity and mass - Centroid for a body - Resultant of a distributed force system - Moments of inertia for areas - Parallel-axis theorem - Rotated-axis theorem	1	T, U	- Internal forces in beams - Shear force and bending moment diagrams	1	T, U		
Topic	Weight	Level																			
- Fundamental concepts - Systems of Units, - Vector overview: operations, projections	1	I																			
- Forces as vectors, Two-dimensional force systems, and Three-dimensional force systems. - System of forces, moment and couples - Equivalent systems.	1	T																			
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- Internal forces in beams - Shear force and bending moment diagrams	1	T, U																			
Examination forms	Constructed-response test																				
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have GPA more than 50/100 points overall to pass this course.																				
Reading list and Media employed	<u>Textbooks:</u> [1] R. C. Hibbeler, Static and Mechanics of Materials, 4th Edition, Pearson, 2014. <u>Additional references:</u> [2] J. L. Meriam and L.G Kraige, Engineering Mechanics—Statics, 5th edition, Wiley, 2002.																				

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Intended Learning Outcomes (ILO) is shown in the following table:

	ILO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x	x									
2	x	x									
3						x					

3. Planned learning and assessment activities

Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities

Week	Topic	CLO	Assessments activities	Learning activities	Resources
1	- Fundamental concepts - Systems of Units - Vector overview: operations, projections	1,2,4	Attendance Q&A Homework 1	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 1
2	- Forces as vectors, Two-dimensional force systems, and Three-dimensional force systems. - System of forces, moment and couples - Equivalent systems.	1,2,4	Attendance Q&A Homework 2	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 2
3-8	- Conditions for equilibrium, Free-body diagrams, and Equilibrium equations for 2D and 3D. - Friction - Trusses, The method of joints, and The method of sections - Frames Midterm Examination	1,2,4	Attendance Q&A Homework 3 Midterm Examination	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class Test	[1] Chapter 3-5
9-11	- Center of gravity and mass - Centroid for a body - Resultant of a distributed force system - Moments of inertia for areas - Parallel-axis theorem - Rotated-axis theorem	1,3,4	Attendance Q&A Homework 4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[1] Chapter 6
12-15	- Internal forces in beams - Shear force and bending moment diagrams	1,3,4	Attendance Q&A Homework 5	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[1] Chapter 7
16-17	FINAL EXAMINATION		WRITING		

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3
1	Progress Assessment (PA, 30%)			
1.1	Class attendance (25% of PA)			Attended 80%Pass
1.2	In-class activity: Discussion and doing Quizzes in class (25% of PA)			Participated in class Q&A 60%Pass
1.3	Homeworks (50% of PA)			HW1-5, Submitted 80%Pass
2	Midterm exam (Mid, 20%)	Q1-2, 60%Pass		
3	Final exam (Fin, 50%)	Q1-2, 60%Pass	Q3-4, 60%Pass	Q1-4, 60%Pass

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics (optional)

- No

6. Date revised: May 27, 2025

Ho Chi Minh City, 27/5/2025

Dean of School of Civil Engineering and Management

(Signature)



PhD. Nguyen Hoai Nghia



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Civil Engineering and Management

COURSE SYLLABUS

**Course Name: ARTIFICIAL INTELLIGENCE IN CIVIL ENGINEERING AND
CONSTRUCTION MANAGEMENT**

Course Code: CE217IU

1. General information

Course name	- <i>ARTIFICIAL INTELLIGENCE IN CIVIL ENGINEERING AND CONSTRUCTION MANAGEMENT</i> - <i>TRÍ TUỆ NHÂN TẠO TRONG KỸ THUẬT VÀ QUẢN LÝ XÂY DỰNG</i>
Course designation	This course introduces how we apply artificial intelligence in civil engineering (CE) and construction management (CM). Several typical problems of applied artificial intelligence in CE and CM are introduced, such as regression/classification/segmentation/abnormality detection in experimental data, monitoring data, etc. The course introduces machine learning methods frequently utilized in CE and CM, including k-nearest neighbor, neural network, decision tree, and random forest, and explains their concepts so that students can know how to formulate a problem-solving.
Course type	☐ <i>General knowledge</i> <i>Fundamental</i> ☐ ☒ <i>Specialized knowledge</i> <i>Internship/Project/Thesis</i> <i>Others:</i> ☐ ☐
Semester(s) in which the course is taught	
Person responsible for the course	Dr. Pham, Nguyen Linh Khanh; Dr. Nguyen, Ba Quang Vinh
Language	English

Relation to curriculum	<i>Compulsory</i>	
Teaching methods	Lecture, discussion, and assignments.	
Workload (incl. contact hours, self-study hours)	Total workload: 127.5 (Estimated) Contact hours: - lecture: 30 - Discussion: 7.5 Private study, including examination preparation, specified in hours: 90	
Credit points	3 credits/ 4.64 ECTS	
Number of periods	Theory: 45 Practice: 0	
Required and recommended prerequisites for joining the course		
Course objectives	The course provides students with basic definitions of machine learning and its implications in industry. The students have the ability to recognize and formulate the problems in CE and CM that AI can apply. Furthermore, some basis machine algorithms (e.g., neural network, support vector machine, decision tree) are introduced to aid the student in analyzing and solving real case problems. Also, the impacts and contemporary issues of artificial intelligence in CE and CM are discussed.	
Course learning outcomes	Upon the successful completion of this course, students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Understand basic definitions of machine learning and its implications in the industry
	Skill	CLO2. Apply mathematics and ML algorithms to solve problems. CLO3. Design and conduct experiments, analyze and interpret CE and CM data
	Attitude	

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize)		
	Topic	Weight	Level
	Introduction	1	I
	Linear Algebra	1	T
	Data analysis	2	T, U
	Machine learning – Unsupervised learning algorithm	2	T
	Machine learning – Supervised learning algorithm	2	T
	Neural network	2	T
	Machine learning issues	1	I
	Case studies	1	I
Examination forms	Constructed-response test, Presentation.		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: To pass this module, students must have more than 50/100 points overall.		
Reading list	[1] Deep Learning, Ian Goodfellow, Yoshua Bengio, and Aaron Courville, The MIT Press, 2016 (free online: http://www.deeplearningbook.org/) [2] Hands-on Machine Learning with Scikit-Learn & Tensorflow, Aurelien Geron, O'Reilly, 2017.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-3) and Program Intended Learning Outcomes (ILO) (a-k) is shown in the following table:

	ILO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1		x									
2		x	x								
3				x	x					x	

Program Intended Learning Outcome:

- (a) Understanding the physical world and using knowledge of mathematics and natural sciences to represent it in pursuing and establishing research by the use of quantitative and quantitative

methods.

- (b) Understanding the fundamentals of the civil engineering field (e.g., construction geology, material science, construction physics, surveying, structural theory, technical design, construction informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction)
- (c) Ability to analyze and prepare investment projects and understand their economic, environmental, and social impacts
- (d) Awareness of professional and ethical responsibilities of a civil engineer; ability to make rational decisions based on an ethical argumentation, think critically in order to find innovative and effective solutions for interdivision aqualitative and quantitative problems.
- (e) Ability to function as a member of a multidisciplinary team (including multi-national and mixed-gender teams) as well as having good knowledge of management and organization to be able to take on leadership roles
- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies emerge regularly, as well as take part in developing new technologies by engaging in research works having the ability to interpret and use empirical datasets, integrate technical literature and databases to solve specific civil engineering problems or fill knowledge gaps.
- (g) Ability to communicate matters related to civil engineering to colleagues in the same profession or the general public, effectively using oral, written, and other forms of communication.
- (h) A broad education necessary to understand the impacts of civil engineering solutions in a global and social context
- (i) A broad understanding of contemporary issues in civil engineering in the national, regional, and global level
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and daily life situations.

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction	1, 2, 3	In-class exercise	Lecture, Discussion	
2	Linear Algebra	1, 2, 3	In-class exercise, Quiz 1	Lecture, Discussion	
3	Data analysis	1, 2, 3	In-class exercise and Midterm exam	Lecture, Discussion	

4-6	Machine learning – Unsupervised learning algorithms	1, 2, 3	In-class exercise, Quiz 1	Lecture, Discussion	
7-9	Machine learning – Unsupervised learning algorithms, Midterm exam	1, 2, 3	In-class exercise, Midterm exam	Lecture, Discussion, Test	
10-12	Neural network	1, 2, 3	In-class exercise and Final exam	Lecture, Discussion	
13	Machine learning Issues	1, 2, 3	In-class exercise and Final exam	Lecture, Discussion	
14-16	Cases studies	1, 2, 3	Presentation	Discussion/ Presentations	
17	ML in industry	1, 2, 3	In-class exercise	Discussion/ Presentations	
18-19	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
In-class exercises/ Quiz (30%)	In-class exercises + Quiz1 50%Pass	In-class exercises 50%Pass	In-class exercises 50%Pass
Midterm exam (30%)	50% Pass	50% Pass	
Final exam (40%)		50% Pass	50% Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Date revised: May 25, 2025

Ho Chi Minh City, May 25, 2025
Dean of School



Dr. Nguyễn Hoài Nghĩa



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Computer-Aided Design and Drafting

Course Code: CE103IU

1. General information

Course name	- (in English): Computer-Aided Design and Drafting - (in Vietnamese): Vẽ kỹ thuật
Course designation	This course introduces to the students a comprehensive overview of construction drawings basic. The course explains the use of lines, dimensions, specifications, symbols and standards, terminology and manufacturing process notes contained on a CAD drawing. The course also offers and expands into broader topic such as different construction drawing types and how blueprints and construction drawings are used to implement the construction process.
Course type	☐ General knowledge ☒ Fundamental ☐ Specialized knowledge Internship/Project/Thesis ☐ Others:..... ☐ ☐
Semester(s) in which the course is taught	3, 4

Person responsible for the course	Dr. Tran Thanh Ha
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, practice, group assignments/home works, seminar
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 75 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 45 Private study including examination preparation, specified in hours ¹ : 30
Credit points	03 credits (Theory: 03 + Practice: 00) 4.64 ECTS
Number of periods	Theory: 45 Practice: 00
Required and recommended prerequisites for joining the course	Non
Course objectives	Students are able to prepare and read construction drawings; are equipped with up to date information to reflect the most recent developments in the construction industry, and to be able to interpret and deal with the technical information found in blueprint documents.

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1. Recognize legal documents related to civil drawings. CLO2. Present and illustrate professional 2D drawings. CLO3. Describe and interpret blueprints, sections, elevations, site plans, architectural and structural plans, and more.	
	Skill	CLO4. Present skills in teamwork, communication, presentation, and drawing skills	
	Attitude	CLO5. Perform working activities in independently, actively and seriously	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introduction to graphics communications	1	I
	Orthographic Projection	2	T,U
	Dimensioning	2	T,U
	Sectioning	2	T,U
	Blueprints and Construction Drawings	3.5	T,U
	The meaning of symbols	0.5	T,U
	Understanding Schedules	0.5	T,U
	Interpreting Specifications	0.5	T,U
Introduction to sustainable/green buildings	1	I, T	
Examination forms	Written examination: Midterm and Final Exams		

Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.
Reading list	<u>Textbooks:</u> [1] Kirstie Plantenberg, <i>Engineering Graphic Essentials</i>, SDC Publications, Fourth Edition. [2] Sam A. A. Kubba, <i>Blueprint Reading: Construction Drawings for the Building Trades</i>, Mc Graw-Hill Higher Education, 2009 [3] Gary R Bertoline, <i>Introduction to Graphics Communication for Engineers</i>, Mc Graw-Hill Higher Education, Fourth Edition.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-5) and Program Learning Outcomes (PLO) (a-k) is shown in the following table:

	PLO										
CLO	a	b	c	d	e	f	g	h	i	j	k
1		x									
2		x									
3		x									
4							x				x
5											

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction to graphics communications: Introduction ; Traditional Drawing Tools; Computer Aided Drawing Tools	1		Lecture, Discussion,	[1] [3]
2-3	Orthographic Projection	1,2	Quiz 1 HW1	Lecture, Discussion, In-class Quiz	[1] [3]
4-5	Dimensioning	1,2	Quiz 2 HW2	Lecture, Discussion, In-class Quiz	[1] [3]
6-7	Sectioning	1,2	Quiz 3 HW3	Lecture, Discussion, In-class Quiz	[1] [3]
8	Group presentation and Review for exam	2,4,5	Group report 1 Midterm exam	Presentation & discussion Test	
9-12	Blueprints and Construction Drawings The meaning of symbols	1, 3	Quiz 4 HW4	Lecture, Discussion, In-class Quiz	[2]
13	Understanding Schedules Interpreting Specifications	1,3	Quiz 5 HW5	Lecture, Discussion, In-class Quiz	[2]
14	Introduction to sustainable/green buildings	1,3	HW6	Lecture, Discussion In-class Quiz	[2]
15	Group presentation and Review for exam	2,4,5	Group report 2	Presentation & discussion	
16	Reservation week				
17-18	Final exam				

*Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities.

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5
Class participation/In-class activities/quizzes (15%)	Qz(1-6) 50%Pass	Qz(1-3) 50%Pass	Qz(4-6) 50%Pass		
Homework exercises (10%)		HW(1-3) 60%Pass	HW(4-6) 60%Pass		HW(1-6) 60%Pass
Group report and presentation (5%)		Group report 80% pass	Group report 80% pass	Class presentation 80% pass	
Midterm exam (30%)	Q1-4 60%Pass	Q1-4 60%Pass			
Final exam (40%)	Q1-4 60%Pass		Q1-4 60%Pass		

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Date revised: June 12, 2025

Ho Chi Minh City, June 12, 2023

Dean of School

Dr. Nguyễn Hoài Nghĩa



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Practice CADD

Course Code: **CE104IU**

1. General information

Course name	- (in English): Practice CADD - (in Vietnamese): Thực hành vẽ kỹ thuật
Course designation	<i>The course provides to students the common skills to draw objects in 2D plane from Auto CAD software</i>
Course type	☐ General knowledge ☒ Fundamental ☐ Specialized knowledge Internship/Project/Thesis ☐ Others: ☐ ☐
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Dr. Tran Thanh Ha
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, homework, discussion

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 30 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 30 The private study includes examination preparation, specified in hours ¹ : 30	
Credit points	01 credits (Theory: 00 + Practice: 01) 2.45 ECTS	
Number of periods	Theory: 00 Practice: 30	
Required and recommended prerequisites for joining the course	Computer-Aided Design and Drafting (CADD)	
Parallel course	Computer-Aided Design and Drafting (CADD)	
Course objectives	This course is designed to give junior engineering students practical skills in using drawing commands, modifying commands, dimensioning commands, layer management with color and line style, printing management, and advances in auto lisp.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Categorie s	Course learning outcome (CLO)/ Competency
	Knowledg e	CLO1. Be able to use Auto CAD software in 2D
	Skills	CLO2. Draw any objects related to structures in civil engineering. CLO3. Set printing objects with line thickness.
	Attitude	CLO4. Be aware of drawing in the correct scale.

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	The description of the contents should clearly indicate the weighting of the content and the level. Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Drawing commands and practice</td><td>1</td><td>I, T, U</td></tr><tr><td>Modifying commands and practice</td><td>1</td><td>I, T, U</td></tr><tr><td>Dimensioning commands and practice</td><td>1</td><td>I, T, U</td></tr><tr><td>Layer management with color and line style and practice</td><td>1</td><td>I, T, U</td></tr><tr><td>Printing management and practice</td><td>1</td><td>I, T, U</td></tr><tr><td>Advance in drawing with Auto lisp and practice</td><td>1</td><td>I, T, U</td></tr><tr><td>Practice drawing steel structures</td><td>1</td><td>I, T, U</td></tr><tr><td>Practice drawing reinforced concrete structures</td><td>1</td><td>I, T, U</td></tr></table>	Topic	Weight	Level	Drawing commands and practice	1	I, T, U	Modifying commands and practice	1	I, T, U	Dimensioning commands and practice	1	I, T, U	Layer management with color and line style and practice	1	I, T, U	Printing management and practice	1	I, T, U	Advance in drawing with Auto lisp and practice	1	I, T, U	Practice drawing steel structures	1	I, T, U	Practice drawing reinforced concrete structures	1	I, T, U
Topic	Weight	Level																										
Drawing commands and practice	1	I, T, U																										
Modifying commands and practice	1	I, T, U																										
Dimensioning commands and practice	1	I, T, U																										
Layer management with color and line style and practice	1	I, T, U																										
Printing management and practice	1	I, T, U																										
Advance in drawing with Auto lisp and practice	1	I, T, U																										
Practice drawing steel structures	1	I, T, U																										
Practice drawing reinforced concrete structures	1	I, T, U																										
Examination forms	Written examination: Drawing some objects on AutoCAD software																											
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have GPA of more than 50/100 points overall to pass this course.																											
Reading list and Media employed	<u>Textbooks:</u> [1] Help from AutoCAD software. <u>Additional references:</u> [3] IStructE/Concrete Society, <i>Standard-Method-of-Concrete-Detailing</i>, 3rd Edition, 2006.																											

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Learning Outcomes (PLO) is shown in the following table:

	ILO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)

1				x							
2				x							
3				x							
4										x	

3. Planned learning and assessment activities

Week	Topic	CLO	Assessments activities	Learning activities	Resources
1-2	- Drawing commands and practice	1, 4	Attendance and practice Q&A, Homework 1	Doing the lecture Practicing drawing some objects in the class	[1] [2]
3-4	- Modifying commands and practice	1, 4	Attendance and practice Q&A, Homework 2	Doing the lecture Practicing drawing some objects in the class	[1] [2]
5-6	- Dimensioning commands and practice	2, 4	Attendance and practice Q&A, Homework 3	Doing the lecture Practicing drawing some objects in the class	[1] [2]
7-8	- Layer management with color and line style and practice	2, 4	Attendance and practice Q&A, Homework 4 Midterm exam	Doing the lecture Practicing drawing some objects in the class Test	[1] [2]
9-11	- Printing management and practice	3, 4	Attendance and practice Q&A, Homework 5	Doing the lecture Practicing drawing some objects in the class	[1] [2]
12-3	- Advance in drawing with Auto lisp and practice	3, 4	Attendance and practice Q&A, Homework 6	Doing the lecture Practicing drawing some objects in the class	[1] [2]
14	- Practice drawing steel structures	3, 4	Attendance and practice Q&A, Homework 7	Doing the lecture Practicing drawing some objects in the class	[1] [2]
15	- Practice drawing reinforced concrete structures	3, 4	Attendance and practice Q&A,	Doing the lecture Practicing drawing some objects in the class	[1] [2]
	Final examination		Practicing		

*Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 2 components, including: progress assessment and final exam. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3	CLO4
1	Progress assessment (PA, 70%)				
1.1	Class attendance and practice in class (50% of PA)				Attended 80%Pass
1.2	Homework (50% of PA)	HW1-5, Submitted 80%Pass	HW1-5, Submitted 80%Pass	HW1-5, Submitted 80%Pass	HW1-5, Submitted 80%Pass
2	Final exam (Fin, 30%)	Q1 50%Pass	Q1 50%Pass	Q1 50%Pass	Q1 50%Pass

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Date revised: June 12, 2025

Ho Chi Minh City, June 12, 2023

Dean of School



Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Mechanics of Materials 1

Course Code: **CE201IU**

1. General information

Course name	- <i>Mechanics of Materials 1</i> - <i>Sức bền vật liệu 1</i>
Course designation	<i>Internal loading, axial force, shear, moment, and torque in structural members; stress, strain, and stress-strain relations; mechanical properties of material; strain energy; torsion of circular shafts; bending of singly symmetric beams.</i>
Course type	☐ General knowledge ☒ Fundamental ☐ Specialized knowledge ☐ Internship/Project/Thesis ☐ Others:
Semester(s) in which the course is taught	3,4
Person responsible for the course	<i>Phạm Nhân Hòa (Msc)</i>
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, discussion, and assignments

Workload (incl. contact hours, self-study hours)	Total workload: 85 (Estimated) Contact hours: - Lecture: 19 - Discussion: 6 Private study including examination preparation, specified in hours: 60																										
Credit points	2 credits (Theory: 2Cr + Practice: 0)/3.09 ECTS																										
Number of periods	Theory: 30 Practice: 0																										
Required and recommended prerequisites for joining the course	Calculus 2, Engineering Mechanics – Statics																										
Parallel course	None																										
Course objectives	The aim of this course is to - develop an understanding of the relationship between loads (including Axial Loads and Torsion) applied to a deformable body and the internal stress, strains and deformation. - develop an understanding of the relationship between loads (including Bending and Transverse Shear) applied to a deformable body and the internal stress, strains and deformation.																										
Course learning outcomes	Upon the successful completion of this course students will be able to:																										
	Categories	Course learning outcome (CLO)/ Competency																									
	Knowledge	CLO1: Showing proficiency in the mathematics and basic sciences required to solve structural engineering and mechanics problem.																									
	Skills	CLO2: Demonstrating the ability to organize, approach, and solve engineering problems that are multi-step problems in which the solutions are not visible at the beginning of the process.																									
	Attitude	CLO3: Work independently and professionally																									
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>																										
	Weight: lecture session (3 hours)																										
	Teaching levels: I (Introduce); T (Teach); U (Utilize)																										
	<table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Introduction</td><td>1</td><td>I</td></tr><tr><td>Stress and Strain</td><td>1</td><td>T,U</td></tr><tr><td>Mechanical Properties of Material</td><td>1</td><td>T, U</td></tr><tr><td>Axial Load</td><td>1</td><td>T, U</td></tr><tr><td>Torsion</td><td>1</td><td>T, U</td></tr><tr><td>Bending</td><td>1</td><td>T, U</td></tr><tr><td>Transverse Shear</td><td>1</td><td>T, U</td></tr></table>			Topic	Weight	Level	Introduction	1	I	Stress and Strain	1	T,U	Mechanical Properties of Material	1	T, U	Axial Load	1	T, U	Torsion	1	T, U	Bending	1	T, U	Transverse Shear	1	T, U
	Topic	Weight	Level																								
	Introduction	1	I																								
	Stress and Strain	1	T,U																								
	Mechanical Properties of Material	1	T, U																								
	Axial Load	1	T, U																								
Torsion	1	T, U																									
Bending	1	T, U																									
Transverse Shear	1	T, U																									

Examination forms	Constructed-response test
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have GPA more than 50/100 points overall to pass this course.
Reading list and Media employed	<u>Textbooks:</u> [1] R.C. Hibbeler, <i>Statics and Mechanics of Materials</i> , SI edition, Prentice Hall, 2008. <u>Additional references:</u> [2] James M Gere, Berry J Goodno, <i>Mechanics of Materials</i> , Seventh Edition, Cengage Learning, 2009

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Intended Learning Outcomes (ILO) is shown in the following table:

	<i>ILO</i>										
<i>CLO</i>	1	2	3	4	5	6	7	8	9	10	11
1	x	x									
2		x		x							
3						x					

3. Planned learning and assessment activities

Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities

Week	Topic	CLO	Assessments activities	Learning activities	Resources
1	Introduction	1,2,3	Attendance Q&A	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 1
2-3	Stress and Strain	1,2,3	Attendance Q&A Homework 1	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 2
4	Mechanical Properties of Material		Attendance Q&A Homework 2	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 3
5-6	Axial Load		Attendance Q&A Homework 3	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 4

7-8	Torsion	1,2,3	Attendance Q&A Homework 4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class Test	[1] Chapter 5
	Midterm Examination		Midterm Examination		
9-11	Bending	1,2,3	Attendance Q&A Homework 5	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[1] Chapter 6
12-15	Transverse Shear	1,2,3	Attendance Q&A Homework 6	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[1] Chapter 7
16-17	FINAL EXAMINATION		WRITING		

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3
1	Progress Assessment (PA, 30%)			
1.1	Class attendance (25% of PA)			Attended 80%Pass
1.2	In-class activity: Discussion and doing Quizzes in class (25% of PA)			Participated in class Q&A 60%Pass
1.3	Homeworks (50% of PA)			HW1-5, Submitted 80%Pass
2	Midterm exam (Mid, 20%)	Q1-4, 60%Pass	Q1-4, 60%Pass	
3	Final exam (Fin, 50%)	Q1-6, 60%Pass	Q1-6, 60%Pass	

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics (optional)

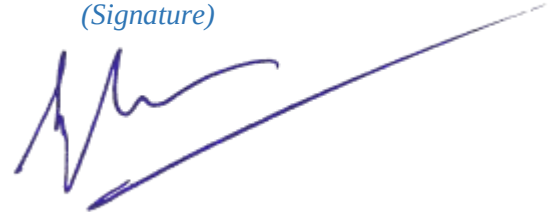
- No

6. Date revised: May 27, 2025

Ho Chi Minh City, 27/5/2025

***Dean of School of Civil Engineering and
Management***

(Signature)

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PhD. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Mechanics of Materials 2

Course Code: **CE208IU**

1. General information

Course name	- <i>MECHANICS OF MATERIALS 2</i> - <i>SỨC BỀN VẬT LIỆU 2</i>
Course designation	<i>Combined loadings; stress and strains transformations, principal stresses and strains, stress, strain and stress-strain relationship; buckling of columns; design of beams and energy methods.</i>
Course type	☐ General knowledge ☒ Fundamental Specialized knowledge Internship/Project/Thesis ☐ Others: ☐ ☐
Semester(s) in which the course is taught	4 TH
Person responsible for the course	<i>Phạm Nhân Hòa (Msc)</i>
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, discussion, and assignments; Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities.

Workload (incl. contact hours, self-study hours)	Total workload: 85 (Estimated) Contact hours: - Lecture: 19 - Discussion: 6 Private study including examination preparation, specified in hours : 60																				
Credit points	2 credits/3.09 ECTS																				
Number of periods	Theory: 30 Practice: 0																				
Required and recommended prerequisites for joining the course	Mechanics of Materials 1																				
Parallel course	None																				
Course objectives	The aim of this course is to - An understanding of the relationship between loads (including Combined loadings) and a deformable using Stress and strain transformation - An understanding of the design of beam, Buckling of columns, and behaviour using Energy Method																				
Course learning outcomes	Upon the successful completion of this course students will be able to: <table><tr><td>Categor ies</td><td colspan="2">Course learning outcome (CLO)/ Competency</td></tr><tr><td>Knowledg e</td><td colspan="2">CLO1: Showing proficiency in the matematics and basic sciences rquired to solve structural engineering and mechanics problem.</td></tr><tr><td>Skills</td><td colspan="2">CLO2: Demonstrating the ability to organize, approach, and solve engineering problems that are multi-step problems in which the solutions are not visible at the beginning of the process.</td></tr><tr><td>Attitude</td><td colspan="2">CLO3: Work independently and professionally</td></tr></table>			Categor ies	Course learning outcome (CLO)/ Competency		Knowledg e	CLO1: Showing proficiency in the matematics and basic sciences rquired to solve structural engineering and mechanics problem.		Skills	CLO2: Demonstrating the ability to organize, approach, and solve engineering problems that are multi-step problems in which the solutions are not visible at the beginning of the process.		Attitude	CLO3: Work independently and professionally							
Categor ies	Course learning outcome (CLO)/ Competency																				
Knowledg e	CLO1: Showing proficiency in the matematics and basic sciences rquired to solve structural engineering and mechanics problem.																				
Skills	CLO2: Demonstrating the ability to organize, approach, and solve engineering problems that are multi-step problems in which the solutions are not visible at the beginning of the process.																				
Attitude	CLO3: Work independently and professionally																				
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Combined loadings</td><td>1</td><td>T,U</td></tr><tr><td>Stress and strain transformation</td><td>1</td><td>T, U</td></tr><tr><td>Design of beams</td><td>1</td><td>T, U</td></tr><tr><td>Buckling of columns</td><td>1</td><td>T, U</td></tr><tr><td>Energy Method</td><td>1</td><td>T, U</td></tr></table>			Topic	Weight	Level	Combined loadings	1	T,U	Stress and strain transformation	1	T, U	Design of beams	1	T, U	Buckling of columns	1	T, U	Energy Method	1	T, U
Topic	Weight	Level																			
Combined loadings	1	T,U																			
Stress and strain transformation	1	T, U																			
Design of beams	1	T, U																			
Buckling of columns	1	T, U																			
Energy Method	1	T, U																			
Examination forms	Constructed-response test																				

Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have GPA more than 50/100 points overall to pass this course.
Reading list and Media employed	<u>Textbooks:</u> [1] R.C. Hibbeler, <i>Statics and Mechanics of Materials</i>, SI edition, Prentice Hall, 2008. <u>Additional references:</u> [2] James M Gere, Berry J Goodno, <i>Mechanics of Materials</i>, Seventh Edition, Cengage Learning, 2009

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Intended Learning Outcomes (ILO) is shown in the following table:

	<i>ILO</i>										
<i>CLO</i>	a	b	c	d	e	f	g	h	i	j	k
1	x	x									
2		x		x							
3						x					

3. Planned learning and assessment activities

Week	Topic	CLO	Assessments activities	Learning activities	Resources
1-5	Combined loadings	1,2,3	Attendance Q&A Homework 1	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 9
6-8	Stress and strain transformation Midterm Exam	1,2,3	Attendance Q&A Homework 2 Midterm exam	Reading materials before class; Doing the lecture; Discussion; Test	[1] Chapter 10
9-10	Design of beams	1,2,3	Attendance Q&A Homework 3	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[1] Chapter 11
11	Object-oriented programming in beam design	1,2,3	Attendance Q&A	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[1] Chapter 11

12-13	Buckling of columns	1,2,3	Attendance Q&A Homework 4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[1] Chapter 12
14-15	Energy Method		Attendance Q&A Homework 5	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[1] Chapter 13
16-17	FINAL EXAMINATION		WRITING		

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3
1	Progress Assessment (PA, 30%)			
1.1	Class attendance (25% of PA)			Attended 80%Pass
1.2	In-class activity: Discussion and doing Quizzes in class (25% of PA)			Participated in class Q&A 60%Pass
1.3	Homeworks (50% of PA)			HW1-5, Submitted 80%Pass
2	Midterm exam (Mid, 20%)	Q1-2, 60%Passes	Q1-2, 60%Passes	
3	Final exam (Fin, 50%)	Q3-5, 60%Passes	Q3-5, 60%Passes	

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics (optional)

- No

6. Date revised: May 24 2025

Ho Chi Minh City, 24/5/2025
Dean of School of Civil Engineering and
Management
(Signature)

A handwritten signature in blue ink, consisting of stylized, overlapping loops and a long, sweeping horizontal stroke extending to the right.

PhD. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Mechanics of Materials Laboratory

Course Code: CE202IU

1. General information

Course name	- (in English) <i>Mechanics of Materials Laboratory</i> - (in Vietnamese) <i>Thí nghiệm Sức bền vật liệu</i>
Course designation	This course allows students to practice the basic mechanics of materials concepts discussed in the theory course - CE201IU Mechanics of Materials. It will also familiarize students with the different materials testing instruments. Basic mechanics of materials concepts: members subjected to tension, buckling, bending, torsion, indeterminate structures and stress-and-strain behaviors of materials.
Course type	☐ General knowledge <i>Fundamental</i> ☒ Specialized knowledge <i>Internship/Project/Thesis</i> ☐ Others: ☐ ☐
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Pham Thanh Tung, Ph.D.
Language	English
Relation to curriculum	☒ Compulsory Elective ☐
Teaching methods	Pre-laboratory discussions and demonstrations, laboratory experiments, writing of laboratory reports

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 67.5 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 37.5 Private study including examination preparation, specified in hours ¹ : 30		
Credit points	1 credits (Theory: 0 + Practice: 1) 2.45 ECTS (<i>optional</i>)		
Number of periods	Theory: 0 Practice: 8		
Required and recommended prerequisites for joining the course	- Prerequisites: CE101IU - Engineering Mechanics - Statics - Corequisites: CE201 - Mechanics of Materials 1 - Previous course:		
Course objectives	The objective of this course is to equip the students with understanding of basic mechanics of materials concepts.		
Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1. perform basic testing procedures for mechanics of materials and use materials testing instruments.	
	Skill	CLO2. perform calculations from experimental data collected and prepare reports, and other related documents.	
	Attitude	CLO3. work professionally in a team.	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: laboratory session (4 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	1. Introduction and Lab Orientation	1	I
	2. Bending Stress in a Beam	1	T, U
	3. Steel Bars under Pure Tensile Forces.	2	T, U
	4. Torsion of Circular Sections	1	T, U
	5. Buckling of Struts	1	T, U
	6. Continuous and Indeterminate Beams	1	T, U
	7. Final presentation	1	U

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Examination forms	
Study and examination requirements	Students are expected to attend the practice every week. Students are divided into groups of 4-5 members. Each group performs the laboratory exercises and must prepare and submit a laboratory report one week after the laboratory exercise is done. Students must have an overall score of at least 50/100 points to pass this course.
Reading list	1. Experimental laboratory manuals Textbooks: 1. R.C. Hibbeler, Statics and Mechanics of Materials, SI edition, Prentice Hall, 2008.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

CLO	ILO										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1		X								X	
2		X								X	X
3					X						

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction and lab orientation	1	Attendance	Discussions and demonstrations	[1]
2	Bending Stress in a Beam	1,2,3	Lab experiment 1, Lab Report L01	Pre-lab discussions and demonstrations	[1,2]
3 - 4	Steel Bars under Pure Tensile Forces.	1,2,3	Lab experiment 2, Lab Report L02	Pre-lab discussions and demonstrations	[1,2]
5	Torsion of Circular Sections	1,2,3	Lab experiment 3, Lab Report L03	Pre-lab discussions and demonstrations	[1,2]
6	Buckling of Struts	1,2,3	Lab experiment 4, Lab Report L04	Pre-lab discussions and demonstrations	[1,2]
7	Continuous and Indeterminate Beams	1,2,3	Lab experiment 5, Lab Report L05	Pre-lab discussions and demonstrations	[1,2]
8	Final presentation	3	Presentation	Reporting and Q&A	[2]

4. Assessment plan

No.	Assessment Type	CLO1	CLO2	CLO3
1	Progress Assessment (80%)			
1.1	Attendance, Participation in lab experiments (50% of PA)	Lab 1-5 100%Pass		Lab 1-5 100%Pass
1.2	Laboratory reports (50% of PA)		L01-L05 60%Pass	L01-L05 60%Pass
2	Final Requirement (20%)			Presentation 60%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics

- None

6. Date revised: 20/05/2025

7. Course coordinator/Lecturer

- School/Department: School of Civil Engineering and Management
- Email: pttung@hcmiu.edu.vn

Ho Chi Minh City, 20/05/2025

**DEAN OF SCHOOL OF CIVIL
ENGINEERING AND MANAGEMENT**

(Signature)

Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS
Course Name: Fluid Mechanics
Course Code: **CE205IU**

1. General information

Course name	- (in English) <i>Fluid Mechanics</i> . - (in Vietnamese) <i>Cơ lưu chất</i>
Course designation	Fluid mechanics is one of a principle subjects for civil engineers. Generally, fluid mechanics is the study of the mechanisms in which fluids, under all possible conditions (such as: gases and liquids) respond to forces, exert forces, and move from one place to another in physical view. This course will provide fundamental knowledge on physical properties of fluids and its characteristics as well. Moreover, students learn the laws and the governing equations representing different kinds of fluids at both static and motion state interacting to structures; and know how to solve these equations or compute physical parameters in practical meaning. In addition, the practices to measure fluid properties are introduced in this course. Therefore, fluid mechanics is involved in nearly all areas of civil Engineering either directly or indirectly. Some examples of direct involvement are those where we are concerned with manipulating the fluid, including: sea and river (flood) defenses, water distribution/sewerage (sanitation) networks, dams, irrigation, pumps and turbines, water retaining structures, and so on; and some examples where the primary object is construction - yet analysis of the fluid mechanics is essential, such as: flow of air in / around buildings; bridge piers in rivers; Ground-water flow, and so forth.
Course type	☐ <i>General knowledge</i> <i>Fundamental</i> ☒ <i>Specialized knowledge</i> <i>Internship/Project/Thesis</i> ☐ <i>Others:</i> ☐ ☐
Semester(s) in which the course is taught	5,6

Person responsible for the course	A/Prof. Phạm Ngọc									
Language	English									
Relation to curriculum	☒ Compulsory ☐ Elective									
Teaching methods	Lecture, lesson, homework, discussion For the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities.									
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 90 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 30 Private study including examination preparation, specified in hours ¹ : 60									
Credit points	2 credits (Theory: 2 + Practice: 0) ECTS (<i>optional</i>)									
Number of periods	Theory: 15 Practice: 0									
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name)..... - Corequisites: (Course code – Course name): CEIU206IU - Fluid Mechanic Laboratory - Previous course (Course code – Course name)									
Course objectives	- Introduce the concepts of fluid mechanics, which are more applicable for civil engineers; - Demonstrate how these concepts are used for solving some common problems in field of civil engineering									
Course learning outcomes	Upon the successful completion of this course students will be able to: <table border="1" style="width: 100%;"> <thead> <tr> <th>Competency level</th> <th>Course learning outcome (CLO)</th> </tr> </thead> <tbody> <tr> <td>Knowledge</td> <td> CLO1. Calculate fundamental parameters of fluids. CLO2. Apply the principles of fluid static to analyze and estimate the hydrostatic pressure and force exerted on submerged surfaces or floating subjects. CLO3. Apply the fundamental of fluid dynamic to solve some problems in field of civil engineering. </td> </tr> <tr> <td>Skill</td> <td>CLO4: Think and work independently and professionally, solve problems.</td> </tr> <tr> <td>Attitude</td> <td>CLOiii:.....</td> </tr> </tbody> </table>		Competency level	Course learning outcome (CLO)	Knowledge	CLO1. Calculate fundamental parameters of fluids. CLO2. Apply the principles of fluid static to analyze and estimate the hydrostatic pressure and force exerted on submerged surfaces or floating subjects. CLO3. Apply the fundamental of fluid dynamic to solve some problems in field of civil engineering.	Skill	CLO4: Think and work independently and professionally, solve problems.	Attitude	CLOiii:.....
Competency level	Course learning outcome (CLO)									
Knowledge	CLO1. Calculate fundamental parameters of fluids. CLO2. Apply the principles of fluid static to analyze and estimate the hydrostatic pressure and force exerted on submerged surfaces or floating subjects. CLO3. Apply the fundamental of fluid dynamic to solve some problems in field of civil engineering.									
Skill	CLO4: Think and work independently and professionally, solve problems.									
Attitude	CLOiii:.....									

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (2 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introduction	1	I, T, U
	Fluid Static	4	I, T, U
	The flow of an ideal fluids	2	I, T, U
	The flow of a real fluids	1	I, T, U
	The flow in pipes	4	I, T, U
Fluid measurement	1	I, T	
Group assignment	1	I, U	
Examination forms	Written examination: Mid-term and Final examinations		
Study and examination requirements	Attendance: A minimum attendance of 60 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have GPA more than 50/100 points overall to pass this course.		
Reading list	<u>Textbooks:</u> [1] Bruce R. Munson, Donald F. Young, Theodore H.Okiishi, Fundamentals of fluid mechanics, John Wiley & Sons Inc. 2006. [2]. Donald F. Elger, Barbara C. Williams, Clayton T. Crowe, John A. Roberson. Engineering of Fluid Mechanics (10 Edition). Wiley. 2014 <u>Additional references:</u> [3] Bar Meir, Genick, Basic of fluid mechanics, www.potto.org [4] Nakayama, Y., Boucher, R.F.. Introduction to fluid mechanics, Butterworth-Heinemann. 2000. [5] John K. Vennard. Elementary fluid mechanics, John Wiley & Sons Inc. 1940		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

	PLO										
CLO	a	b	c	d	e	f	g	h	i	j	k

1	x										x
2	x	x									x
3	x	x									x
4					x						

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

For the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities.

Week	Topic	CLO	Learning activities	Assessments activities	Resources
1	Introduction: about the course; physical properties and important characteristics of fluids.	1,4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	Attendance Q&A Homework 1	[1] [2]
2-3	Fluid Statics: Definition of pressure; Physical laws and basic equations for analyzing and determining pressure of a point in rest fluids; Methods to measure pressure.	2,4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	Attendance Q&A Homework 1	[1] [2]
4-5	Fluid Statics: Hydrostatic force acting on the submerged surface; Buoyancy phenomena and buoyant force; Stability of floating body; Rigid-body rotation.	2,4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	Attendance Q&A Homework 2	[1] [2]
6-8	The flow of ideal fluids: Introduction; Bernoulli's Equation; Continuity equation; Flow rate measurement; Energy line and the hydraulic grade line. Midterm exam	3,4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class, Midterm exam	Attendance Q&A Homework 3 Test	[1] [2]
9	The flow of real fluids: Laminar and Turbulent flow; Fluid flow past solid boundaries; Fluid flow between parallel plates.	3,4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	Attendance Q&A Homework 3	[1] [2]
10-13	Fluid flow in pipes: Energy relationships; General mechanics of fluid flow in pipes; Friction and head losses in the pipes	3,4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	Attendance Q&A Homework 4	[1] [2]
14	Fluid measurements	3,4	Reading materials before class;	Attendance Q&A	[1] [2]

			Doing the lecture; Discussion; and doing Quiz in class	Homework 5	
15	Group assignment and review for final examination	3,4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	Attendance Q&A	[1] [2]
	Final examination			Writing	

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of score is from 0 to 100.
- The final GPA of students is integrated from 3 components, including: progress assessment, mid-term exam and final exam. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3	CLO4
1	<i>Progress assessment (30%)</i>				
1.1	Class attendance				Attended 80%Pass
1.2	In class activity: Discussion and doing Quiz in class				Participated in class Q&A 60%Pass
1.3	Home works				HW1-4, Submitted 80%Pass
2	<i>Midterm exam (Mid, 30%)</i>	Q1-2, 60%Pass	Q3-4 60%Pass		
3	<i>Final exam (Fin, 40%)</i>		Q1 70%Pass	Q3-5 70%Pass	

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics

5.1 Rubric for grading progress assessment

Criteria	CLO	Weight (%)	Scale of qualification			
			Excellent	Good	Medium	Fail
			(90-100)	(70-89)	(50-69)	0-49
Lecture Attendance, relatively estimated	4	30	> 90%	80% ÷ 90%	70% ÷ 80%	<60% (Or forbidden for exams)

from scheduled hours						
Participation in learning activities	4	30	- Enthusiastic discussion, - actively answer many questions - Fulfill Independently and correctly more than 90% quizzes	- Sometime participating for discussion and answering the question - Submit from 70% to 90% quizzes; but not correct all	- Sometime participating for discussion and answering the question - Submit from 50% to 70% quizzes; but few of the are correct or not solve by themselves	- No discussion or answer to the questions. - Submit less than 50%; or most quizzes are not correct or not solve by themselves
Individual and group homework	4	40	- Submit 90% HomeWorks on time with correct solution. - Main contributor or leader for group assignment assessed as good solution	- Submit 70% - 90% HomeWorks on time; and most of them with correct solution. - A member of the group having group assignment assessed as medium quality	- Submit 50% - 70% HomeWorks on time; and most of them with correct solution. - A member of the group having group assignment assessed as medium quality	- Submit less than 50% HomeWorks on time; few of them with correct solution. - A member of the group having group assignment assessed as poor quality
Total score:		100	90-100	70-89	50-69	0-49

5.2 Rubric for grading midterm exam

Criteria	CLO	Weight/ Score (%)	Scale of qualification			
			Excellent	Good	Medium	Fail
			(90%-100%)	(70%-89%)	(50%-69%)	(0-49%)
Ability for calculating physical properties of gases	1	20	- Understand problem and apply correct	- Understand problem and apply correct formula; and	- Understand problem and apply correct	- Do not understand problem and so apply

Ability for calculating physical properties of liquids	1	20	- formula; and - Have correct solution and results	- Have correct solution but wrong results.	- formula; and - Have not correct solution and wrong results.	- wrong formula; or - Have not correct solution results; or - No solution; or - Commit plagiarism.
Ability for applying Pascal law to solve some real problems	2	30	- Apply correct Pascal law to solve problem with suitable ways and correct results.	- Apply correct Pascal law to solve problem with suitable ways, but wrong results.	- Apply correct Pascal law to solve problem with suitable ways, but wrong results.	
Ability for applying the principal laws of hydro-pressure in static water body to analyze and to estimate the hydrostatic force exerting on submerged plates	2	30	- Figure out clear and correct pressure and force diagram. - Apply principle of fluid static to solve problem with suitable ways and correct results.	- Apply principle of fluid static to solve problem with suitable ways and correct results; but only pressure and force diagram not clear or some mistakes	- Apply principle of fluid static to solve problem with suitable ways and results have some mistake; or having pressure and force diagram but not clear or some mistakes	- Do not understand the problem; and wrong application of principle to solve problem; or - No solution; or - Commit plagiarism
Total score:		100	90-100	70-89	50-69	0-49

5.3 Rubric for grading final examination

Criteria	CLO	Weight/ Score (%)	Scale of qualification			
			Excellent	Good	Medium	Fail
			(90%-100%)	(70%-89%)	(50%-69%)	(0-49%)
Ability for applying the theory to solve the problem of hydro static force analysis for some common hydraulic structures	2	30	Well understanding the given problem. Figure out clear and correct pressure and force diagram. Solve the problem correctly by applying hydrostatic principles	Well understanding the given problem. Figure out clear and correct pressure and force diagram. Have the problem solution by applying hydrostatic principles with minor mistakes.	Well understanding the given problem. Have pressure and force diagram with some mistakes. Have suitable ways for solving the problem; but many results are not correct	Do not understand the given problem; and do not have pressure and force diagram; and wrong solution; or - No solution; or Commit plagiarism.
Ability for applying the principal laws of ideal fluid dynamic to solve some real problems	3	30	Well understanding the given problem. Solve the problem correctly by well applying important concepts for ideal fluid at steady state flowing condition (e.g: Reynold theory, Bernoulli's equation, continuity equation and so on)	Well understanding the given problem. Have problem solution by correctly applying principal equations of fluid dynamic with minor mistake or results	Well understanding the given problem. Write down correct form of principal hydro-dynamic equations for solving the problem solution; but many results are not correct	Do not understand the given problem and have wrong solution; or - No solution. - or Commit plagiarism.
Ability for applying the	3	40	Well understanding the given problem.	Well understanding the given problem.	Well understanding the given problem.	Do not understand the given problem;

principal laws of real fluid dynamic to solve some problems in pipe systems			- Figure out a clear and correct diagram of hydraulic grade line and energy line. - Solve the problem correctly by well applying theory of real fluid flowing pipes (e.g: Reynold theory, methos for estimating head loss Bernoulli's equation, continuity equation and so on)	- Figure out a clear and correct diagram of hydraulic grade line and energy line. - Correctly apply equations for solution; but the results having some minor mistakes	- Figure out diagram of hydraulic grade line and energy line with some mistake or not clear. - Correctly apply equations for solution; but the results have many mistakes	- and do not have hydraulic grade line and energy line; and wrong solution; or No solution; or Commit plagiarism.
Total Score:		100	90-100	70-89	50-69	0-49

6. Date revised: May 27, 2025

7. Course coordinator/Lecturer

- School of Civil Engineering and Management
- Email: pngoc@hcmiu.edu.vn

Ho Chi Minh City, May 27, 2025

DEAN OF SCHOOL

(Signature)

Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS
Course Name: Fluid Mechanic Laboratory
Course Code: **CE206IU**

1. General information

Course name	- (in English) <i>Fluid Mechanic Laboratory</i> . - (in Vietnamese) <i>Thí nghiệm Cơ lưu chất</i>
Course designation	This course is primarily used as an undergraduate teaching lab. The experimental exercises will be provided to students for demonstrating the theoretical class lectures. These experiments are designed to examine some properties of fluids and to conduct experiments involving principle phenomena of incompressible (water) flow, such as: flow over the weir, head losses of flow in pipe.....
Course type	☐ General knowledge <i>Fundamental</i> ☒ Specialized knowledge <i>Internship/Project/Thesis</i> ☐ Others: ☐ ☐
Semester(s) in which the course is taught	5,6
Person responsible for the course	A/Prof. Phạm Ngọc
Language	English
Relation to curriculum	☒ Compulsory Elective ☐
Teaching methods	Lecture, practice, group homework, seminar; For the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities.

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 60 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 30 hours in Lab Private study including examination preparation, specified in hours ¹ : 30	
Credit points	1 credits (Theory: 0 + Practice: 1) ECTS (<i>optional</i>)	
Number of periods	Theory: 1 Practice: 7	
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name)..... - Corequisites: (Course code – Course name): CEIU205IU - Fluid Mechanics - Previous course (Course code – Course name)	
Course objectives	- To provide practical skills to determine some properties of fluids and conduct some experiments in Lab.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Describe and explain the mechanism of some basic flow phenomena CLO2. Demonstrate five fundamental experiments, including: Discharge over a notch; Reynolds number and transitional flow; Flow measurement apparatus; Jet trajectory and flow through an orifice; Fluid friction apparatus. CLO3. Analyze the experiment data
	Skill	CLO4: Present skills of teamwork, communication, reporting and presentation.
	Attitude	CLO5:.....

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (4 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introduction	1	I, T
	Discharge Over a Notch	1	T, U
	Reynolds Number and Transitional Flow	1	T, U
	Flow Measurement Apparatus	1	T, U
Jet Trajectory and Flow Through an Orifice	1	T, U	
Fluid Friction Apparatus	1	T, U	
Examination forms	Report		
Study and examination requirements	Attendance: attendance of 100 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.		
Reading list	<u>Textbooks:</u> [1] Bruce R. Munson, Donald F. Young, Theodore H.Okiishi, Fundamentals of fluid mechanics, John Wiley & Sons Inc. 2006. [2]. Donald F. Elger, Barbara C. Williams, Clayton T. Crowe, John A. Roberson. Engineering of Fluid Mechanics (10 Edition). Wiley. 2014		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

	PLO										
CLO	a	b	c	d	e	f	g	h	i	j	k
1	x					x				x	x
2	x					x				x	x
3					x	x				x	
4						x				x	

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

For the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities.

Week	Topic	CLO	Learning activities	Assessments activities	Resources

1	Introduction to the course, rules working in Lab, and using of equipment.	1	Lecture, practice		[1] [2]
2	Discharge Over a Notch	2,3,4,5	Lecture, practice	Group report 1	[1] [2]
3	Reynolds Number and Transitional Flow	2,3,4,5	Lecture, practice	Group report 2	[1] [2]
4	Flow Measurement Apparatus	2,3,4,5	Lecture, practice	Group report 3	[1] [2]
5	Jet Trajectory and Flow Through an Orifice	2,3,4,5	Lecture, practice	Group report 4	[1] [2]
6	Fluid Friction Apparatus	2,3,4,5	Lecture, practice	Group report 5	[1] [2]
7	Make up class				
8	Group presentation and evaluation		Presentation and Discussion	Oral examination	

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
Class participation/In-class activities (10%)				Checklist and observe 80%Pass
Group reports (80%)	Group HW (1-5) 80%Pass	Group HW (1-5) 80%Pass	Group HW (1-5) 80%Pass	
Oral presentation (10%)	A&Q 80%pass	A&Q 80%pass	A&Q 80%pass	A&Q 80%pass

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics

- No

6. Date revised: May 27, 2025

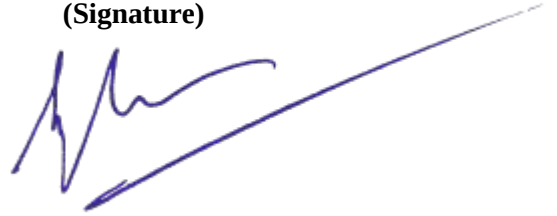
7. Course coordinator/Lecturer

- School of Civil Engineering and Management
- Email: pngoc@hcmiu.edu.vn

Ho Chi Minh City, May 27, 2025

DEAN OF SCHOOL

(Signature)

A handwritten signature in blue ink, consisting of a stylized 'H' followed by a long, sweeping diagonal line extending towards the top right.

Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
 School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Hydrology-Hydraulics

Thủy văn-Thủy lực

Course Code: **CE211IU**

1. General information

Course name	Hydrology - Hydraulics Thủy văn-Thủy lực
Course designation	This course provides students basic knowledge on hydrology and hydraulics, the fundamentals of water engineering, an important field in civil engineering. In the hydrology part of this course, the students will have a deeper understanding of the physical processes of the hydrological cycle, including an understanding of how human intervention through changes made in the environment can affect the hydrological characteristics of a catchment. The students will also learn a computer software to model the hydrology of a catchment. In the hydraulics part, the students will apply the basic principles learned from their basic fluid mechanics course in the analysis and design of open channels and other hydraulic structures. This course helps students understand basic engineering principles and enhance their analytic and problem-solving skills to address real life engineering problems. It has practical applications in the fields of water supply, hydropower, flood mitigation, and other related fields.
Course type	€ General knowledge € Fundamental X Specialized knowledge € Internship/Project/Thesis € Others:.....
Semester(s) in which the course is taught	1,2
Person responsible for the course	Cabaltica Doliente Angeli, MSc.

Language	English								
Relation to curriculum	Core Major (compulsory)								
Teaching methods	Lecture, class discussion, computational quizzes, computer exercises, homeworks								
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (lecture, class discussion, computation exercises, computer exercise):37.5 Private study including examination preparation, specified in hours ¹ : 90								
Credit points	3 credits (Theory: 03 + Practice: 00) 4.64 ECTS								
Number of periods	Theory: 45 Practice: 00								
Required and recommended prerequisites for joining the course	CE205IU Fluid Mechanics								
Course objectives	This course aims to: - provide students an understanding of the physical processes of the hydrological cycle; - equip the students with computational skills involved in quantifying the physical processes of the hydrological cycle; - fundamental knowledge in hydraulics of open channels; and - equip the students with skills in analyzing and designing open channels.								
Course learning outcomes	Upon successful completion of this course, students will be able to: <table border="1"> <thead> <tr> <th>Competency level</th><th>Course learning outcome (CLO)</th></tr> </thead> <tbody> <tr> <td>Knowledge</td><td>CLO1. discuss the different physical processes of the hydrological cycle and how they are measured and estimated;</td></tr> <tr> <td>Skill</td><td>CLO2. analyze, interpret, process, and present hydrological data; CLO3. construct a hydrological model; CLO4. analyze and design open channels; and</td></tr> <tr> <td>Attitude</td><td>CLO5. work professionally whether independently or in a team.</td></tr> </tbody> </table>	Competency level	Course learning outcome (CLO)	Knowledge	CLO1. discuss the different physical processes of the hydrological cycle and how they are measured and estimated;	Skill	CLO2. analyze, interpret, process, and present hydrological data; CLO3. construct a hydrological model; CLO4. analyze and design open channels; and	Attitude	CLO5. work professionally whether independently or in a team.
Competency level	Course learning outcome (CLO)								
Knowledge	CLO1. discuss the different physical processes of the hydrological cycle and how they are measured and estimated;								
Skill	CLO2. analyze, interpret, process, and present hydrological data; CLO3. construct a hydrological model; CLO4. analyze and design open channels; and								
Attitude	CLO5. work professionally whether independently or in a team.								

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	1. Introduction to Hydrology	1	I
	2. Hydrologic Cycle and Water Balance	1	T, U
	3. Hydrological Parameters and Presentation of Hydrological data	1	I, T, U
	4. Precipitation	1	T, U
	5. Evaporation	1	T, U
	6. Infiltration	1	T, U
	7. Runoff and Streamflow Analysis	1	T, U
	8. Hydrological Modelling	1	I, T, U
	9. Introduction to Open Channels	1	I
	10. Uniform Flow Calculations	1	I, T, U
	11. Design of Erodible and Non-erodible Channels	1	I, T, U
	12. Critical Flow	1	I, T, U
13. Hydraulic Jump	1	I, T, U	
14. Non-uniform Flow Calculations	1	I, T, U	
15. Flow Profiles	1	I, T	
Examination forms	Written examinations: Midterm and Final Exams Type: Constructed response test		
Study and examination requirements	Attendance: Students are expected to attend the lectures every week. University regulations indicate that if students attend less than 80% of scheduled classes they may be refused final assessment. Computation exercises, quizzes (written or oral), and homeworks: are given regularly, whether individually or done by group, for the students to understand the concepts better and to improve their problem-solving skills. Examinations: A midterm exam will be given halfway through the semester and a final exam at the end. Students must have an overall score of at least 50/100 points to pass this course.		
Reading list	[1] Viessman, W. and Lewis, G. (2003). Introduction to Hydrology 5th Ed. New Jersey: Prentice Hall. [2] Mays, L. (2004). Water Resources Engineering (Chapter 5 and Chapter 7). Asia: John Wiley and Sons. [3] Bedient, P. and Huber, W. (1992). Hydrology and Floodplain Analysis 2nd ed. USA: Addison-Wesley. [4] Chanson H. (2004). The Hydraulics of Open Channel Flow: An Introduction, 2nd Ed. Elsevier.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Intended Learning Outcomes (ILO) is shown in the following table:

CLO	ILO										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	X										X
2											
3										X	
4		X								X	
5					X						

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction to Hydrology	1, 2	Attendance, Q&A	Lecture, class discussion, self-study	[1], [2], [3]
2	Hydrologic Cycle and Water Balance	1, 2	Attendance, Q&A, Quiz1	Lecture, class discussion, self-study	[1], [2], [3]
3	Hydrological Parameters and Presentation of Hydrological data	1, 2	Attendance, Q&A, Group exercise 1	Lecture, class discussion, group work, self-study	[1], [2], [3]
4	Precipitation	1, 2	Attendance, Q&A, Group exercise 2	Lecture, class discussion, self-study	[1], [2], [3]
5	Evaporation	1, 2	Attendance, Q&A, HW1	Lecture, class discussion, self-study	[1], [2], [3]
6	Infiltration	1, 2	Attendance, Q&A, HW1	Lecture, class discussion, self-study	[1], [2], [3]
7	Runoff	1, 2	Attendance, Q&A, HW1	Lecture, class discussion, self-study	[1], [2], [3]
8	Streamflow Analysis Midterm	1, 2	Attendance, Q&A, Midterm Exam	Lecture, class discussion, self-study, Test	[1], [2], [3]
9	Hydrological Modelling	3,	Attendance, Q&A, HW2	Lecture, computer exercise, self-study	[1], [2], [3]
10	Introduction to Open Channels	4	Attendance, Q&A,	Lecture, class discussion, self-study	[2], [4]
11	Uniform Flow Calculations	4	Attendance Q&A, Group exercise3	Lecture, class discussion, self-study	[2], [4]
12	Design of Erodible and Non-erodible Channels	4	Attendance, Q&A, HW3	Lecture, class discussion, self-study	[2], [4]
13	Critical Flow	4	Attendance, Q&A, HW4	Lecture, class discussion, self-study	[2], [4]
14	Hydraulic Jump	4	Attendance, Q&A, HW4	Lecture, class discussion, self-study	[2], [4]
15	Non-uniform Flow Calculations	4	Attendance, Q&A, Quiz2	Lecture, class discussion, self-study	[2], [4]
16					
17-18	Final exam				

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No.	Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5
1	Progress Assessment (30%)					
1.1	Class Attendance (30% of PA)					Attended 80%Pass
1.2	In-class activities: Participation in discussion, quizzes; Other activities: homeworks, group exercise (70% of PA)	HW1, Qz1, GE1-2 60%Pass	HW1, Qz1, GE1-2 60%Pass	HW2 60%Pass	HW3-4, Qz2, GE3 60%Pass	
2	Midterm Exam (30%)	P1 60%Pass	P2. Q1- Q4 60%Pass			
3	Final Exam (40%)				Q1-4 60%Pass	

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

- None

6. Date revised: May 27, 2025

Ho Chi Minh City, May 27, 2025
**Dean of School of Civil Engineering and
Management**

(Signature)

Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Water Supply & Sewerage

Course Code: CE306IU

1. General information

Course name	Water Supply & Sewerage Cấp thoát nước
Course designation	The rapid rise in population and industrialization places an enormous challenge on the environment and the resources. This has resulted to an increase in demand for water supply and sewerage services. In this course the students will learn the basic structure of a community water supply as well as that of sewerage systems. They will learn and practice the computations and decision-making involved in the planning and design of these systems. Furthermore, they will be taught some computer software to model a simple water distribution system and a stormwater sewer system. This course helps students understand basic engineering principles and enhance their analytic and problem-solving skills to address real life engineering problems.
Course type	€ General knowledge € Fundamental X Specialized knowledge € Internship/Project/Thesis € Others:.....
Semester(s) in which the course is taught	1,2
Person responsible for the course	Cabaltica Doliente Angeli, MSc.
Language	English
Relation to curriculum	Specialisation (compulsory)

Teaching methods	Lecture, class discussion, computational quizzes, computer exercises, homeworks, group reports	
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload:127.5 Contact hours (lecture, class discussion, computation exercise, computer exercise):37.5 Private study including examination preparation, specified in hours ¹ : 90	
Credit points	3 credits (Theory: 03 + Practice: 00) 4.64 ECTS	
Number of periods	Theory: 45 Practice: 00	
Required and recommended prerequisites for joining the course	CE211IU Hydrology - Hydraulics	
Course objectives	This course aims to: - provide the students the fundamentals of drinking water supply systems from the extraction of raw water from its sources to the distribution of treated water; - provide the fundamentals of sewerage systems, from learning the sources and impacts of wastewater to the different types of sewers and wastewater collection systems; - equip the students with knowledge involving the design of a simple water distribution system; and - equip the students with knowledge involving the design of sanitary sewers and stormwater sewers	
Course learning outcomes	Upon successful completion of this course, students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. discuss in detail the components of water supply systems and of sewerage systems;
	Skill	CLO2. perform the computations and decision-making involved in the design of community water supply system and in the design of sanitary and stormwater sewers; CLO3. construct a simple water distribution model using EPANET and a simple drainage system using SWMM; and
	Attitude	CLO4. work professionally whether independently or in a team.

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	1. Introduction to Community Water Supply Systems (CWSS)	1	I, T
	2. Water Consumption and Water Demand	1	I, T, U
	3. Elements of CWSS	3	I, T, U
	4. Pipe Flow Hydraulics	2	T, U
	5. Water Distribution Network Modelling using EPANET	1	I, T, U
	6. Wastewater	1	I, T
	7. Sewers and Sewer Systems	2	I, T
	8. Sanitary Sewer Design	1	I, T, U
	9. Storm Sewer Design	1	I, T, U
10. Introduction to EPA SWMM	1	I, T, U	
11. Sustainable Urban Drainage Systems	1	I	
Examination forms	Written examinations: Midterm and Final Exams Type: Constructed response test		
Study and examination requirements	Attendance: Students are expected to attend the lectures every week. University regulations indicate that if students attend less than 80% of scheduled classes they may be refused final assessment. Computation exercises, quizzes (written or oral), homeworks, and reports: are given regularly, whether individually or done by group, for the students to understand the concepts better and to improve their problem-solving skills. Examinations: A midterm exam will be given halfway through the semester and a final exam at the end. Students must have an overall score of at least 50/100 points to pass this course.		
Reading list	Main Reference: [1] Terence J. McGhee (1991). Water Supply and Sewerage, 6th ed. McGraw-Hill, Inc. Other References: [2] Jerry A. Nathanson (2008). Basic Environmental Technology: Water Supply, Waste Management and Pollution Control, 5th ed. Prentice Hall. [3] Larry Mays (2001). Stormwater Collection Systems Design Handbook. McGraw-Hill, Inc. [4] Walski T. M. et al. Water distribution modeling. Haestad Press, 2001. Local Codes: [5] TCXDVN 33: 2006. Water Supply – Distribution System and Facilities Design Standard [6] TCXDVN 51: 2008. Drainage and Sewerage - External Networks and Facilities. Design Standard		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Intended Learning Outcomes (ILO) is shown in the following table:

CLO	ILO										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1						X					X
2										X	
3										X	
4					X						

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction to Community Water Supply Systems (CWSS)	1,4	Attendance Q&A Homework1	Lecture, class discussion, self-study	[1], [2]
2	Water Consumption and Water Demand	1,2,4	Attendance Q&A Report 1	Lecture, class discussion, self-study, group work	[1], [2], [5]
3-5	Elements of CWSS	1,2	Attendance Q&A Quiz 1	Lecture, class discussion, self-study	[1], [2], [4]
6	Pipe Flow Hydraulics	2,4	Attendance Q&A Homework 2	Lecture, class discussion, self-study	[1]
7	Water Distribution Network Modelling using EPANET	3,4	Attendance Q&A Homework 3	Lecture, computer exercise, self-study	[4], [5]
8	Water Distribution Network Modelling Results Discussion Midterm Exam	1,2,3	Attendance Q&A Midterm Exam	Lecture, class discussion, self-study, Test	[1], [2], [4], [5]
9	Wastewater	1	Attendance Q&A	Lecture, class discussion, self-study	[1], [2], [3]
10-11	Sewers and Sewer Systems	1	Attendance Q&A Quiz 2	Lecture, class discussion, self-study	[1], [2], [3]
12-13	Sanitary Sewer Design	1,2,4	Attendance Q&A Quiz 3	Lecture, class discussion, self-study	[1], [2]
14-15	Storm Sewer Design	1,2	Attendance Q&A Report 2, Homework 4	Lecture, class discussion, self-study	[1], [2], [3]
16					
17-18	Final exam				

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No.	Assessment Type	CLO1	CLO2	CLO3	CLO4
1	Progress Assessment (30%)				
1. 1	Class Attendance (30% of PA)				Attended 80%Pass
1. 2	In-class activities: Participation in discussion, quizzes; Other activities: homeworks, group reports (70% of PA)		Qz1-3, HW1-2, 60%Pass	HW3-4 60%Pass	Reports 1-2 60%Pass
2	Midterm Exam (30%)	P1 60%Pass	P2. Q1-Q4 60%Pass		
3	Final Exam (40%)		Q1-4 60%Pass		

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

- None

6. Date revised: May 27, 2025

Ho Chi Minh City, May 27, 2025
**Dean of School of Civil Engineering and
Management**

(Signature)



Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Construction Materials

Course Code: CE210IU

1. General information

Course name	- (in English) <i>Construction materials</i> - (in Vietnamese) <i>Vật liệu xây dựng</i>
Course designation	<i>The course will introduce both conventional and modern construction materials that are commonly used in civil engineering construction. These are concrete, steel, asphalt concrete and other construction materials such as concrete, cement, brick, mortar, steel, asphalt and so on. Properties of materials will be taught and discussed. Students will find out what properties are the advantages and disadvantages of materials. Therefore, material applications and detailing in structural and non-structural building components are explored. Construction materials should be harmonized to the environmental sustainability, resource durability, capitalizing on using local materials and less fee to strengthen and retrofit, using local materials also satisfy culture, economic and social justice. Resulting from this course, students will gain a comparative knowledge of material properties and possible applications in construction.</i>
Course type	☐ General knowledge ☒ Fundamental Specialized knowledge Internship/Project/Thesis ☐ Others:..... ☐ ☐
Semester(s) in which the course is taught	3
Person responsible for the course	Assoc. Prof. Tran Van Mien
Language	English

Relation to curriculum	☒ Compulsory Elective ☐
Teaching methods	Lecture, lesson, homework, discussion
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 hrs Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 28.5 hrs + 9 hrs Private study including examination preparation, specified in hours ¹ : 90 hrs
Credit points	3 credits (Theory: 3 + Practice: 0) 4.64 ECTS (<i>optional</i>)
Number of periods	Theory: 45 Practice: 0
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name): CE201IU – Mechanics of Materials 1 - Corequisites: (Course code – Course name): None - Previous course (Course code – Course name): None
Course objectives	The course provides students with basic definitions, the physical, chemical and mechanical properties of various construction materials that are commonly used in civil engineering construction. Students are guided to be able to appreciate the criteria for choosing the appropriate materials and indigenous resources, and various tests to control the quality of these materials in applying for stability, durability, sustainability and saving of resources, and development of practices. The course raises awareness of using suitable materials based on their properties to protect a sustainable environment, economy, and cultural awareness towards the social and societal calls.

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Understand basic definitions and physical, chemical, and mechanical properties of various construction materials for civil engineering, particularly the meaning of each property and how to apply with sustainability. Classify types of construction material based on their advantages and disadvantages properties for civil engineering that are affected the quality of structures and the environment.
	Skills	CLO2. Evaluate the suitable quality of construction materials with sustainable criteria and determine the materials' properties using equipment. Able to use social network technology to find material, its properties, and its application in civil engineering. CLO3. Design some mix proportions of some composite construction materials using local materials, industrial waste (fly ash, silica fume, Fluid catalytic cracking), and recycled materials such as types of Portland concrete, types of asphalt concrete, mortar, grout, composite materials with fibers and so on.
	Attitude	CLO4. Be aware of choosing construction materials for suitable purposes and economics in civil engineering. Construction materials cause problems for the environment. So, we have to consider choosing suitable materials to minimize the negative effects on the environment.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (2 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introduction to construction materials	0.5	I, T
	Basic properties of construction materials	2	I, T, U
	Natural rocks	0.5	I, T, U
	Ceramics	2	I, T, U
	Portland cement	3	I, T, U
	Properties of fresh and harden concrete	2	I, T, U
	Mix proportion of normal concrete	1	I, T, U
	Specials concretes, asphalt concrete	1	I, T, U
Steel	1	I, T, U	
Other materials, sustainable materials	2	I, T, U	
Examination forms	Written examination: Mid-term and Final examinations		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.		
Reading list	<u>Textbooks:</u> [1] Michael S. Mamlouk and John P. Zaniewski, <i>Materials for Civil and Construction Engineers</i> , Prentice Hall, 2005. [2]. Steven H. Kosmatka, Beatrix Kerkhoff, and William C. Panarese, <i>Design and Control of Concrete Mixtures</i> , 14 th Ed., Portland Cement Association, 2008. <u>Additional references:</u> [3] Neil Jackson and Ravindra K. Dhir, <i>Civil engineering materials</i> , 4 th Ed, Palgrave Macmillan, 1996. [4] Phùng Văn Lự và các tác giả, <i>Giáo trình vật liệu xây dựng</i> , NXB Giáo dục, 2000. [5] Phạm Duy Hữu, Ngô Xuân Quảng và Mai Đình Lộc, <i>Giáo trình Vật liệu xây dựng</i> , NXB Giao Thông Vận Tải		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

	ILO

CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1		x									
2		x								x	
3								x			
4				x							

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments activities	Learning activities	Resources
1	Introduction to construction materials	1	Attendance Q&A	Reading materials before class; Doing the lecture; Discussion;	[1] [4]
1-2	Chapter 1: Basic properties of construction materials - Physical properties - Mechanical properties	2,4	Attendance Q&A Homework	Reading materials before class; Doing the lecture; Discussion; Quiz	[1] [4]
3	Chapter 2: Natural rock - Classification of natural rocks - Application of natural rocks as construction materials	1	Attendance Q&A	Reading materials before class; Quiz Doing the lecture; Discussion;	[1] [2]
4-5	Chapter 3: Ceramics - Definition and classification of ceramics - Raw materials used to manufacture ceramics - Properties of ceramics - Sustainable aspect	1,2	Attendance Q&A	Reading materials before class; Doing the lecture; Discussion; Quiz	[1] [2]
6-9	Chapter 4: Portland cement - Classification of binders - Binders hardening in air - Binders hardening in water - Raw materials used to manufacture Portland cement - Properties of Portland cement - Durability of hardened cement exposed to aggressive media - Midterm exam	2,4	Attendance Q&A Homework, Midterm exam	Reading materials before class; Doing the lecture; Discussion; Quiz; Test	[1] [4]
10-12	Chapter 5: Concrete - Classification and application of concrete - Concrete ingredients - Properties of fresh concrete - Properties of hardened concrete - Durability of concrete exposed to aggressive media - Special concretes - Asphalt concrete	2,4	Attendance Q&A Homework	Reading materials before class; Doing the lecture; Discussion; Quiz	[1] [4]
13	Chapter 6 Steel structures - Introduction steel for construction - Ingredients of steel for construction (Carbon, SiO ₂ , Fe, ...)	3,4	Attendance Q&A Homework	Reading materials before class; Doing the lecture; Discussion; Quiz	[1]

	- Heat treatment of steel - Steel productions: Cast iron, Alloy, normal steel and prestressed steel - Properties and geometry of steel (Grade and standards: shape, diameter, yield strength, ultimate strength, Elastic Modulus, ...)				
14-15	Chapter 8: Other construction materials Sustainable materials	3,4	Attendance Q&A	Reading materials before class; Doing the lecture; Presentation	[1] [4]
	Final examination		Writing		

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 2 components, including progress assessment and final presentation. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3	CLO 4	CLO5	CLO6
1	Progress assessment (PA, 30%)						
1.1	Class attendance (50% of PA)						Attended 80%Pass
1.2	In-class activity: Discussion and doing Quizzes in class (25% of PA)						Participated In-class Q&A 60%Pass
1.3	Homework (25% of PA)					HW1-6, Submitted 80%Pass	
2	Midterm exam (Mid, 30%)	Q1, 50%Pass	Q1,2,4 50%Pass	Q2, 50%Pass	Q3 50%Pass	Q4 50%Pass	Q1,2,3,4 50%Pass
3	Final exam (Fin, 40%)	Q1 50%Pass	Q1,2,3 50%Pass	Q2,3 50%Pass	Q4, 50%Pass	Q4 50%Pass	Q1,2,3,4 70%Pass

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics: None

6. Date revised: May 24, 2025

7. Course coordinator/Lecturer

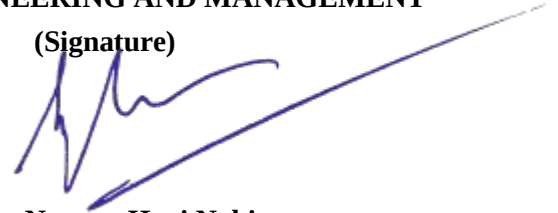
- School of Civil Engineering and Management

- Email: pnlkhanh@hcmiu.edu.vn

Ho Chi Minh, May 24, 2025

**DEAN OF SCHOOL OF
CIVIL ENGINEERING AND MANAGEMENT**

(Signature)

A handwritten signature in blue ink, consisting of stylized, overlapping loops and a long, sweeping horizontal stroke extending to the right.

Nguyen Hoai Nghia



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
Department of Civil Engineering

COURSE SYLLABUS

Course Name: Civil Architecture

Course Code: CE214IU

1. General information

Course name	- (in English): <i>Civil Architecture</i> - (in Vietnamese): <i>Kiến trúc dân dụng</i>
Course designation	CE214IU – Civil Architecture The course provides students with a concise source of core information needed to form a framework for a detailed planning of any building project. The information includes the principles of the design process, basic information on sitting, servicing and construction buildings, as well as illustrations and descriptions of a wide range of building types. Students work in teams, exploring hands-on activities to learn the characteristics of civil architecture
Course type	☐ <i>General knowledge</i> ☒ <i>Fundamental</i> ☐ <i>Specialized knowledge</i> ☐ <i>Internship/Project/Thesis</i> ☐ <i>Others:</i> ☐ ☐
Semester(s) in which the module is taught	2
Person responsible for the module	Dr. Nguyen Van Tiep
Language	English
Relation to curriculum	Compulsory

Teaching methods	Lecture, presentation, and assignments.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 85 Contact hours (lecture, exercise, laboratory session, etc.): 25 Private study including examination preparation, specified in hours ¹ : 60
Credit points	2 credits (Theory: 30 + Practice: 0) 3.09 ECTS (<i>optional</i>)
Number of periods	Theory: 30 Practice: 0
Required and recommended prerequisites for joining the module	N/A
Course objectives	Overall objectives are to equip CE students with fundamentals of civil architecture and an essential knowledge and reference for the design and planning of a building project. Students who complete the course will be able to perform the following tasks: (1) identifying and solving engineering and management problems through applying principles of engineering, science, and mathematics (2) carrying out construction project feasibility study and that ensure the feasibility with the consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors (3) recognizing ethical and professional responsibilities in engineering situations; and being able to make judgments with the consideration to the impact of engineering and management solutions in the different contexts regarding global, economic, environmental, and social aspects (4) establishing an effective team that enhance members work together to establish goals, specific objectives and actional plans

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

	(5) developing and conducting appropriate construction management research including: collect the data, analyze and use engineering judgments to draw important conclusions (6) acquiring and applying new knowledge as needed, as well as using appropriate learning strategies.		
Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1: Have basic understanding of civil architecture CLO2: Have essential knowledge for design and planning of a building project.	
	Skill	CLO3: Conduct basic calculations which are required for architecture design appraisal CLO4: Be able to make judgements based on ethical codes and professional responsibilities in specific engineering situations	
	Attitude	CL05: Be active and able to communicate with peers to plan and execute a team project	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize)		
	Topic	Weight	Level
	1. A History of Civil Engineering and Architecture	1	I
	2. Residential architecture styles	2	I, T
	3. Principles and Elements of Design Applied to Architecture	1	I, T
	4. Principles of architectural compositions	2	I, T, U
	5. Building Components	1	I, T
	6. Green building and Green construction	1	I, T
	7. Principles of landscape design	1	I, T

	8. Sustainable design for small landscapes	1	I, T
	9. Passive design and passive house	1	I, T
	10. Overview of Building Information Modeling (BIM)	1	I, T
	11. Introduction to Interior Design	1	I, T
Examination forms	Constructed-response test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.		
Reading list	[1] Ernst Neufert & Peter Neufert (2000). Ernst & Peter Neufert Architect's Data, Edited by Bousmaha Baiche and Nicholas Walliman, 3rd Edition, Backwell Science [2] Francis D.K. Ching (2014), Building Construction Illustrated, 5th Ed., John Wiley & Sons, Inc., Hoboken, New Jersey [3] Francis D.K. Ching, Steven P. Juroszek (2019) Design Drawing, 3rd Edition Wiley [4] Francis D.K. Ching (2003), Architectural graphics, 4th Ed., John Wiley & Sons, Inc., New York. [5] Francis D.K. Ching (1995), A visual dictionary of architecture, John Wiley & Sons, Inc., New York.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-5) and Program Intended Learning Outcomes (a-k) is shown in the following table:

	Program Intended Learning Outcomes (ILO)										
CLO	a	b	c	d	e	f	g	h	i	j	k
1	x										
2	x							x			
3		x								x	
4											
5					e		x				x

3. Planned learning activities and teaching methods

Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities

Week	Topic	CLO	Assessments	Learning activities	Resources
1-2	A History of Civil Engineering and Architecture	1	Assignment 1	Lecture, Discussion	Research Collection
3-4	Residential architecture styles	1	HW1	Lecture, HW Guide	[1]
5	Principles and Elements of Design Applied to Architecture	1,2	HW2	Lecture, HW Guide	[4,5]
6	Principles of architectural compositions	1, 2	Assignment 2	Lecture, Discussion	[4,5]
7-8	Building components Midterm Exam	1,2	Assignment 3 Midterm Exam	Lecture, Discussion Test	[4,5]
9	Green building and Green construction	1,2,3	Group Assignment	Lecture, Discussion	[2]
10	Student presentation	2,3	Discussion	Group Presentation	Lecture Guide
11	Principles of landscape design	1,2	Group Assignment	Lecture, Discussion	[1,3,4,5]
12	Sustainable design for small landscapes	1,2	HW3	Lecture, HW Guide	[1,3,4,5]
13	Passive design and passive house	1,2,3	Group Assignment	Lecture, Discussion	[1,3,4,5]
14	Overview of Building Information Modeling (BIM)	1,2	Assignment 4	Lecture, Discussion	[2]
15	Introduction to Interior Design	1,2	HW4	Lecture, HW Guide	[1,3,4,5]
16-17	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5
Individual Assignments (15%)	Ass1 50%Pass	Ass2,3,4 50%Pass		Ass5,6 50%Pass	Ass5,6 50%Pass
Homework exercises/ Presentation (15%)	HW1 50%Pass	HW2, HW3, HW4 50% Pass	Presentation 60% Pass		
Midterm exam (20%)	Q1 50%Pass	Q2,3 50%Pass			
Final exam (50%)	Q1 50%Pass	Q 2,3 50%Pass			

Note: %Pass: % students have scores greater than 50 out of 100.

5. Rubrics (optional)

6. Date revised: May 27, 2025

Ho Chi Minh City, May 27, 2025

Dean of School of Civil Engineering and
Management



Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS
Course Name: Surveying
Course Code: CE307IU

1. General information

Course name	Surveying Trắc địa
Course designation	This course covers the basics of surveying. It includes the principles of measurements of distances, elevations, and angles. The students will become familiar with all surveying instruments as well as learn about the different types of surveying including how they are carried out, the data to collect, and how to analyze, interpret, and process the data. It also includes basic error theory in measurement and calculations, and basic principles of map making.
Course type	☐ General knowledge ☐ Fundamental ☒ Specialized knowledge ☐ Internship/Project/Thesis Others:.....
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Cabaltica Doliente Angeli, MSc.
Language	English
Relation to curriculum	Specialization (compulsory)
Teaching methods	Lecture, class discussion, computation exercises

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 90 Contact hours (lecture, class discussion, computation exercise): 30 Private study including examination preparation, specified in hours ¹ : 60	
Credit points	2 credits (Theory: 02 + Practice: 00) 3.09 ECTS	
Number of periods	Theory: 30 Practice: 00	
Required and recommended prerequisites for joining the course		
Parallel course	CE308IU Surveying Practice	
Course objectives	This course aims to: - introduce students to the different techniques of data collection, layout, and presentation of field data; - make students understand all the tasks involved in a various surveying operations in order that they might have the confidence to undertake such tasks in a professional capacity; and - make students understand and perform the calculations and plottings involved in surveying.	
Course learning outcomes	Upon successful completion of this course, students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. discuss the different types of surveys; describe the different surveying tools and instruments used for different types of surveys
	Skill	CLO2. perform calculations in surveying including distances, elevations, directions, coordinates, and areas; CLO3. read, interpret, as well as prepare maps, plots, reports involved in surveying; and
	Attitude	CLO4. work professionally whether independently or in a team.

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>1. Introduction to Surveying</td><td>0.5</td><td>I</td></tr><tr><td>2. Reference Systems</td><td>0.5</td><td>I, T</td></tr><tr><td>3. Errors in Measurement</td><td>1</td><td>I, T, U</td></tr><tr><td>4. Horizontal Distance Measurement</td><td>2</td><td>I, T, U</td></tr><tr><td>5. Levelling</td><td>3</td><td>I, T, U</td></tr><tr><td>6. Control Surveys</td><td>3</td><td>I, T, U</td></tr><tr><td>7. Topographic Surveys</td><td>2</td><td>I, T, U</td></tr><tr><td>8. Setting out</td><td>1</td><td>I, T</td></tr><tr><td>9. GPS and GIS</td><td>2</td><td>I</td></tr></table>	Topic	Weight	Level	1. Introduction to Surveying	0.5	I	2. Reference Systems	0.5	I, T	3. Errors in Measurement	1	I, T, U	4. Horizontal Distance Measurement	2	I, T, U	5. Levelling	3	I, T, U	6. Control Surveys	3	I, T, U	7. Topographic Surveys	2	I, T, U	8. Setting out	1	I, T	9. GPS and GIS	2	I
Topic	Weight	Level																													
1. Introduction to Surveying	0.5	I																													
2. Reference Systems	0.5	I, T																													
3. Errors in Measurement	1	I, T, U																													
4. Horizontal Distance Measurement	2	I, T, U																													
5. Levelling	3	I, T, U																													
6. Control Surveys	3	I, T, U																													
7. Topographic Surveys	2	I, T, U																													
8. Setting out	1	I, T																													
9. GPS and GIS	2	I																													
Examination forms	Written examinations: Midterm and Final Exams Type: Constructed response test																														
Study and examination requirements	Attendance: Students are expected to attend the lectures every week. University regulations indicate that if students attend less than 80% of scheduled classes they may be refused final assessment. Computation exercises, quizzes (written or oral), and homeworks: are given regularly, whether individually or done by group, for the students to understand the concepts better and to improve their problem-solving skills. Examinations: A midterm exam will be given halfway through the semester and a final exam at the end. Students must have an overall score of at least 50/100 points to pass this course.																														
Reading list	Main Reference [1] Charles D. Ghilani – Paul R. Wolf. , <i>Elementary Surveying – An introduction to Geomatics</i>, 13th, edition, Prentice Hall, 2012. Other References [2] Lillesand, Kiefer, <i>Remote sensing and image interpretation</i>, John Wiley & Sons,1994. [3] Paul A. Longley, Michael F. Goodchild, David J. Mauire, David W. Rhind, <i>Geographic Information Systems and Science</i>, John Wiley & Sons, 2005.																														

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Intended Learning Outcomes (ILO) is shown in the following table:

CLO	ILO										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1		X								X	X
2		X								X	
3										X	
4					X						

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction to Surveying	1, 4	Attendance, Q&A, Quiz 1	Lecture, class discussion, self-study	[1]
2	Reference Systems	3, 4	Attendance, Q&A	Lecture, class discussion, self-study	[1]
3-4	Errors in Measurement	2	Attendance, Q&A, Quiz 2	Lecture, class discussion, self-study	[1]
5-6	Horizontal Distance Measurement	1, 2	Attendance, Q&A, Homework 1	Lecture, class discussion, self-study	[1]
7	Differential Levelling	1, 2, 3, 4	Attendance, Q&A, Homework 2	Lecture, class discussion, self-study	[1]
8	Three-wire levelling Midterm Exam	1, 2, 3, 4	Attendance, Q&A, Midterm Exam	Lecture, class discussion, self-study, Test	[1]
9-10	Trigonometric & Profile Levelling	1, 2, 3, 4	Attendance, Q&A, Quiz 3	Lecture, class discussion, self-study	[1]
11-13	Control Surveys	1, 2, 3, 4	Attendance, Q&A, Homework 3	Lecture, class discussion, self-study	[1]
14-15	Topographic Surveys	1, 2, 3, 4	Attendance, Q&A, Quiz 4	Lecture, class discussion, self-study	[1]
16					
17-18	Final exam				

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No.	Assessment Type	CLO1	CLO2	CLO3	CLO4
1	Progress Assessment (30%)				
1.1	Class Attendance (30% of PA)				Attended 80%Pass
1.2	In-class activities: Participation in discussion, quizzes; Other activities: homeworks, group exercise (70% of PA)	Qz1	Qz2-3 HW1-3 60%Pass	Qz3-4 60%Pass	
2	Midterm Exam (30%)	P1 60%Pass	P2. Q1-Q4 60%Pass	P2. Q1-Q4 60%Pass	
3	Final Exam (40%)		Q1-4 60%Pass	Q1-4 60%Pass	

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

- *None*

6. Date revised: May 27, 2025

Ho Chi Minh City, May 27, 2025

***Dean of School of Civil Engineering and
Management***

(Signature)

A handwritten signature in blue ink, consisting of stylized, flowing cursive letters, positioned above the printed name.

Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Surveying Practice

Course Code: CE308IU

1. General information

Course name	Surveying Practice Thực tập Trắc địa
Course designation	This course allows students to practice the surveying operations discussed in the theory course – CE 307IU Surveying. It will familiarize students with the different surveying instruments; allow them to practice different surveying operations like taping, stadia survey, levelling, and control survey in a closed-loop traverse; as well as make adjustments and calculations of coordinates of control stations, perform detail surveying and mapping of points.
Course type	€ General knowledge € Fundamental X Specialized knowledge € Internship/Project/Thesis Others:.....
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Cabaltica Doliente Angeli, MSc.
Language	English
Relation to curriculum	Specialization (Compulsory)
Teaching methods	Pre-lab discussions and demonstrations, field survey, writing of laboratory reports, map/plot preparations

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 67.5 Contact hours (field surveying exercises): 37.5 Private study including laboratory reports preparation, specified in hours ¹ : 30	
Credit points	1 credit (Theory: 00 + Practice: 01) 2.45 ECTS	
Number of periods	Theory: 00 Practice: 15	
Required and recommended prerequisites for joining the course		
Parallel course	CE307IU Surveying	
Course objectives	This course aims to: - familiarize students with the different surveying instruments; - allow the students to practice different surveying operations like angle and distance measurement, levelling, control survey, and detail surveying in a closed-loop traverse, and; - allow the students to practice adjustment and calculation of coordinates of control stations, mapping of points, and preparation of maps and reports involved in surveying.	
Course learning outcomes	Upon successful completion of this course, students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. conduct different types of surveys discussed in class and use various surveying tools and instruments in surveying operations;
	Skill	CLO2. perform calculations from field data collected including error analysis, adjustments, and corrections to field survey data and prepare maps, plots, field reports, and other related documents; and
	Attitude	CLO3. work professionally in a team.

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: laboratory session (4 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	1. Introduction, Angle Measurement	1	I, T, U
	2. Horizontal Distance Measurement: Taping and Stadia	2	T, U
	3. Levelling	1	T, U
Examination forms	4. Control Survey		
	5. Detail Surveying & Plotting		
	2		
Study and examination requirements	T, U		
Reading list	Students are expected to attend the practice every week. Students are divided into groups of 4-5 members. Each group performs the field exercises and must prepare and submit a laboratory report one week after the field exercise is done. Each group must submit the final topographic map at the end of the course.		
	Students must have an overall score of at least 50/100 points to pass this course.		
Reading list	Main Reference		
	[1] Charles D. Ghilani – Paul R. Wolf. , <i>Elementary Surveying – An introduction to Geomatics</i> , 13th, edition, Prentice Hall, 2012.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Intended Learning Outcomes (ILO) is shown in the following table:

CLO	ILO										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1		X								X	
2		X								X	X
3					X						

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction, Angle Measurement	1,2,3	Field Survey 1, Lab Report L01	Pre-lab discussions and demonstrations	[1]
2	Horizontal Distance Measurement by Taping	1,2,3	Field Survey 2, Lab Report L02	Pre-lab discussions and demonstrations	[1]
3	Horizontal Distance Measurement by Stadia	1,2,3	Field Survey 3, Lab Report L02	Pre-lab discussions and demonstrations	[1]
4	Levelling	1,2,3,	Field Survey 4, Lab Report L03	Pre-lab discussions and demonstrations	[1]
5-6	Control Survey	1,2,3	Field Survey 5-6, Lab Report L04	Pre-lab discussions and demonstrations	[1]
7-8	Detail Surveying	1,2,3	Field Survey 7-8, Lab Report L05, Final Topographic Map	Pre-lab discussions and demonstrations	[1]

4. Assessment plan

- The final GPA of students is integrated from 2 components, including progress assessment, and final report. The contribution of each component (in percentage) is shown in the table below.

No.	Assessment Type	CLO1	CLO2	CLO3
1	Progress Assessment (80%)			
1.	Attendance, Participation in Field Surveys (50% of PA)	FS 1-8 100%Pass		FS 1-8 100%Pass
2.	Laboratory reports (50% of PA)		L01-L05 60%Pass	L01-L05 60%Pass
2	Final Requirement (20%)		Topographic Map 60%Pass	Topographic Map 60%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

- None

6. Date revised: May 27, 2025

Ho Chi Minh City, May 27, 2025

**Dean of School of Civil Engineering and
Management**

(Signature)

Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS
Course Name: Soil mechanics
Course Code: CE302IU

1. General information

Course name	- (in English) <i>Soil mechanics</i> - (in Vietnamese) <i>Cơ học đất</i>
Course designation	<i>The course provides students with a background of soil behaviors, Lateral earth pressure acting on structures, slope stability, bearing capacity of the soil, and settlement of structures above soil mechanics, which are commonly used in civil engineering construction. Properties of soil include soil formation, physical properties, classification, compaction, permeability, and seepage. Soil mechanics consist of in situ stress, stress in a soil mass, soil compressibility, and soil shear strength. Lateral earth pressures are expressed by pressure at rest based on Rankine and Coulomb, and curved failure surface</i>
Course type	☐ General knowledge ☐ Fundamental ☒ Specialized knowledge ☐ Internship/Project/Thesis ☐ Others:
Semester(s) in which the course is taught	3
Person responsible for the course	Dr. Pham Nguyen Linh Khanh
Language	English
Relation to curriculum	☒ Compulsory ☐ Elective
Teaching methods	Lecture, discussion, and assignments.

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 hrs Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 28.5 hrs + 9 hrs Private study including examination preparation, specified in hours ¹ : 90 hrs	
Credit points	3 credits (Theory: 3 + Practice: 0) 4.64 ECTS (<i>optional</i>)	
Number of periods	Theory: 45 Practice: 0	
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name): CE201IU - Mechanics of materials, CE210IU - Construction Materials - Corequisites: (Course code – Course name): None - Previous course (Course code – Course name): None	
Course objectives	The course provides students with basic definitions physical and mechanical properties of various soils in different states, such as dry, wet, and saturated states. The methods to determine the properties of soils and the effect of groundwater on soil properties are also guided in the course. The stresses acting on the soil at any point beneath the ground caused by upper soil layers and structures constructed on the ground are mentioned. Therefore, the safety of constructed structures can be determined based on the ultimate shear strength of soils. Further, students can appreciate lateral earth pressure's effect on wall structures commonly used in civil engineering construction.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Understand basic definitions, and determine the physical and mechanical properties of various soils in different states.
	Skill	CLO2. Analyze the soil behaviors under different conditions. CLO3. Conduct strength analysis and settlement analysis of the soil.
	Attitude	

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Soil formation and Physical properties</td><td>1</td><td>I</td></tr><tr><td>Plasticity and structure of soil</td><td>2</td><td>T</td></tr><tr><td>Classification of soil</td><td>2</td><td>T, U</td></tr><tr><td>Soil compaction</td><td>2</td><td>T</td></tr><tr><td>Permeability</td><td>2</td><td>T</td></tr><tr><td>Retaining Walls</td><td>1</td><td>I</td></tr><tr><td>Seepage</td><td>2</td><td>T</td></tr><tr><td>In situ Stress</td><td>2</td><td>T, U</td></tr><tr><td>Stress in a Mass soil</td><td>2</td><td>T, U</td></tr><tr><td>Compressibility of soil</td><td>2</td><td>T, U</td></tr><tr><td>Shear strength of soil</td><td>2</td><td>T, U</td></tr><tr><td>Lateral earth pressure</td><td>1</td><td>I</td></tr><tr><td>Slope stability</td><td>1</td><td>I</td></tr></table>	Topic	Weight	Level	Soil formation and Physical properties	1	I	Plasticity and structure of soil	2	T	Classification of soil	2	T, U	Soil compaction	2	T	Permeability	2	T	Retaining Walls	1	I	Seepage	2	T	In situ Stress	2	T, U	Stress in a Mass soil	2	T, U	Compressibility of soil	2	T, U	Shear strength of soil	2	T, U	Lateral earth pressure	1	I	Slope stability	1	I
Topic	Weight	Level																																									
Soil formation and Physical properties	1	I																																									
Plasticity and structure of soil	2	T																																									
Classification of soil	2	T, U																																									
Soil compaction	2	T																																									
Permeability	2	T																																									
Retaining Walls	1	I																																									
Seepage	2	T																																									
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Stress in a Mass soil	2	T, U																																									
Compressibility of soil	2	T, U																																									
Shear strength of soil	2	T, U																																									
Lateral earth pressure	1	I																																									
Slope stability	1	I																																									
Examination forms	Constructed-response test																																										
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.																																										
Reading list	<i>Textbooks:</i> [1] Braja M. Das, <i>Principles of Geotechnical Engineering</i>, 7th Edition, CL - Engineering, 2005. [2] Braja M. Das, <i>Introduction to Geotechnical Engineering</i>, 1st Edition, CL - Engineering, 2008. [3] Châu Ngọc Ẩn, <i>Cơ học đất</i>, 5th Edition, HoChiMinh City Vietnam National University, 2012.																																										

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

	ILO

CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x	x									
2		x				x				x	
3		x								x	

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Soil formation & Physical properties	1	In-class exercise, Quiz 1	Lecture, Discussion	[1] Chapter 2 & 3
2	Plasticity and structure of soil	1	In-class exercise, Quiz 1	Lecture, Discussion	[1] Chapter 4
3	Classification of soil	1, 2	In-class exercise and Midterm exam	Lecture, Discussion	[1] Chapter 5
4	Soil compaction	1	In-class exercise, Quiz 1	Lecture, Discussion	[3] Chapter 6
5-6	Permeability	1, 2	In-class exercise and Midterm exam	Lecture, Discussion	[1] Chapter 7
7	Seepage	1, 2	In-class exercise and Midterm exam	Lecture, Discussion	[1] Chapter 8
8-9	In situ Stress, Midterm exam	1, 2	In-class exercise and Midterm exam	Lecture, Discussion, Test	[1] Chapter 9
10-11	Stress in a Mass soil	1, 3	In-class exercise and Final exam	Lecture, Discussion	[1] Chapter 10
12-13	Compressibility of soil	2, 3	In-class exercise and Final exam	Lecture, Discussion	[1] Chapter 11
14	Shear strength of soil	2, 3	In-class exercise and Final exam	Lecture, Discussion	[1] Chapter 12
15-16	Lateral earth pressure	2, 3	In-class exercise and Final exam	Lecture, Discussion	[1] Chapter 12 & 13
17	Slope stability	2, 3	In-class exercise and Final exam	Lecture, Discussion	[1] Chapter 15
18	Review				

19-20	Final exam				

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 2 components, including progress assessment and final presentation. The contribution of each component (in percentage) is shown in the table below.

Assessment Type	CLO1	CLO2	CLO3
In-class exercises/ Quiz (30%)	In-class exercises + Quiz1 50%Pass	In-class exercises 50%Pass	In-class exercises 50%Pass
Midterm exam (30%)	50% Pass	50% Pass	
Final exam (40%)		50% Pass	50% Pass

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics: None

6. Date revised: May 24, 2025

7. Course coordinator/Lecturer

- School of Civil Engineering and Management
- Email: pnlkhanh@hcmiu.edu.vn

Ho Chi Minh, May 24, 2025

**DEAN OF SCHOOL OF
CIVIL ENGINEERING AND MANAGEMENT**

(Signature)

Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Soil Mechanics Laboratory

Course Code: CE303IU

1. General information

Course name	- (in English) <i>Soil mechanics Laboratory</i> - (in Vietnamese) <i>Thực hành cơ học đất</i>
Course designation	<i>The course provides students the knowledge and practical skills in conducting laboratory tests for determining soil properties needed in engineering design such as: the determination of water content and unit weight, particle size distribution, Atterberg limits, compaction test, and direct shear test. The course also provides knowledge on the different testing equipment, general procedures related to each test, and parameters measured in each test.</i>
Course type	☐ General knowledge ☐ Fundamental ☒ Specialized knowledge ☐ Internship/Project/Thesis ☐ Others:
Semester(s) in which the course is taught	3
Person responsible for the course	Dr. Pham Nguyen Linh Khanh
Language	English
Relation to curriculum	☒ Compulsory ☐ Elective
Teaching methods	Pre-laboratory discussions and demonstrations, laboratory experiments, writing of laboratory reports; Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities.

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 67.5 hrs Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 28.5 hrs + 9 hrs Private study including examination preparation, specified in hours ¹ : 30 hrs		
Credit points	1 credits (Theory: 0 + Practice: 1) 2.45 ECTS (<i>optional</i>)		
Number of periods	Theory: 0 Practice: 15		
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name): None - Corequisites: (Course code – Course name): None - Previous course (Course code – Course name): None		
Course objectives	The objective of the course is to give the students practical skills in conducting tests to determine soil properties, performing computations to determine related parameters, analyzing experimental results, and reporting of results.		
Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1. conduct laboratory testing procedures to determine soil properties and use different laboratory instruments used for testing the properties of soil;	
	Skill	CLO2. perform calculations from experimental data collected and and prepare reports, and other related documents; and	
	Attitude	CLO3. work professionally in a team.	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	1. Introduction and Lab Orientation	1	I
	2. Water content and unit weight	1	T, U
	3. Sieve analysis	1	T, U
	4. Atterberg limits (LL and PL)	2	T, U
	5. Compaction test (Proctor test)	1	T, U
	6. Direct shear test	1	T, U
	7. Final presentation	1	U
Examination forms	Presentation		

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.
Reading list	<i>Textbooks:</i> [1] Experimental laboratory manuals <i>Textbooks:</i> [2] Braja M. Das, Principles of Geotechnical Engineering, 7th Edition, CL - Engineering, 2005.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

CLO	ILO										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1		X								X	
2		X								X	X
3					X						

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

Wee k	Topic	CLO	Assessments	Learning activities	Resou rces
1	Introduction and lab orientation	1	Attendance	Discussions and demonstrations	[1]
2	Water content and unit weight	1,2,3	Lab experiment 1, Lab report L01	Pre-lab discussions and demonstrations	[1,2]
3	Sieve analysis	1,2,3	Lab experiment 2, Lab report L02	Pre-lab discussions and demonstrations	[1,2]
4 - 5	Atterberg limits (LL and PL)	1,2,3	Lab experiment 3, Lab report L03	Pre-lab discussions and demonstrations	[1,2]
6	Compaction test (Proctor test)	1,2,3	Lab experiment 4, Lab report L04	Pre-lab discussions and demonstrations	[1,2]
7	Direct shear test	1,2,3	Lab experiment 5, Lab report L05	Pre-lab discussions and demonstrations	[1,2]
8	Final presentation	3	Presentation	Reporting and Q&A	[2]

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 2 components, including progress assessment and final presentation. The contribution of each component (in percentage) is shown in the table below.

No.	Assessment Type	CLO1	CLO2	CLO3
1	Progress Assessment (80%)			

1.1	Attendance, Participation in lab experiments (50% of PA)	Lab Exer 1-5 100%Pass		Lab Exer 1-5 100%Pass
1.2	Laboratory reports (50% of PA)		L01-L05 60%Pass	L01-L05 60%Pass
2	Final Requirement (20%)			Presentation 60%Pass

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics: None

6. Date revised: May 24, 2025

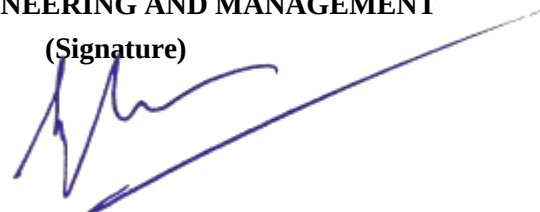
7. Course coordinator/Lecturer

- School of Civil Engineering and Management
- Email: pnlkhanh@hcmiu.edu.vn

Ho Chi Minh, 24/05/2025

**DEAN OF SCHOOL OF
CIVIL ENGINEERING AND MANAGEMENT**

(Signature)



Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Foundation Engineering

Course Code: CE309IU

1. General information

Course name	- (in English) <i>Foundation Engineering</i> - (in Vietnamese) <i>Nền móng</i>
Course designation	This course covers foundation analysis and design concepts for civil engineering students. Topics discussed in the courses include bearing capacity, settlement and structural design of shallow foundations and deep foundations, lateral earth pressure, retaining, and sheet pile walls. Moreover, the students will be introduced to the commercial software (e.g., Plaxis, Pier) that is broadly used in practices for foundation designs and exposed to case studies. Through this course, the students will have the background and basic skills to conduct the basic steps for foundation design, given various working conditions.
Course type	☐ <i>General knowledge</i> <i>Fundamental</i> ☐ ☒ <i>Specialized knowledge</i> <i>Internship/Project/Thesis</i> <i>Others:</i> ☐ ☐
Semester(s) in which the course is taught	3
Person responsible for the course	Dr. Pham Nguyen Linh Khanh
Language	English
Relation to curriculum	☒ Compulsory Elective ☐

Teaching methods	Lecture, discussion, and assignments.								
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 hrs Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 28.5 hrs + 9 hrs Private study including examination preparation, specified in hours ¹ : 90 hrs								
Credit points	3 credits (Theory: 3 + Practice: 0) 4.64 ECTS (<i>optional</i>)								
Number of periods	Theory: 45 Practice: 0								
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name): CE302IU – Soil mechanics - Corequisites: (Course code – Course name): None - Previous course (Course code – Course name): None								
Course objectives	To equip CE students with fundamentals of foundation engineering and the state-of-the-art geotechnical and structural design concepts and skills essential for professional practice.								
Course learning outcomes	Upon the successful completion of this course students will be able to: <table border="1"> <thead> <tr> <th>Competency level</th><th>Course learning outcome (CLO)</th></tr> </thead> <tbody> <tr> <td>Knowledge</td><td>CLO1. Understand the concepts of foundation designs and failure mechanisms.</td></tr> <tr> <td>Skill</td><td>CLO2. Analyze the geotechnical investigation results. CLO3. Conduct basic calculations (e.g., bearing capacity, settlement, and structural designs) for shallow and deep foundations and associated geotechnical infrastructure.</td></tr> <tr> <td>Attitude</td><td></td></tr> </tbody> </table>	Competency level	Course learning outcome (CLO)	Knowledge	CLO1. Understand the concepts of foundation designs and failure mechanisms.	Skill	CLO2. Analyze the geotechnical investigation results. CLO3. Conduct basic calculations (e.g., bearing capacity, settlement, and structural designs) for shallow and deep foundations and associated geotechnical infrastructure.	Attitude	
Competency level	Course learning outcome (CLO)								
Knowledge	CLO1. Understand the concepts of foundation designs and failure mechanisms.								
Skill	CLO2. Analyze the geotechnical investigation results. CLO3. Conduct basic calculations (e.g., bearing capacity, settlement, and structural designs) for shallow and deep foundations and associated geotechnical infrastructure.								
Attitude									

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Review of soil mechanics & soil investigation</td><td>1</td><td>I</td></tr><tr><td>Shallow foundations: Ultimate bearing capacity, Allowable bearing capacity, and Settlement</td><td>2</td><td>T</td></tr><tr><td>Structural Designs of Spread Footings</td><td>1</td><td>T, U</td></tr><tr><td>Combined Footings and Mat Foundations</td><td>1</td><td>T, U</td></tr><tr><td>Lateral Earth Pressure</td><td>1</td><td>T, U</td></tr><tr><td>Retaining Walls</td><td>1</td><td>T, U</td></tr><tr><td>Pile Foundations</td><td>2</td><td>T, U</td></tr><tr><td>Sheet Pile Walls and Braced Cuts</td><td>1</td><td>I</td></tr></table>	Topic	Weight	Level	Review of soil mechanics & soil investigation	1	I	Shallow foundations: Ultimate bearing capacity, Allowable bearing capacity, and Settlement	2	T	Structural Designs of Spread Footings	1	T, U	Combined Footings and Mat Foundations	1	T, U	Lateral Earth Pressure	1	T, U	Retaining Walls	1	T, U	Pile Foundations	2	T, U	Sheet Pile Walls and Braced Cuts	1	I
Topic	Weight	Level																										
Review of soil mechanics & soil investigation	1	I																										
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Structural Designs of Spread Footings	1	T, U																										
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Lateral Earth Pressure	1	T, U																										
Retaining Walls	1	T, U																										
Pile Foundations	2	T, U																										
Sheet Pile Walls and Braced Cuts	1	I																										
Examination forms	Constructed-response test																											
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.																											
Reading list	<i>Textbooks:</i> [1] Das, B. M. (2015). <i>Principles of Foundation Engineering</i> (7th Ed.). Cengage Learning. [2] Coduto, D. P., Kitch, W. A., & Yeung, M. C. R. (2001). <i>Foundation design: Principles and Practices</i>. Upper Saddle River: Prentice-Hall. [3] Bowles, L. E. (1996). <i>Foundation analysis and design</i>. McGraw-hill.																											

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

	ILO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x	x									
2		x				x					
3						x				x	

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

Week	Topic	CL O	Assessment s	Learning activities	Resources
1	Review of soil mechanics & Soil Investigation	2	In-class exercise, Quiz 1	Lecture, Discussion	[1] Chapter 2 & 3
2-3	Shallow foundation: Ultimate Bearing Capacity	1, 3	In-class exercise and Midterm exam	Lecture, Discussion	[1] Chapter 4
4-5	Shallow foundation: Allowable Bearing capacity and Settlement	1, 3	In-class exercise and Midterm exam	Lecture, Discussion	[1] Chapter 7
6	Structural Design of Spread Footings	1, 3	In-class exercise and Midterm exam	Lecture, Discussion	[3] Chapter 8
7	Combined Footings and Mat Foundations	1, 3	In-class exercise and Midterm exam	Lecture, Discussion	[1] Chapter 8
8-9	Lateral Earth Pressure, Midterm exam	1, 3	In-class exercise and Midterm exam	Lecture, Discussion, Test	[1] Chapter 12
10 - 14	Pile foundations	1, 3	In-class exercise and Final exam	Lecture, Discussion	[1] Chapter 9
15	Retaining Walls	1, 3	In-class exercise and Final exam	Lecture, Discussion	[1] Chapter 13
16-17	Sheet pile walls and Braced Cuts	1, 3	In-class exercise and Final exam	Lecture, Discussion	[1] Chapter 14 & 15
18	Revision			Review-Discussion	
19-20	Final exam				

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 2 components, including progress assessment and final presentation. The contribution of each component (in percentage) is shown in the table below.

Assessment Type	CLO1	CLO2	CLO3

In-class exercises/quiz (30%)	In-class exercises 50%Pass	In-class exercises + Quiz1 50%Pass	In-class exercises 50%Pass
Midterm exam (30%)	50%Pass		50%Pass
Final exam (40%)	50%Pass		50%Pass

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics: None

6. Date revised: May 25, 2025

7. Course Coordinator/Lecturer

- School of Civil Engineering and Management
- Email: pnlkhanh@hcmiu.edu.vn

Ho Chi Minh, May 25, 2025

**DEAN OF SCHOOL OF
CIVIL ENGINEERING AND MANAGEMENT**

(Signature)

Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
 School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Structural Analysis 1

Course Code: CE209IU

1. General information

Course name	- (in English) <i>Structural Analysis 1</i> - (in Vietnamese) <i>Cơ học Kết cấu 1</i>
Course designation	<i>Define the types of structures, supports and loads. Idealization of structures and loads. Geometric stability and determinacy. Analysis of determinate trusses, frames; internal force diagrams. Displacement calculation by integration, virtual work methods, and graph multiplication method. Force method, displacement method.</i>
Course type	☐ General knowledge Fundamental ☐ ☒ Specialized knowledge Internship/Project/Thesis Others: ☐ ☐
Semester(s) in which the course is taught	4
Person responsible for the course	Prof. Le Van Canh
Language	English
Relation to curriculum	☒ Compulsory Elective ☐

Teaching methods	Lecture, discussion, and assignments; Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities.	
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 hrs Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 28.5 hrs + 9 hrs Private study including examination preparation, specified in hours ¹ : 90 hrs	
Credit points	3 credits (Theory: 3 + Practice: 0) 4.64 ECTS (<i>optional</i>)	
Number of periods	Theory: 45 Practice: 0	
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name): CE201IU- Mechanics Of Materials 1 - Corequisites: (Course code – Course name): None - Previous course (Course code – Course name): None	
Course objectives	This course introduces computational analysis of structures and the practice of solving structural problems. Understand basic structural engineering concepts. Determine magnitude of different types of loads in accordance to the related codes. Idealization of structures and loads in relation with real structures. Determine the internal forces and draw diagrams for beams, frames and trusses.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. An understanding of basic structural engineering concepts. CLO2. An understanding of methods for computing displacements and slopes for beams and frames using double integration, virtual work methods, and graph multiplication methods.
	Skill	CLO3. An ability to determine the internal forces and draw diagrams for determinate structure. CLO4. An ability to determine the internal forces and draw diagrams for indeterminate structure.
	Attitude	

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Classification of structures</td><td>1</td><td>I</td></tr><tr><td>Shear diagram</td><td>1</td><td>T, U</td></tr><tr><td>Moment diagram</td><td>1</td><td>T, U</td></tr><tr><td>Deflections</td><td>1</td><td>T, U</td></tr><tr><td>Slopes</td><td>1</td><td>T, U</td></tr><tr><td>Force method</td><td>1</td><td>T, U</td></tr><tr><td>Displacement method</td><td>1</td><td>T, U</td></tr></table>	Topic	Weight	Level	Classification of structures	1	I	Shear diagram	1	T, U	Moment diagram	1	T, U	Deflections	1	T, U	Slopes	1	T, U	Force method	1	T, U	Displacement method	1	T, U
Topic	Weight	Level																							
Classification of structures	1	I																							
Shear diagram	1	T, U																							
Moment diagram	1	T, U																							
Deflections	1	T, U																							
Slopes	1	T, U																							
Force method	1	T, U																							
Displacement method	1	T, U																							
Examination forms	Constructed-response test																								
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.																								
Reading list	<i>Textbooks:</i> <i>[1] R. C. Hibbeler, Structural Analysis, Prentice-Hall.</i> <i>References:</i> <i>[2] Jacob Fish, Teb Belytschko, A First Course in Finite Elements, Willey, 2007.</i> <i>[3] T.H.G. Megson, Structural and stress analysis, Elsevier, 2005.</i>																								

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

CLO	ILO										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x	x									x
2	x	x									x
3		x								x	x
4		x								x	x

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Classification of structures; loads; structural design	1, 3	Quiz 1	Lecture, Discussion	[1] Chapter 1

	Idealization of structures and loads.				
2	Geometric stability and determinacy	1, 3	Quiz 1	Lecture, Discussion	[1] Chapter 1
3-4	Shear and moment diagrams in frames	1, 3	Quiz 1	Lecture, Discussion	[1] Chapter 3,4
5-8	Deflection and slopes: integration, virtual work method, graph multiplication Midterm Exam	1, 3	Quiz 1 Midterm exam	Lecture, Discussion, Test	[1] Chapter 8
9-11	Force method	2, 4	Quiz 2	Lecture, Discussion	[1] Chapter 10
13-15	Displacement method	2, 4	Quiz 2	Lecture, Quiz	[1] Chapter 11
16-17	Final exam				

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 2 components, including progress assessment and final presentation. The contribution of each component (in percentage) is shown in the table below.

Assessment Type	CLO1	CLO2	CLO3	CLO4
In-class exercises/quizzes/attendance (20%)	Quiz 1 60%Pass	Quiz 2 60%Pass	Quiz 1 60%Pass	Quiz 2 60%Pass
Midterm exam (30%)	Q1 50%Pass		Q2 50%Pass	
Final exam (50%)		Q1 50%Pass		Q2 50%Pass

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics: None

6. Date revised: May 24, 2025

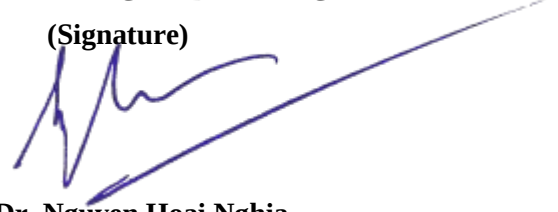
7. Course coordinator/Lecturer

- School of Civil Engineering and Management
- Email: lycanh@hcmiu.edu.vn

Ho Chi Minh, 24/05/2025

**DEAN OF SCHOOL OF
CIVIL ENGINEERING AND MANAGEMENT**

(Signature)

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Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
 School of Civil Engineering and Management

COURSE SYLLABUS
Course Name: Structural Analysis 2
 Course Code: CE301IU

1. General information

Course name	- (in English) <i>Structural analysis 2</i> - (in Vietnamese) <i>Cơ học Kết cấu 2</i>
Course designation	<i>Application of finite element methods to problems in structural analysis. Emphasis on truss, beam and frame elements and interpreting calculation results. Use of commercial FEA packages. Introduction to plastic analysis of frames and slabs.</i>
Course type	☐ General knowledge <i>Fundamental</i> ☐ ☒ Specialized knowledge <i>Internship/Project/Thesis</i> <i>Others:</i> ☐ ☐
Semester(s) in which the course is taught	5
Person responsible for the course	Prof. Le Van canh
Language	English
Relation to curriculum	☒ Compulsory Elective ☐
Teaching methods	Lecture, discussion, and assignments; Regarding the twinning program, the teaching methods and learning activities can be project-based methods or/and in-class activities.

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 hrs Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 28.5 hrs + 9 hrs Private study including examination preparation, specified in hours ¹ : 90 hrs	
Credit points	3 credits (Theory: 3 + Practice: 0) 4.64 ECTS (<i>optional</i>)	
Number of periods	Theory: 45 Practice: 0	
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name): CE209IU – Structural analysis 1 - Corequisites: (Course code – Course name): None - Previous course (Course code – Course name): None	
Course objectives	This course introduces computational analysis of structures and the practice of using programs to solve structural problems. Background in finite element analysis is developed. Plastic analysis of frames and slabs are introduced.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. An understanding of basic concept of finite element analysis. CLO2. An understanding of basic concept of plastic analysis of frames and slabs.
	Skill	CLO3. An ability to perform matrix analysis of trusses, beams, and frames. CLO4. An ability to analyze structures, use structural analysis as a design tool, and solve structural analysis problems using a FEA package.
	Attitude	

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Introduction to finite element method, discretization of a structure, displacement functions</td><td>1</td><td>I</td></tr><tr><td>Truss element</td><td>1</td><td>T, U</td></tr><tr><td>Beam element</td><td>1</td><td>T, U</td></tr><tr><td>Frame problems</td><td>1</td><td>T, U</td></tr><tr><td>FEA software</td><td>1</td><td>I</td></tr><tr><td>Plastic hinge analysis of frames</td><td>1</td><td>T, U</td></tr><tr><td>Yield line analysis of slabs</td><td>1</td><td>T, U</td></tr></table>	Topic	Weight	Level	Introduction to finite element method, discretization of a structure, displacement functions	1	I	Truss element	1	T, U	Beam element	1	T, U	Frame problems	1	T, U	FEA software	1	I	Plastic hinge analysis of frames	1	T, U	Yield line analysis of slabs	1	T, U
Topic	Weight	Level																							
Introduction to finite element method, discretization of a structure, displacement functions	1	I																							
Truss element	1	T, U																							
Beam element	1	T, U																							
Frame problems	1	T, U																							
FEA software	1	I																							
Plastic hinge analysis of frames	1	T, U																							
Yield line analysis of slabs	1	T, U																							
Examination forms	Constructed-response test																								
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.																								
Reading list	Textbooks: [1] R. C. Hibbeler, Structural Analysis, Prentice-Hall. References: [2] Jacob Fish, Teb Belytschko, A First Course in Finite Elements, Willey, 2007. [3] T.H.G. Megson, Structural and stress analysis, Elsevier, 2005.																								

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

	ILO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x	x									x
2	x	x									x
3		x								x	x

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources

1	Introduction, discretization of a structure, displacement functions	1, 3, 4	Quiz 1	Lecture, Discussion	[1] Chapter 12
2	Truss element	1, 3, 4	Quiz 1	Lecture, Discussion	[1] Chapter 14
3-4	Beam element	1, 3, 4	Quiz 1	Lecture, Discussion	[1] Chapter 15
5-6	Frame problems	1, 3, 4	Quiz 1	Lecture, Discussion	[1] Chapter 16
7-8	FEA software Midterm Exam	1, 3, 4	Quiz 1 Midterm exam	Lecture, Quiz, Test	[1] Chapter 14, 15, 16
11-12	Plastic hinge analysis of beam and frames	2, 4	Quiz 2	Lecture, Discussion	[3] Chapter 18
13-15	Yield line analysis of slabs, Quiz	2, 4	Quiz 2	Lecture, Quiz	[3] Chapter 19
16-17	Final exam				

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 2 components, including progress assessment and final presentation. The contribution of each component (in percentage) is shown in the table below.

Assessment Type	CLO1	CLO2	CLO3	CLO4
In-class exercises/quizzes/attendance (20%)	Quiz 1 60%Pass	Quiz 2 60%Pass	Quiz 1 60%Pass	Quiz 1,2 60%Pass
Midterm exam (30%)	Q1,2 50%Pass		Q1,2 50%Pass	
Final exam (50%)		Q1,2 50%Pass		Q1,2 50%Pass

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics: None

6. Date revised: May 24, 2025

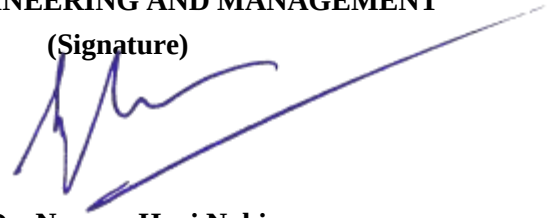
7. Course coordinator/Lecturer

- School of Civil Engineering and Management
- Email: lycanh@hcmiu.edu.vn

Ho Chi Minh, 24/05/2025

**DEAN OF SCHOOL OF
CIVIL ENGINEERING AND MANAGEMENT**

(Signature)

A handwritten signature in blue ink, consisting of stylized, overlapping loops and a long, sweeping horizontal stroke extending to the right.

Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Reinforced Concrete 1

Course Code: **CE304IU**

1. General information

Course name	- (in English) <i>Reinforced concrete 1</i> - (in Vietnamese) <i>Bê tông cốt thép 1</i>
Module designation	CE304IU – Reinforced Concrete 1 Basic design concepts: basic layout of concrete structures, loading; Basic material properties: concrete and reinforcing steel; Analysis of structures: limit state design, simplification of framed structures, moment redistribution; Analysis and design of flexural members; Shear; Bond and anchorage; Serviceability; One-way and two-way slabs; Compression members; Foundation: footings. Current building code and standards are referred to extensively in this course. General concepts of oriented-programing toward designing Rc structures
Course type	☐ <i>General knowledge</i> <i>Fundamental</i> ☒ <i>Specialized knowledge</i> <i>Internship/Project/Thesis</i> <i>Others:</i> ☐ ☐
Semester(s) in which the module is taught	5
Person responsible for the module	Assoc. Prof. Cao Thanh Ngoc Tran
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture and assignments.

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (lecture, exercise, laboratory session, etc.): 37.5 Private study including examination preparation, specified in hours ¹ : 90																	
Credit points	3 credits (Theory: 3 + Practice: 0) 4.64 ECTS (optional)																	
Number of periods	Theory: 45 Practice: 0																	
Required and recommended prerequisites for joining the module	Structural analysis – CE209IU																	
Module objectives/intended learning outcomes	Overall objectives are to equip CE students with knowledge about reinforced concrete structures Students who complete the course will be able to perform the following tasks: (1) Identify and calculate loadings to reinforced concrete structures. (2) Design reinforced concrete structures under ultimate and serviceability limit states. (3) Design and analyze the reinforced concrete members: beam, column, one-way and two-way slabs, footings.																	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Introduction to reinforced concrete design</td><td>1</td><td>I</td></tr><tr><td>Design of singly-reinforced rectangular beams</td><td>2</td><td>T, U</td></tr><tr><td>Design of doubly-reinforced rectangular beams</td><td>2</td><td>T, U</td></tr><tr><td>Moment redistribution</td><td>1</td><td>T, U</td></tr></table>			Topic	Weight	Level	Introduction to reinforced concrete design	1	I	Design of singly-reinforced rectangular beams	2	T, U	Design of doubly-reinforced rectangular beams	2	T, U	Moment redistribution	1	T, U
Topic	Weight	Level																
Introduction to reinforced concrete design	1	I																
Design of singly-reinforced rectangular beams	2	T, U																
Design of doubly-reinforced rectangular beams	2	T, U																
Moment redistribution	1	T, U																

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

	Design for shear	1	T, U
	Bond of reinforcement	1	T, U
	Slabs	2	T, U
	Columns	2	T, U
	Footings	3	T, U
Examination forms	Constructed-response test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.		
Reading list	Text book: [1] Mosley, W.H., Hulse, R. and Bungey, J.H., <i>"Reinforced Concrete Design to EuroCode 2"</i> , 6th edition, Macmillan, London, 2007 [2] Eurocode 2: Design of Concrete Structures – Part 1-1: General rules and rules for buildings		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-3) and Program/Student Learning Outcomes (a-k) is shown in the following table:

- (1) CLO1: Identify and calculate loadings to reinforced concrete structures.
- (2) CLO2: Design reinforced concrete structures under ultimate and serviceability limit states.
- (3) CLO3: Design and analyze the reinforced concrete members: beam, column, one-way and two-way slabs, footings.

Course Learning Outcome	Program Intended Learning Outcome (ILO)										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
CLO1	x	x									x
CLO2		x								x	x
CLO3		x								x	x

Program Learning Outcome:

- (a) Understanding the physical world and using knowledge of mathematics along with natural science to represent and pursue research and establish and interpret empirical data sets by the use of quantitative and quantitative methods
- (b) Understanding of fundamentals of civil engineering field (e.g., construction geology, material

science, construction physics, surveying, structural theory, technical design, construction informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction), and ability to utilize both classical and modern research methods to identify, interpret and integrate technical literature and database

- (c) Ability to analyze and prepare investment projects and understand the economic, environmental, and social impact of engineering solutions
- (d) Awareness of professional and ethical responsibilities of a civil engineer
- (e) Ability to function as a member of a multidisciplinary team (including international and mixed gender members) as well as having good knowledge of management and organization to perform projects to grow into an appropriate and responsible leadership role
- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies appear regularly
- (g) Ability to communicate on content and problems of civil engineering with both professional colleagues and individuals of a wider public in foreign languages and intercultural relations efficiently, including oral, written, and others
- (h) A broad education is necessary to understand the impact of engineering solutions in a global and social context, taking into account sustainability, environmental, ecological, and economic aspects
- (i) Understanding of contemporary issues of national, regional, and the world with a broad vision
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and day-life situations.

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction to reinforced concrete design Properties of constituent materials Load combinations	1	Quiz 1	Lecture, Discussion	[1] Chapter 1,2,3
2, 3	Design of singly-reinforced rectangular beams	2	Quiz 1	Lecture, Discussion	[1] Chapter 4
4,5	Design of doubly-reinforced rectangular beams	2	Quiz 1	Lecture, Discussion	[1] Chapter 4
6	Moment redistribution	2	Quiz 1	Lecture, Discussion	[1] Chapter 3

7	Design for shear	2	Quiz 1	Lecture, Discussion	[1] Chapter 5
8-9- 10	Bond of reinforcement. Curtailement of reinforcement Serviceability requirements in RC design. Quiz 1, Midterm exam	2	Quiz 1, Midterm exam	Lecture, Quiz 1, Test	[1] Chapter 5
11-12	One-way spanning slabs Two-way spanning slabs	3	Quiz 2	Lecture, Discussion	[1] Chapter 8
13, 14	Columns – behavior and classification, Moments and forces in columns, Axially loaded columns, Columns resisting uniaxial bending and biaxial bending, Construction of column interaction diagrams	3	Quiz 2	Lecture, Discussion	[1] Chapter 9
15, 16, 17	Footings – general considerations Design of axially loaded pad footing Eccentrically loaded pad footing Design of combined footing, Quiz 2	3	Quiz 2	Lecture, Discussion	[1] Chapter 10
18-19	FINAL EXAM				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
In-class exercises/quizzes/attendance (30%)	Quiz 1 60%Pass		Quiz 2 60%Pass
Midterm exam (20%)		50%Pass	
Final exam (50%)			50%Pass

Note: %Pass: % students have scores greater than 50 out of 100.

5. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025

**Dean of School of Civil Engineering and
Management**

(Signature)

A handwritten signature in blue ink, consisting of a stylized 'N' followed by a horizontal line and a diagonal stroke extending upwards and to the right.

Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Reinforced Concrete 2

Course Code: **CE310IU**

1. General information

Course name	- (in English) <i>Reinforced concrete 2</i> - (in Vietnamese) <i>Bê tông cốt thép 2</i>
Module designation	CE310IU – Reinforced Concrete 2 Analysis and design of prestressed concrete members; beam; slabs. Analysis and design of composite slabs. Current building code and standards are referred to extensively in this course.
Course type	☐ <i>General knowledge</i> <i>Fundamental</i> ☐ ☒ <i>Specialized knowledge</i> <i>Internship/Project/Thesis</i> <i>Others:</i> ☐ ☐
Semester(s) in which the module is taught	6
Person responsible for the module	Assoc. Prof. Cao Thanh Ngoc Tran
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture and assignments.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (lecture, exercise, laboratory session, etc.): 37.5

	Private study including examination preparation, specified in hours ¹ : 90																					
Credit points	3 credits (Theory: 3 + Practice: 0) 4.64 ECTS (<i>optional</i>)																					
Number of periods	Theory: 45 Practice: 0																					
Required and recommended prerequisites for joining the module	Reinforced Concrete 1 – CE304IU																					
Module objectives/intended learning outcomes	Overall objectives are to equip CE students with knowledge about prestressed concrete and composite structures Students who complete the course will be able to perform the following tasks: (1) Identify and calculate loadings to prestressed and composite structures. (2) Design prestressed and composite structures under ultimate, serviceability and transfer limit states. (3) Design and analyze the prestressed and composite members: simply supported beams, continuous beams and composite slabs																					
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Principles of prestressing</td><td>1</td><td>I</td></tr><tr><td>Design for the serviceability limit state</td><td>3</td><td>T, U</td></tr><tr><td>Prestress losses</td><td>2</td><td>T, U</td></tr><tr><td>Calculation of deflection, End blocks</td><td>1</td><td>T, U</td></tr><tr><td>Analysis and design at the ultimate limit state</td><td>1</td><td>T, U</td></tr><tr><td>Design of simply supported prestressed concrete beams</td><td>2</td><td>T, U</td></tr></table>	Topic	Weight	Level	Principles of prestressing	1	I	Design for the serviceability limit state	3	T, U	Prestress losses	2	T, U	Calculation of deflection, End blocks	1	T, U	Analysis and design at the ultimate limit state	1	T, U	Design of simply supported prestressed concrete beams	2	T, U
Topic	Weight	Level																				
Principles of prestressing	1	I																				
Design for the serviceability limit state	3	T, U																				
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Calculation of deflection, End blocks	1	T, U																				
Analysis and design at the ultimate limit state	1	T, U																				
Design of simply supported prestressed concrete beams	2	T, U																				

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

	Continuous members	2	T, U
	Introduction to composite structures	1	T, U
	Design of the steel beam for conditions during construction The composite section at the ultimate state: moment & shear	2	T, U
Examination forms	Constructed-response test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.		
Reading list	Text book: [1] Hurst, M.K., <i>"Prestressed Concrete Design"</i> , 2nd edition. [2] Mosley, W.H., Hulse, R. and Bungey, J.H., <i>"Reinforced Concrete Design to EuroCode 2"</i> , 6th edition, Macmillan, London, 2007 [3] Eurocode 2: Design of Concrete Structures – Part 1-1: General rules and rules for buildings		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-3) and Program Intended Learning Outcomes (a-k) is shown in the following table:

- (1) CLO1: Identify and calculate loadings to prestressed and composite structures.
- (2) CLO2: Design prestressed and composite structures under ultimate, serviceability and transfer limit states.
- (3) CLO3: Design and analyze the prestressed and composite members: simply supported beams, continuous beams and composite slabs.

No.	Program Intended Learning Outcome (ILO)										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
CLO1	x	x									x
CLO2		x								x	x
CLO3		x								x	x

Program Learning Outcome:

- (a) Understanding the physical world and using knowledge of mathematics along with natural science to represent and pursue research and establish and interpret empirical data sets by the use of quantitative and quantitative methods
- (b) Understanding of fundamentals of civil engineering field (e.g., construction geology, material science, construction physics, surveying, structural theory, technical design, construction

informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction), and ability to utilize both classical and modern research methods to identify, interpret and integrate technical literature and database

- (c) Ability to analyze and prepare investment projects and understand the economic, environmental, and social impact of engineering solutions
- (d) Awareness of professional and ethical responsibilities of a civil engineer
- (e) Ability to function as a member of a multidisciplinary team (including international and mixed gender members) as well as having good knowledge of management and organization to perform projects to grow into an appropriate and responsible leadership role
- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies appear regularly
- (g) Ability to communicate on content and problems of civil engineering with both professional colleagues and individuals of a wider public in foreign languages and intercultural relations efficiently, including oral, written, and others
- (h) A broad education is necessary to understand the impact of engineering solutions in a global and social context, taking into account sustainability, environmental, ecological, and economic aspects
- (i) Understanding of contemporary issues of national, regional, and the world with a broad vision
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and day-life situations.

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Principles of prestressing Methods of prestressing Analysis of concrete under working loads	1	Quiz 1	Lecture, Discussion	[1] Chapter 1,2,3
2, 3, 4	Design for the serviceability limit state • Determination of minimum section properties • Design of prestress force	2	Quiz 1	Lecture, Discussion	[1] Chapter 9

	• Stresses under the quasi-permanent loading • Magnel diagram construction • Design of tendon profiles • Width of cable zone				
5,6	Prestress losses	2	Quiz 1	Lecture, Discussion	[1] Chapter 4
7	Calculation of deflection, End blocks,	2	Quiz 1	Lecture, Discussion	[2] Chapter 11
8-9	Analysis and design at the ultimate limit state, Quiz 1, Midterm Exam	2	Quiz 1; Midterm exam	Lecture, Discussion; Test	[1] Chapter 8
10-12	Design of simply supported prestressed concrete beams	3	Quiz 2	Lecture, Discussion	[2] Chapter 11
13, 14	Continuous members	3	Quiz 2	Lecture, Discussion	[1] Chapter 11
15	Introduction to composite structures Design procedure for composite slab	3	Quiz 2	Lecture, Discussion	[2] Chapter 12
16, 17	Design of the steel beam for conditions during construction The composite section at the ultimate state: moment & shear. Quiz 2	3	Quiz 2	Lecture, Discussion	[2] Chapter 12
18-19	FINAL EXAM				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
In-class exercises/quizzes/attendance (30%)	Quiz 1 60%Pass		Quiz 2 60%Pass
Midterm exam (20%)		50%Pass	

Final exam (50%)			50%Pass

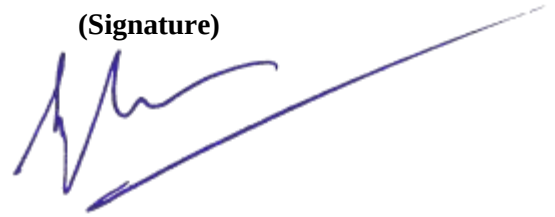
Note: %Pass: % students have scores greater than 50 out of 100.

5. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025

**Dean of School of Civil Engineering and
Management**

(Signature)



Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: STEEL STRUCTURES

Course Code: **CE305IU**

1. General information

Course name	- <i>Steel Structures</i> - <i>Kết cấu thép</i>
Course designation	<i>Introduction to students the basic principles of reading steel structural plans, elevations and sectional views, distribute loadings on structures based on architecture plans, determine factored loads for design, design structural steel beams and columns, and design bolted and welded connections.</i>
Course type	☐ <i>General knowledge</i> ☐ <i>Fundamental</i> ☒ <i>Specialized knowledge</i> ☐ <i>Internship/Project/Thesis</i> ☐ <i>Others:</i>
Semester(s) in which the course is taught	5 TH
Person responsible for the course	<i>Phạm Nhân Hòa (Msc)</i>
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, discussion, and assignments

Workload (incl. contact hours, self- study hours)	Total workload: 127.5 (Estimated) Contact hours: - lecture: 28.5 - Discussion: 9 Private study including examination preparation, specified in hours: 90	
Credit points	3 credits (Theory: 3Cr + Practice: 0)/4.64 ECTS	
Number of periods	Theory: 45 Practice: 0	
Required and recommende d prerequisites for joining the course	Mechanics of Materials 1 and Structural Analysis 1	
Parallel course	None	
Course objectives	The aim of this course is - to develop an understanding of Limit State Design as applied to structural steel beams based on the latest Euro Code 3 – Design of steel structures. - to develop an understanding of Limit State Design as applied to structural steel columns and connections based on the latest Euro Code 3 – Design of steel structures.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Categorie s	Course learning outcome (CLO)/ Competency
	Knowledg e	CLO1: Analyzing, interpreting, and designing steel structures based on National Codes. CLO2: Analyzing, interpreting, and designing joints of steel structures based on National Codes.
	Skills	
	Attitude	CLO3: Work independently and professionally

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introduction, material properties, limit state design, loading, and section classifications.	1	I,T,U
	Tension members	1	I,T,U
	Compression members: Its Behaviors, local and overall buckling, column slenderness and effective length concept.	1	I,T,U
	Local buckling of thin-plate elements	1	I,T,U
	In-plane bending of beams	1	I,T,U
	Lateral buckling of beams	1	I,T,U
	Beam-columns	1	I,T,U
	Introduction to moment connections of bolted end plate connections, beam and column splices.	1	I,T,U
Examination forms	Constructed-response test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have GPA more than 50/100 points overall to pass this course.		
Reading list and Media employed	<u>Textbooks:</u> [1] Trahair, NS.; Bradford MA.; Nethercot DA. and Gardner, L. “The Behavior Design of Steel Structures to EC 3”, 4th Edition, Taylor and Francis, 2007. [2] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-1: Design of Steel Structures – General Rules and Rules for Buildings, British Standards Institution, London, UK. [3] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-5: Design of steel structures – Plated Structural Elements, British Standards Institution, London, UK. [4] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-8: Design of Steel Structures – Design of Joints, British Standards Institution, London, UK. <u>Additional references:</u> [5] Gardner, L. and Nethercot, D.A., “Designer’s Guide to Eurocode 3: Design of Steel Structures”, 3 rd Edition, Thomas Telford, 2009.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Intended Learning Outcomes (ILO) is shown in the following table:

	<i>ILO</i>

CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x	x									
2	x	x									
3						x					

3. Planned learning and assessment activities

Week	Topic	CLO	Assessments activities	Learning activities	Resources
1	Introduction, material properties, limit state design, loading, and section classifications.	1,2,3	Attendance Q&A	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 1
2	Tension members	1,2,3	Attendance Q&A Homework 1	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 2
3-4	Compression members: Its Behaviors, local and overall buckling, column slenderness and effective length concept.	1,2,3	Attendance Q&A Homework 2	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 3
5-8	Local buckling of thin-plate elements Midterm Examination	1,2,3	Attendance Q&A Homework 3 Quizz 1 Midterm Examination	Reading materials before class; Doing the lecture; Discussion; Test	[1] Chapter 4
9	In-plane bending of beams	1,2,3	Attendance Q&A Homework 4	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 5
10-11	Lateral buckling of beams	1,2,3	Attendance Q&A Homework 5	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 6

12-13	Beam-columns	1,2,3	Attendance Q&A Homework 6	Reading materials before class;	[1] Chapte r 7
14-15	Introduction to moment connections of bolted end plate connections, beam and column splices.	1,2,3	Attendance Q&A Quizz 2	Doing the lecture; Discussion;	[1] Chapte r 9
16-17	FINAL EXAMINATION		WRITING		

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3
1	Progress Assessment (PA, 30%)			
1.1	Class attendance (25% of PA)			Attended 80%Pass
1.2	In-class activity: Discussion and doing Quizzes in class (25% of PA)	Quiz 1	Quiz 2	Participated in class Q&A 60%Pass
1.3	Homeworks (50% of PA)	HW1-6, Submitted 80%Pass		HW1-6, Submitted 80%Pass
2	Midterm exam (Mid, 20%)	Q1-5, 60%Pass		
3	Final exam (Fin, 50%)	Q1, 60%Pass	Q2, 60%Pass	

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics (optional)

- No

6. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025
**Dean of School of Civil Engineering and
Management**

(Signature)



PhD. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Construction Engineering

Course Code: **CE311IU**

1. General information

Course name	CE311IU – Construction Engineering CE311IU – Kỹ thuật thi công
Module designation	This course is designed to provide students knowledge about construction engineering, including earthwork, foundation construction, wood construction, concrete construction, masonry construction, and steel construction.
Course type	☐ <i>General knowledge</i> ☐ <i>Fundamental</i> ☒ <i>Specialized knowledge</i> ☐ <i>Internship/Project/Thesis</i> ☐ <i>Others:</i>
Semester(s) in which the module is taught	3
Person responsible for the module	Dr. Nguyen, Hoai Nghia
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, and assignments.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (lecture, exercise, laboratory session, etc.): 37.5 Private study including examination preparation, specified in hours ¹ : 90
Credit points	3 credits (Theory: 03 + Practice: 00) 4.64 ECTS

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Number of periods	Theory: 45 Practice: 00																																			
Required and recommended prerequisites for joining the module	- Prerequisites: - Corequisites: - Previous course: CE304IU - Reinforced concrete 1																																			
Module objectives/intended learning outcomes	Overall objectives are to equip CE students with knowledge about construction engineering, including earthwork, foundation construction, wood construction, concrete construction, masonry construction, and steel construction. Students who complete the course will be able to perform the following tasks: (1) Knowing the construction industry and its related matter (2) Caculating the earthwork volume and knowing earthwork construction methodology (3) Calculating the volume and knowing various construction methodology of various construction works such as: foundation, masonry, concrete works, ...																																			
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize) <table><tr><td>Topic</td><td>Weight</td><td>Level</td></tr><tr><td>Introduction</td><td>1</td><td>I</td></tr><tr><td>Earthmoving materials and operation</td><td>2</td><td>T, U</td></tr><tr><td>Excavating and lifting</td><td>1</td><td>T, U</td></tr><tr><td>Loading and hauling</td><td>1</td><td>T, U</td></tr><tr><td>Compacting and finishing</td><td>1</td><td>T, U</td></tr><tr><td>Foundation</td><td>1</td><td>T, U</td></tr><tr><td>Wood construction</td><td>2</td><td>T, U</td></tr><tr><td>Concrete construction</td><td>3</td><td>T</td></tr><tr><td>Concrete from design</td><td>2</td><td>T, U</td></tr><tr><td>Masonry construction</td><td>1</td><td>T, U</td></tr></table>			Topic	Weight	Level	Introduction	1	I	Earthmoving materials and operation	2	T, U	Excavating and lifting	1	T, U	Loading and hauling	1	T, U	Compacting and finishing	1	T, U	Foundation	1	T, U	Wood construction	2	T, U	Concrete construction	3	T	Concrete from design	2	T, U	Masonry construction	1	T, U
Topic	Weight	Level																																		
Introduction	1	I																																		
Earthmoving materials and operation	2	T, U																																		
Excavating and lifting	1	T, U																																		
Loading and hauling	1	T, U																																		
Compacting and finishing	1	T, U																																		
Foundation	1	T, U																																		
Wood construction	2	T, U																																		
Concrete construction	3	T																																		
Concrete from design	2	T, U																																		
Masonry construction	1	T, U																																		

	Steel construction	1	T
Examination forms	Constructed-response test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.		
Reading list	Text book: [1] S. W. Nunnally, (2014). <i>Construction Methods and Management</i> , Pearson, 8 th edition. [2] R. L. Peurifoy, C. J. Schexnayder, R. L. Schmitt, and A. Shapira. (2018). <i>Construction Planning, Equipment, and Methods</i> , McGraw-Hill Education 9 th edition.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-3) and Program Intended Learning Outcomes (a-k) is shown in the following table:

- (1) CLO1: Knowing the construction industry and its related matter
- (2) CLO2: Calculating the earthwork volume and knowing earthwork construction methodology
- (3) CLO3: Calculating the volume and knowing various construction methodology of various construction works such as: foundation, masonry, concrete works, ...

No.	Program Intended Learning Outcome (ILO)										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
CLO1	x										x
CLO2		x								x	x
CLO3		x								x	x

Program Learning Outcome:

- (a) Understanding the physical world and using knowledge of mathematics and natural sciences to represent it in pursuing and establishing research by the use of quantitative and quantitative methods.
- (b) Understanding the fundamentals of the civil engineering field (e.g. construction geology, material science, construction physics, surveying, structural theory, technical design, construction informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction)
- (c) Ability to analyze and prepare investment projects and understand their economic, environmental, and social impacts
- (d) Awareness of professional and ethical responsibilities of a civil engineer

- (e) Ability to function as a member of a multidisciplinary team (including multi-national and mixed-gender teams) as well as having good knowledge of management and organization to be able to take on leadership roles
- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies emerge regularly as well as take part in developing new technologies by engaging in research works having the ability to interpret and use empirical datasets, integrate technical literature and databases to solve specific civil engineering problems or fill knowledge gaps.
- (g) Ability to communicate matters related to civil engineering to colleagues in the same profession or the general public, effectively using oral, written, and other forms of communication.
- (h) A broad education necessary to understand the impacts of civil engineering solutions in a global and social context
- (i) A broad understanding of contemporary issues in civil engineering in the national, regional, and global level
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and daily life situations

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction	1	HW1	Lecture, Discussion, HW1	[1] Chapter 1
2, 3	Earthmoving materials and operation	2	HW2 and/or Quiz1	Lecture, HW2 and/or Quiz1	[1] Chapter 2
4	Excavating and lifting	2	Presentation HW3 and/or Quiz2	Lecture, HW3 and/or Quiz2	[1] Chapter 3
5	Loading and hauling	2	Presentation HW4 and/or Quiz3	Lecture, HW4 and/or Quiz3	[1] Chapter 4
6	Compacting and finishing	2	Presentation HW5 and/or Quiz4	Lecture, HW5 and/or Quiz4	[1] Chapter 5
7	Foundation	3	Quiz5	Lecture, Quiz5	[1] Chapter 10

8	Wood construction Midterm exam	3	Quiz6 Midterm exam	Lecture, Quiz6, Test	[1] Chapter 11
9-11	Concrete construction	3	Quiz7	Lecture, Quiz7	[1] Chapter 12
12, 13	Concrete from design	3	HW6	Lecture, HW6	[1] Chapter 13
14	Masonry construction	3	Quiz8	Lecture, Quiz8	[1] Chapter 14
15	Steel construction	3	Quiz9	Lecture, Quiz9	[1] Chapter 15
16	Reservation week				
17-18	FINAL EXAM				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
In-class exercises/quizzes/attendance (10%)		Qz1, Qz2, Qz3, Qz4 60%Pass	Qz5, Qz6, Qz7, Qz8, Qz9 60%Pass
Homework exercises/Presentation (20%)	HW1 50%Pass	HW2, HW3, HW4, HW5, 50% Pass Presentations 60% Pass	HW6 50% Pass
Midterm exam (20%)		Q1, Q2, Q3, Q4, Q5, Q6, Q7, 50%Pass	
Final exam (50%)			Q1, Q2, Q3, Q4, Q5, Q6, Q7 50%Pass

Note: %Pass: % students have scores greater than 50 out of 100.

5. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025

Dean of School of Civil Engineering and
Management



Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Construction Management

Course Code: CE401IU

1. General information

Course name	- (in English): Construction Management - (in Vietnamese): Quản lý xây dựng
Course designation	<i>This course covers a wide range of subjects, reflecting the breadth of knowledge needed to understand the dynamics of the construction industry. This course focuses on the processes and tasks required for the management of construction projects. Students will work in project teams and perform various tasks associated with construction project administration including, developing construction budgets, record keeping and documentation, interpreting contracts and specifications, and other duties necessary for efficient project operation and successful completion.</i>
Course type	☐ General knowledge Fundamental ☒ Specialized knowledge Internship/Project/Thesis ☐ Others: ☐ ☐
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Phạm Văn Bảo (Msc)

Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, discussion, and assignments
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (lecture, exercise, laboratory session, etc.): 37.5 Private study including examination preparation, specified in hours ¹ : 90
Credit points	03 credits (Theory: 03 + Practice: 00) 4.64 ECTS
Number of periods	Theory: 45 Practice: 00
Required and recommended prerequisites for joining the course	Construction Engineering
Parallel course	None
Course objectives	The aim of this course is to provide - A basic understanding and application of construction operations and construction management. - A basic understanding of construction project management.

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Categories	Course learning outcome (CLO)/ Competency
	Knowledge	CLO1. Understand construction documents: drawings, technical specifications, quantity takeoff, and various construction contract forms. CLO2. Understand equipment ownership, construction safety, material management, and cost control.
	Skills	CLO3. Test the application of calculation methods in construction planning & scheduling, project cash flow, construction labor, cost control, and estimating process.
	Attitude	CLO4. Work independently and professionally

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>History and basic concepts</td><td>1</td><td>I</td></tr><tr><td>Preparing the bid package</td><td>1</td><td>T</td></tr><tr><td>Issues during the construction phase</td><td>1</td><td>T, U</td></tr><tr><td>Construction contracts</td><td>1</td><td>T</td></tr><tr><td>Legal structure</td><td>1</td><td>I, T</td></tr><tr><td>Project planning</td><td>1</td><td>T, U</td></tr><tr><td>Project scheduling</td><td>1</td><td>T, U</td></tr><tr><td>Scheduling – PERT Networks and linear operations</td><td>1</td><td>T, U</td></tr><tr><td>Project cash flow and funding</td><td>1</td><td>T, U</td></tr><tr><td>Equipment Ownership</td><td>1</td><td>T, U</td></tr><tr><td>Construction labor</td><td>1</td><td>T, U</td></tr><tr><td>Estimating process</td><td>1</td><td>T, U</td></tr><tr><td>Cost control</td><td>1</td><td>T, U</td></tr><tr><td>Materials management and safety</td><td>1</td><td>I, T</td></tr></table>	Topic	Weight	Level	History and basic concepts	1	I	Preparing the bid package	1	T	Issues during the construction phase	1	T, U	Construction contracts	1	T	Legal structure	1	I, T	Project planning	1	T, U	Project scheduling	1	T, U	Scheduling – PERT Networks and linear operations	1	T, U	Project cash flow and funding	1	T, U	Equipment Ownership	1	T, U	Construction labor	1	T, U	Estimating process	1	T, U	Cost control	1	T, U	Materials management and safety	1	I, T
Topic	Weight	Level																																												
History and basic concepts	1	I																																												
Preparing the bid package	1	T																																												
Issues during the construction phase	1	T, U																																												
Construction contracts	1	T																																												
Legal structure	1	I, T																																												
Project planning	1	T, U																																												
Project scheduling	1	T, U																																												
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Project cash flow and funding	1	T, U																																												
Equipment Ownership	1	T, U																																												
Construction labor	1	T, U																																												
Estimating process	1	T, U																																												
Cost control	1	T, U																																												
Materials management and safety	1	I, T																																												
Examination forms	Constructed-response test																																													
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have GPA more than 50/100 points overall to pass this course.																																													
Reading list and Media employed	<u>Textbooks:</u> [1] D. W. Halpin (2006), "Construction Management" Third Edition, Wiley & Sons <u>Additional references:</u> [2] Barry Fryer and Marilyn Fryer (1996), The practice of construction management, 3rd Edition, Blackwell Science [3] W.J. Slater (2005), Cases in construction management, Taylor & Francis e-Library.																																													

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Intended Learning Outcomes (ILO) is shown in the following table:

	<i>ILO</i>										
<i>CLO</i>	a	b	c	d	e	f	g	h	i	j	k
1	x										
2	x	x									
3	x	x									
4						x					

3. Planned learning and assessment activities

Week	Topic	CLO	Assessments activities	Learning activities	Resources
1	History and basic concepts	1,4	Attendance Q&A Homework 1	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 1
2	Preparing the bid package	1,4	Attendance Q&A Homework 2	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 2
3	Issues during the construction phase	1,4	Attendance Q&A Homework 3	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 3
4	Construction contracts	1,4	Attendance Q&A Homework 4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[1] Chapter 4
5	Legal structure	1,4	Attendance Q&A Homework 5	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[1] Chapter 5
6	Project planning	3,4	Attendance Q&A Homework 6	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class,	[1] Chapter 6
7-8	Project scheduling Midterm Exam	3,4	Attendance Q&A Homework 7 Exam	Reading materials before class; test	[1] Chapter 7

				Doing the lecture; Discussion; and doing Quiz in class	
9	Scheduling – PERT Networks and linear operations	3,4	Attendance Q&A Homework 8	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 8
10	Project cash flow and funding	3,4	Attendance Q&A Homework 9	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 9&10
11	Equipment Ownership	3,4	Attendance Q&A Homework 10	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 11
12	Construction labor	3,4	Attendance Q&A Homework 11	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 14
13	Estimating process	3,4	Attendance Q&A Homework 12	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 15
14	Cost control	3,4	Attendance Q&A Homework 13	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 16
15	Materials management and safety	2,4	Attendance Presentation	Reading materials before class; Doing the presentation; Discussion;	[1] Chapter 17&18
16	Reservation week				
17-18	Final examination		Writing		

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3	CLO4
1	Progress assessment (PA, 30%)				
1.1	Class attendance (50% of PA)				Attended 80%Pass
1.2	In-class activity: Discussion and doing Quizzes in class (25% of PA)				Participate d in class Q&A 60%Pass
1.3	Home works (25% of PA)				HW1-13, Submitted 80%Pass
2	Midterm exam (Mid, 20%)	Q1-3, 60%Pass	Q4-5 60%Pass		
3	Final exam (Fin, 50%)		Q1-2 60%Pass	Q3-5 60%Pass	

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics (optional)

- No

6. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025

***Dean of School of Civil Engineering and
Management***

(Signature)

TS. Nguyễn Hoài Nghĩa



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: STEEL PROJECT

Course Code: CE312IU

1. General information

Course name	- <i>Steel Project</i> - <i>Đồ án Kết cấu thép</i>
Course designation	A practice construction project is carried out, including steel buildings, and water supply or transportation structures. Students are supposed to apply the knowledge in the steel structure course to this project composing of calculating loads, determining internal forces with an analysis structure software, designing with a certain code, and ultimately describing them on a report
Course type	☐ <i>General knowledge</i> ☐ <i>Fundamental</i> ☒ <i>Specialized knowledge</i> ☐ <i>Internship/Project/Thesis</i> ☐ <i>Others:</i>
Semester(s) in which the course is taught	6
Person responsible for the course	MSc. Pham Nhan Hoa
Language	English
Relation to curriculum	<i>Compulsory</i>
Teaching methods	Discussion and project.

Workload (incl. contact hours, self-study hours)	Total workload: 67.5 (Estimated) Contact hours: - Lecture: 19.5 - Checking: 18 Private study including examination preparation, specified in hours: 30		
Credit points	1 credit (Theory: 0 + Practice: 1Cr)/2.45 ECTS		
Required and recommended prerequisites for joining the course	Steel Structures – CE305IU		
Course objectives	1. The overall objectives of this course are to develop an understanding of Limit State Design as applied to structural steel beams based on the latest Euro Code 3 – Design of steel structures. 2. The course aims to develop an understanding of Limit State Design as applied to structural steel columns and connections based on the latest Euro Code 3 – Design of steel structures.		
Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge		
	Skill	CLO1: enhance problem solving skills using the software in civil engineering problems with SAP, ETABS, and EXCEL. CLO2: develop the self-learning with respect to other softwares of civil engineering students	
	Attitude	CLO3: Work independently and professionally	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (teach); U (Utilize)		
	Topic	Weight	Level
	Intepretation of Pratical steel Structures	1	T, U
	Steel-Structure Model	2	T,U
	Steel Structures calculation	2	T, U
Report and Foundation structure drawings	2	T, U	
Examination forms	Report		

Study and examination requirements	Student is expected that you will spend at least 5 hours per week on studying this course. This time should be made up of reading, working on exercises and problem, group assignment and attending class lectures and tutorials. University regulations indicate that if students attend less than 80% of scheduled classes they may be refused final assessment. Regular attendance is essential for successful performance and learning in this course, particular in view of the interactive teaching and learning approach adopted.
Reading list	<u>Textbooks:</u> [1] Trahair, NS.; Bradford MA.; Nethercot DA. and Gardner, L. “The Behavior Design of Steel Structures to EC 3”, 4th Edition, Taylor and Francis, 2007. [2] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-1: Design of Steel Structures – General Rules and Rules for Buildings, British Standards Institution, London, UK. [3] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-5: Design of steel structures – Plated Structural Elements, British Standards Institution, London, UK. [4] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-8: Design of Steel Structures – Design of Joints, British Standards Institution, London, UK. <u>Additional references:</u> [5] Gardner, L. and Nethercot, D.A., “Designer’s Guide to Eurocode 3: Design of Steel Structures”, 3rd Edition, Thomas Telford, 2009.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program Intended Learning Outcomes (ILO) (a -k) is shown in the following table:

	ILO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x										x
2	x										x
3							x			x	x

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Intepretation of Pratical steel Structures	1	In-class excercies 1	Discussion, Group work,	
2	Steel-Structure Model	1,2,3	In-class excercies 2	Discussion, Group work,	
3	Steel Structures calculation	1,2,3	In-class excercies 3	Discussion, Group work,	

4	Report and Foundation structure drawings	1,2,3	In-class excercises 4	Discussion, Group work,	
5	Project defense	1,2,3	In-class excercises	Discussion, Group work,	

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
In-class exercises/quizzes (30%)	Excercises 1,2,3,4 60%Pass	Excercises 1,2,3,4 60%Pass	
Reports/ Presentation (70%)	Report/ Presentation (70% pass)	Report/ Presentation (70% pass)	Report/ Presentation (70% pass)

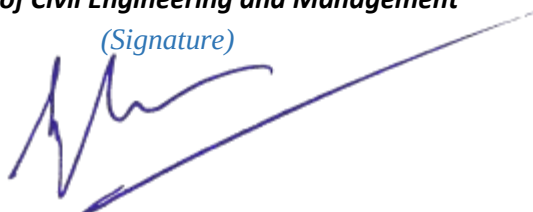
Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Date revised:

Ho Chi Minh City, May 24, 2025

Dean of School of Civil Engineering and Management

(Signature)



PhD. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Reinforced Concrete Project

Course Code: CE313IU

1. General information

Course name	- (in English) <i>Reinforced concrete Project</i> - (in Vietnamese) <i>Đồ án bê tông cốt thép</i>
Module designation	CE313IU – Reinforced Concrete Project In this course, students are supposed to apply the knowledge in the courses of reinforced concrete design to this project composing of calculating loads, designing reinforced concrete beams, columns and slabs, preparing drawing and writing a report..
Course type	☐ <i>General knowledge</i> <i>Fundamental</i> ☐ <i>Specialized knowledge</i> ☒ <i>Internship/Project/Thesis</i> ☐ <i>Others:</i> ☐
Semester(s) in which the module is taught	6
Person responsible for the module	Assoc. Prof. Cao Thanh Ngoc Tran
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture and assignments.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 67.5 Contact hours (lecture, exercise, laboratory session, etc.): 37.5

	Private study including examination preparation, specified in hours ¹ : 30																		
Credit points	1 credits (Theory: 0 + Practice: 1) 2.45 ECTS (optional)																		
Number of periods	Theory: 0 Practice: 15																		
Required and recommended prerequisites for joining the module	Reinforced Concrete 1 – CE304IU																		
Module objectives/intended learning outcomes	Overall objectives Students who complete the course will be able to perform the following tasks: (1) Designing the structural layout of reinforced concrete building. (2) Designing the details of beams, columns and slabs (3) Performing the design in the calculation note, drawing, and defense.																		
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize) <table><tr><td>Topic</td><td>Weight</td><td>Level</td></tr><tr><td>Project guidance</td><td>1</td><td>I</td></tr><tr><td>Structural dimensions Material characteristics</td><td>1</td><td>T, U</td></tr><tr><td>Load determination</td><td>1</td><td>T, U</td></tr><tr><td>Modelling</td><td>1</td><td>T, U</td></tr><tr><td>Detailings</td><td>3</td><td>T, U</td></tr></table>	Topic	Weight	Level	Project guidance	1	I	Structural dimensions Material characteristics	1	T, U	Load determination	1	T, U	Modelling	1	T, U	Detailings	3	T, U
Topic	Weight	Level																	
Project guidance	1	I																	
Structural dimensions Material characteristics	1	T, U																	
Load determination	1	T, U																	
Modelling	1	T, U																	
Detailings	3	T, U																	
Examination forms	Constructed-response test																		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged.																		

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

	Assignments/Examination: Students must have more than 50/100 points overall to pass this module.
Reading list	Text book: [1] Hurst, M.K., <i>"Prestressed Concrete Design"</i> , 2nd edition. [2] Mosley, W.H., Hulse, R. and Bungey, J.H., <i>"Reinforced Concrete Design to EuroCode 2"</i> , 6th edition, Macmillan, London, 2007 [3] Eurocode 2: Design of Concrete Structures – Part 1-1: General rules and rules for buildings

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-3) and Program Intended Learning Outcomes (a-k) is shown in the following table:

- (1) CLO1: Designing the structural layout of reinforced concrete building.
- (2) CLO2: Designing the details of beams, columns and slabs.
- (3) CLO3: Performing the design report.

No.	Program Learning Outcome (ILO)										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
CLO1	x	x									x
CLO2		x								x	x
CLO3							x			x	x

Program Learning Outcome:

- (a) Understanding the physical world and using knowledge of mathematics along with natural science to represent and pursue research and establish and interpret empirical data sets by the use of quantitative and quantitative methods
- (b) Understanding of fundamentals of civil engineering field (e.g., construction geology, material science, construction physics, surveying, structural theory, technical design, construction informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction), and ability to utilize both classical and modern research methods to identify, interpret and integrate technical literature and database
- (c) Ability to analyze and prepare investment projects and understand the economic, environmental, and social impact of engineering solutions
- (d) Awareness of professional and ethical responsibilities of a civil engineer
- (e) Ability to function as a member of a multidisciplinary team (including international and mixed gender members) as well as having good knowledge of management and organization to perform projects to grow into an appropriate and responsible leadership role
- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies appear regularly
- (g) Ability to communicate on content and problems of civil engineering with both professional

colleagues and individuals of a wider public in foreign languages and intercultural relations efficiently, including oral, written, and others

- (h) A broad education is necessary to understand the impact of engineering solutions in a global and social context, taking into account sustainability, environmental, ecological, and economic aspects
- (i) Understanding of contemporary issues of national, regional, and the world with a broad vision
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and day-life situations.

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Project guidance			Lecture	Lecture note
2	Structural dimensions Material characteristics	1,3	Attendance/ report	Project checking	[1] Chapter 4
3	Load determination	1,3	Attendance/ report	Project checking	[1] Chapter 4
4	Modelling	1,3	Attendance/ report	Project checking	[1] Chapter 3
5,6,7	Detailings	1,3	Attendance/ report	Project checking	[1] Chapter 7,8,9
	Submission			Drawings and Reports	

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
Drawing (50%)	Structural layout 50%Pass	Beam, Column and Slab Detailing 50%Pass	
Report (50%)			Design Report 50% pass

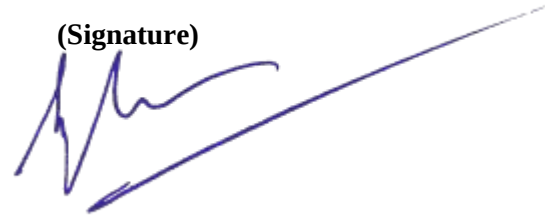
Note: %Pass: % students have scores greater than 50 out of 100.

5. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025

**Dean of School of Civil Engineering and
Management**

(Signature)

A handwritten signature in blue ink, consisting of stylized, overlapping loops and a long, sweeping horizontal stroke extending to the right.

Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Foundation Engineering Project

Course Code: CE402IU

1. General information

Course name	- (in English) <i>Foundation Engineering Project</i> - (in Vietnamese) <i>Đồ án Nền móng</i>
Course designation	This course provides an organizational and procedural understanding of geotechnical and foundation engineering. Topics covered in this course include subsurface soil investigation and integrated design of building foundations. In addition, this class will equip students with the knowledge necessary to apply geotechnical and foundation principles in analyzing and designing an economic substructure system.
Course type	☐ General knowledge Fundamental ☐ Specialized knowledge ☒ Internship/Project/Thesis ☐ Others: ☐
Semester(s) in which the course is taught	4
Person responsible for the course	Dr. Pham Nguyen Linh Khanh
Language	English
Relation to curriculum	☒ Compulsory Elective ☐

Teaching methods	Discussion and Projects												
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 67.5 hrs Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 28.5 hrs + 9 hrs Private study including examination preparation, specified in hours ¹ : 30 hrs												
Credit points	1 credits (Theory: 0 + Practice: 1) 2.45 ECTS (<i>optional</i>)												
Number of periods	Theory: 0 Practice: 15												
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name): CE309IU – Foundation Engineering - Corequisites: (Course code – Course name): None - Previous course (Course code – Course name): None												
Course objectives	The overall objectives of this course are to develop an understanding of foundation engineering design issues in a professional substructure design project that will merge knowledge gained in prerequisite geotechnical and foundation engineering courses. After this course, students will gain proficiency in structural conceptualization, induced load determination, modeling and analysis, detailed design of substructure, and graphical communication.												
Course learning outcomes	Upon the successful completion of this course students will be able to: <table><tr><th>Competency level</th><th>Course learning outcome (CLO)</th></tr><tr><td>Knowledge</td><td></td></tr><tr><td>Skill</td><td>CLO1. Analyze data from different in situ (field) tests (e.g., SPT, CPT) for use in foundation engineering. CLO2. Design a foundation system for a given superstructure CLO3. Generate structural drawings for construction</td></tr><tr><td>Attitude</td><td></td></tr></table>	Competency level	Course learning outcome (CLO)	Knowledge		Skill	CLO1. Analyze data from different in situ (field) tests (e.g., SPT, CPT) for use in foundation engineering. CLO2. Design a foundation system for a given superstructure CLO3. Generate structural drawings for construction	Attitude					
Competency level	Course learning outcome (CLO)												
Knowledge													
Skill	CLO1. Analyze data from different in situ (field) tests (e.g., SPT, CPT) for use in foundation engineering. CLO2. Design a foundation system for a given superstructure CLO3. Generate structural drawings for construction												
Attitude													
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Interpretation of the geotechnical report</td><td>1</td><td>T, U</td></tr><tr><td>Structural foundation calculation</td><td>2</td><td>T, U</td></tr><tr><td>Foundation structure drawings</td><td>2</td><td>T, U</td></tr></table>	Topic	Weight	Level	Interpretation of the geotechnical report	1	T, U	Structural foundation calculation	2	T, U	Foundation structure drawings	2	T, U
Topic	Weight	Level											
Interpretation of the geotechnical report	1	T, U											
Structural foundation calculation	2	T, U											
Foundation structure drawings	2	T, U											

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Examination forms	Report
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.
Reading list	<i>Textbooks:</i> [1] Das, B. M. (2015). <i>Principles of Foundation Engineering</i> (7 th Ed.). Cengage Learning. [2] Donald P. Coduto, <i>Foundation Design Principles and Practices</i> , 2nd, edition, Prentice Hall, 2001. [3] Joseph E. Bowles, <i>Foundation Analysis and Design</i> , 5th edition..

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

CLO	ILO										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1						x					
2		x				x				x	
3							x			x	

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Interpretation of geotechnical report	1	In-class exercise, report	Discussion	
2	Structural foundation calculation	2	In-class exercise, report	Discussion	
3-4	Foundation structure drawings	3	In-class exercise, report	Discussion	
5	Report	1, 2, 3	Report/ Presentation	Discussion	

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 2 components, including progress assessment and final presentation. The contribution of each component (in percentage) is shown in the table below.

Assessment Type	CLO1	CLO2	CLO3
Reports/ Presentation (100%)		Report/ Presentation (70% pass)	Report/ Presentation (70% pass)

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics: None

6. Date revised: May 25, 2025

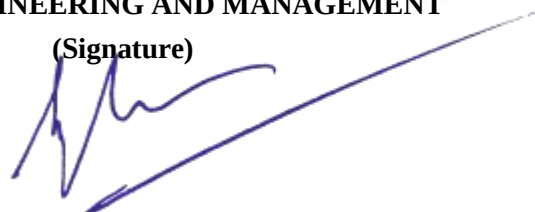
7. Course coordinator/Lecturer

- School of Civil Engineering and Management
- Email: pnlkhanh@hcmiu.edu.vn

Ho Chi Minh, May 25, 2025

**DEAN OF SCHOOL OF
CIVIL ENGINEERING AND MANAGEMENT**

(Signature)



Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Construction Project

Course Code: **CE403IU**

1. General information

Course name	CE311IU – Construction Project CE403IU – Đồ án kỹ thuật thi công
Course designation	In this course, students are supposed to apply the knowledge in the courses of construction engineering and construction management to this project composing of calculating loads for construction, designing formwork for column, slab and beam, safety measure, preparing the schedule of concrete frame construction (optional), and finally writing a report.
Course type	☐ General knowledge ☐ Fundamental ☐ Specialized knowledge ☒ Internship/Project/Thesis ☐ Others:
Semester(s) in which the module is taught	3
Person responsible for the module	Dr. Nguyen, Hoai Nghia
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, project, and defense.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 67.5 Contact hours (lecture, exercise, laboratory session, etc.): 37.5 Private study including examination preparation, specified in hours ¹ : 30
Credit points	1 credit (Theory: 00 + Practice: 01)

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

	2.45 ECTS																					
Number of periods	Theory: 00 Practice: 30																					
Required and recommended prerequisites for joining the module	- Prerequisites: - Corequisites: - Previous course: CE311IU - Construction Engineering																					
Module objectives/intended learning outcomes	Overall objectives Students who complete the course will be able to perform the following tasks: (1) Designing the construction formwork system for the concrete structure and the construction methodology. (2) Designing the construction methodology for the sub-structure, including: pressed piles, bored piles, pile caps (individually). (3) Performing the design in the calculation note, drawing, and defense.																					
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Project guidance</td><td>1</td><td>I</td></tr><tr><td>Structure dimensions Material characteristics Formwork layout arrangement</td><td>1</td><td>T, U</td></tr><tr><td>Load determination Slab formwork design</td><td>1</td><td>T, U</td></tr><tr><td>Load determination Beam forwork design</td><td>1</td><td>T, U</td></tr><tr><td>Load determination Column formwork design</td><td>1</td><td>T, U</td></tr><tr><td>Sub-structure methodology (individual assignment)</td><td>1</td><td>T, U</td></tr></table>	Topic	Weight	Level	Project guidance	1	I	Structure dimensions Material characteristics Formwork layout arrangement	1	T, U	Load determination Slab formwork design	1	T, U	Load determination Beam forwork design	1	T, U	Load determination Column formwork design	1	T, U	Sub-structure methodology (individual assignment)	1	T, U
Topic	Weight	Level																				
Project guidance	1	I																				
Structure dimensions Material characteristics Formwork layout arrangement	1	T, U																				
Load determination Slab formwork design	1	T, U																				
Load determination Beam forwork design	1	T, U																				
Load determination Column formwork design	1	T, U																				
Sub-structure methodology (individual assignment)	1	T, U																				

	Construction methodology and safety measure	1	T, U
Examination forms	Defense		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation, report, and defense. Examination: Students must have more than 50/100 points overall to pass this module.		
Reading list	Text book: [1] S. W. Nunnally, (2014). <i>Construction Methods and Management</i> , Pearson, 8 th edition. [2] R. L. Peurifoy, C. J. Schexnayder, R. L. Schmitt, and A. Shapira. (2018). <i>Construction Planning, Equipment, and Methods</i> , McGraw-Hill Education 9 th edition.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-3) and Program/Student Learning Outcomes (a-k) is shown in the following table:

- (1) CLO1: Designing the construction formwork system for the concrete structure and the construction methodology.
- (2) CLO2: Designing the construction methodology for the sub-structure, including: pressed piles, bored piles, pile caps (individually).
- (3) CLO3: Performing the design in the calculation note, drawing, and defense.

No.	Program Learning Outcome (ILO)										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
CLO1	x										x
CLO2	x										x
CLO3							x			x	x

Program Learning Outcome:

- (a) Understanding the physical world and using knowledge of mathematics and natural sciences to represent it in pursuing and establishing research by the use of quantitative and quantitative methods.
- (b) Understanding the fundamentals of the civil engineering field (e.g. construction geology, material science, construction physics, surveying, structural theory, technical design, construction informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction)
- (c) Ability to analyze and prepare investment projects and understand their economic, environmental, and social impacts
- (d) Awareness of professional and ethical responsibilities of a civil engineer

- (e) Ability to function as a member of a multidisciplinary team (including multi-national and mixed-gender teams) as well as having good knowledge of management and organization to be able to take on leadership roles
- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies emerge regularly as well as take part in developing new technologies by engaging in research works having the ability to interpret and use empirical datasets, integrate technical literature and databases to solve specific civil engineering problems or fill knowledge gaps.
- (g) Ability to communicate matters related to civil engineering to colleagues in the same profession or the general public, effectively using oral, written, and other forms of communication.
- (h) A broad education necessary to understand the impacts of civil engineering solutions in a global and social context
- (i) A broad understanding of contemporary issues in civil engineering in the national, regional, and global level
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and daily life situations

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Project guidance			Lecture	Lecture note
2	Structure dimensions Material characteristics Formwork layout arrangement	1,3	Attendance/ report	Project checking	[1] Chapter 13
3	Load determination Slab formwork design	1,3	Attendance/ report	Project checking	[1] Chapter 13
4	Load determination Beam formwork design	1,3	Attendance/ report	Project checking	[1] Chapter 13
5	Load determination Column formwork design	1,3	Attendance/ report	Project checking	[1] Chapter 13, 14
6	Sub-structure methodology (individual assignment)	2,3	Attendance/ report	Project checking	[1] Chapter 10
7	Construction methodology and safety measure	1,2,3	Attendance/ report	Project checking	[1] Chapter 11

	DEFENSE			Project defense	

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
Attendance (30%)			
Report – Calculation note (20%)	Slab. Beam , column formwork design 50%Pass	Sub-structure design 50%Pass	Calculation note performance 50% Pass
Report – Drawing (20%)	Design-based performance 50% pass	Design-based performance 50% pass	Standard compliance 50% pass
Defense (30%)	Questions related to design 50% pass	Questions related to design 50% pass	

Note: %Pass: % students have scores greater than 50 out of 100.

5. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025

School of Civil Engineering and
Management

(Signature)

Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: DYNAMICS OF STRUCTURES

Course Code: CE404IU

1. General information

Course name	- <i>Dynamics of Structures</i> - <i>Động lực học công trình</i>
Course designation	<i>This course covers the fundamental concepts of structural dynamics. Formulations of the equation of motion. Free and forced vibrations of linear, single, and multiple degrees of freedom systems. Damping. Mode superposition. Analysis of dynamic response for structures subjected to time-varying, including earthquake, wind, and blast loading.</i>
Course type	☐ <i>General knowledge</i> ☐ <i>Fundamental</i> ☒ <i>Specialized knowledge</i> ☐ <i>Internship/Project/Thesis</i> ☐ <i>Others:</i>
Semester(s) in which the course is taught	6
Person responsible for the course	<i>Phạm Nhân Hòa (Msc)</i>
Language	English
Relation to curriculum	Elective
Teaching methods	Lecture, presentation, discussion, and assignments

Workload (incl. contact hours, self-study hours)	Total workload: 127.5 (Estimated) Contact hours: - Lecture: 28.5 - Discussion: 9 Private study including examination preparation, specified in hours: 90	
Credit points	3 credits (Theory: 3Cr + Practice: 0)/4.64 ECTS	
Number of periods	Theory: 45 Practice: 0	
Required and recommended prerequisites for joining the course	Engineering Mechanics – Dynamics, Structural Analysis 2	
Parallel course	None	
Course objectives	The aim of this course is - to develop the fundamental concepts of structural dynamics. - to develop analytical and problem solving skills for free and forced vibrations of single and multiple degree of freedom structures under dynamic loading including earthquake, wind and blast loading.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Categories	Course learning outcome (CLO)/ Competency
	Knowledge	CLO1: Developing the fundamental concepts of structural dynamics. CLO2: Developing analytical and problem solving skills for free and forced vibrations of single and multiple degree of freedom structures under dynamic loading including earthquake, wind and blast loading.
	Skills	CLO3: Problem resolution. Systematically analyze the problem and apply the appropriate technique to solve the problem.
	Attitude	CLO4: Work independently and professionally

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>SINGLE DEGREE OF FREE DOOM</td><td></td><td></td></tr><tr><td>Overview</td><td>1</td><td>I,T,U</td></tr><tr><td>Analysis of free vibration</td><td>1</td><td>I,T,U</td></tr><tr><td>Reponse to harmonic loading</td><td>1</td><td>I,T,U</td></tr><tr><td>Response to periodic loading</td><td>1</td><td>I,T,U</td></tr><tr><td>Response to impulsive loading</td><td>1</td><td>I,T,U</td></tr><tr><td>MULTI-DEGREE OF FREE DOOM</td><td></td><td></td></tr><tr><td>Undamped free vibration</td><td>1</td><td>I,T,U</td></tr><tr><td>Dynamic analysis and response of linear systems</td><td>1</td><td>I,T,U</td></tr></table>			Topic	Weight	Level	SINGLE DEGREE OF FREE DOOM			Overview	1	I,T,U	Analysis of free vibration	1	I,T,U	Reponse to harmonic loading	1	I,T,U	Response to periodic loading	1	I,T,U	Response to impulsive loading	1	I,T,U	MULTI-DEGREE OF FREE DOOM			Undamped free vibration	1	I,T,U	Dynamic analysis and response of linear systems	1	I,T,U
Topic	Weight	Level																															
SINGLE DEGREE OF FREE DOOM																																	
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Examination forms	Constructed-response test																																
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have GPA more than 50/100 points overall to pass this course.																																
Reading list and Media employed	<u>Textbooks:</u> [1] R.W.Clough, J.Penzien, Dynamics of Structures, 3th edition, Computers & Structures Inc., 1995 [2] A. K. Chopra, Dynamics of Structures - Theory and Applications to Earthquake Engineering, 3th edition, Pearson Prentice Hall, 2007																																

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Intended Learning Outcomes (ILO) is shown in the following table:

	<i>ILO</i>										
<i>CLO</i>	1	2	3	4	5	6	7	8	9	10	11
1	x	x									
2	x	x									
3	x	x						x	x		
4						x					

3. Planned learning and assessment activities

Week	Topic	CLO	Assessments activities	Learning activities	Resources
1	Overview	1,2,3,4			[1] Chapter 1 [2] Chapter 1

2-3	Analysis of free vibration	1,2,3,4	Attendance Q&A Homework 1	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 2 [2] Chapter 2
4-5	Response to harmonic loading	1,2,3,4	Attendance Q&A Homework 2	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 3 [2] Chapter 3
6	Response to periodic loading	1,2,3,4	Attendance Q&A Homework 3	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 4 [2] Chapter 4
7-8	Response to impulsive loading Midterm Examination	1,2,3,4	Attendance Q&A Homework 4 Midterm Examination	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class Test	[1] Chapter 5 [2] Chapter 5
9-12	Undamped free vibration	1,2,3,4	Attendance Q&A Homework 5	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 6,7 [2] Chapter 6,7
13-15	Dynamic analysis and response of linear systems	1,2,3,4	Attendance Q&A Homework 6	Reading materials before class; Doing the lecture; Discussion; and doing Quiz in class	[1] Chapter 8 [2] Chapter 8
16-17	FINAL EXAMINATION		WRITING		

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3	CLO4
1	Progress Assessment (PA, 30%)				
1.1	Class attendance (25% of PA)			Attended 80%Pass	Attended 80%Pass
1.2	In-class activity: Discussion and doing Quizzes in class (25% of PA)			Participated in class Q&A 60%Pass	Participated in class Q&A 60%Pass
1.3	Homeworks (50% of PA)			HW1-6, Submitted 80%Pass	HW1-6, Submitted 80%Pass

2	Midterm exam (Mid, 20%)	Q1-4, 60%Pass	Q1-4, 60%Pass		
3	Final exam (Fin, 50%)	Q5-6, 60%Pass	Q5-6, 60%Pass		

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics (optional)

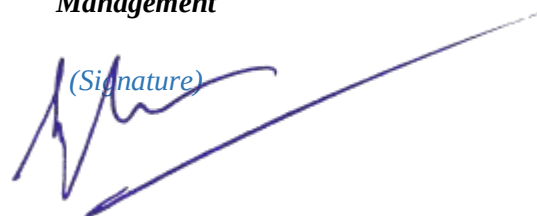
- No

6. Date revised: May 27, 2025

Ho Chi Minh City, 27/5/2025

***School of Civil Engineering and
Management***

(Signature)



PhD. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS
Course Name: Hydraulic structures
Course Code: **CE405IU**

1. General information

Course name	- (in English) <i>Hydraulic structures.</i> - (in Vietnamese) <i>Công trình thủy</i>
Course designation	Water demand for economic development is dramatically increasing; but available water resources is limited. Recently, it tends to be declining as the result of climate change and man-made pollutant. Therefore, a sustainable approach for water resources development and protection is needed. This course will offer students the knowledge to design of some typical hydraulic structures supporting for sustainable water resources engineering. In this course, the application of fluid mechanics, hydrology and open channel hydraulics for designing some common types of water infrastructures are introduced and practiced, which includes storage structures, control structures, energy dissipation structures, coastal protection structures and so forth. Beside of that conventional procedures, students also are provided the sustainable solutions and environmental impact assessment (EIA) practices for the typical structures, which strongly impact on society and natural environment, such as: dam, hydro-power plants, urban drainage systems, and so forth
Course type	☐ <i>General knowledge</i> <i>Fundamental</i> ☐ <i>Specialized knowledge</i> <i>Internship/Project/Thesis</i> ☒ <i>Others:</i> ☐ ☐
Semester(s) in which the course is taught	7,8
Person responsible for the course	A/Prof. Phạm Ngọc

Language	English								
Relation to curriculum	☐ Compulsory ☒ Elective								
Teaching methods	Lecture, homework, small project, seminar.								
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 75 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 45 hours Private study including examination preparation, specified in hours ¹ : 30								
Credit points	3 credits (Theory: 3 + Practice: 0) ECTS (<i>optional</i>)								
Number of periods	Theory: 15 Practice: 0								
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name): CE205IU (Fluid Mechanics), CE211IU (Hydrology and Hydraulic) - Corequisites: (Course code – Course name): - Previous course (Course code – Course name)								
Course objectives	- Students will be provided with technical procedures, and will be practiced to design sustainable hydraulic structures, targeting to sustainable water resources engineering and water related disaster prevention structures.								
Course learning outcomes	Upon the successful completion of this course students will be able to: <table border="1"> <thead> <tr> <th>Competency level</th><th>Course learning outcome (CLO)</th></tr> </thead> <tbody> <tr> <td>Knowledge</td><td> CLO1. Recognize and describe the different type of hydraulic structures together with their functions, and application conditions CLO2. Propose the structural measures for sustainable water resources development in a sustainable approach harmonizing technical, social, economic and environmental criteria CLO3. Design some common the hydraulic structures by integrating the fundamental knowledge and skills studied previously, and the concept of sustainable development </td></tr> <tr> <td>Skill</td><td>CLO4: Present skills in teamwork, communication, planning, critical thinking, use of English in technical environment, identification and solving the real problems</td></tr> <tr> <td>Attitude</td><td>CLO5:.....</td></tr> </tbody> </table>	Competency level	Course learning outcome (CLO)	Knowledge	CLO1. Recognize and describe the different type of hydraulic structures together with their functions, and application conditions CLO2. Propose the structural measures for sustainable water resources development in a sustainable approach harmonizing technical, social, economic and environmental criteria CLO3. Design some common the hydraulic structures by integrating the fundamental knowledge and skills studied previously, and the concept of sustainable development	Skill	CLO4: Present skills in teamwork, communication, planning, critical thinking, use of English in technical environment, identification and solving the real problems	Attitude	CLO5:.....
Competency level	Course learning outcome (CLO)								
Knowledge	CLO1. Recognize and describe the different type of hydraulic structures together with their functions, and application conditions CLO2. Propose the structural measures for sustainable water resources development in a sustainable approach harmonizing technical, social, economic and environmental criteria CLO3. Design some common the hydraulic structures by integrating the fundamental knowledge and skills studied previously, and the concept of sustainable development								
Skill	CLO4: Present skills in teamwork, communication, planning, critical thinking, use of English in technical environment, identification and solving the real problems								
Attitude	CLO5:.....								

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Introduction to hydraulic structures</td><td>1</td><td>I</td></tr><tr><td>Conceptually design the reservoirs</td><td>2</td><td>T, U</td></tr><tr><td>Conceptually design the dams</td><td>2</td><td>T, U</td></tr><tr><td>Conceptually design the spillways and dissipaters</td><td>2</td><td>T, U</td></tr><tr><td>Field trip to visit a multi purposed dam/reservoir or coastal defense project</td><td>1</td><td>I</td></tr><tr><td>Introduction to fish passage</td><td>2</td><td>I</td></tr><tr><td>Introduction to coastal engineering and management</td><td>2</td><td>I</td></tr><tr><td>Introduction to Environmental Impact Assessment (EIA)</td><td>2</td><td>T</td></tr><tr><td>Group project presentation</td><td>1</td><td>I, U</td></tr></table>	Topic	Weight	Level	Introduction to hydraulic structures	1	I	Conceptually design the reservoirs	2	T, U	Conceptually design the dams	2	T, U	Conceptually design the spillways and dissipaters	2	T, U	Field trip to visit a multi purposed dam/reservoir or coastal defense project	1	I	Introduction to fish passage	2	I	Introduction to coastal engineering and management	2	I	Introduction to Environmental Impact Assessment (EIA)	2	T	Group project presentation	1	I, U
Topic	Weight	Level																													
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Conceptually design the dams	2	T, U																													
Conceptually design the spillways and dissipaters	2	T, U																													
Field trip to visit a multi purposed dam/reservoir or coastal defense project	1	I																													
Introduction to fish passage	2	I																													
Introduction to coastal engineering and management	2	I																													
Introduction to Environmental Impact Assessment (EIA)	2	T																													
Group project presentation	1	I, U																													
Examination forms	Written examinations: Midterm and Final Exams Type: Identify and solve problems, discussions																														
Study and examination requirements	Attendance: Students are expected to attend the lectures every week. University regulations indicate that if students attend less than 80% of scheduled classes they may be refused final assessment. Computation exercises, quizzes (written or oral), home works, and reports: are given regularly, whether individually or done by group, for the students to achieve CLOs. Examinations: A midterm exam will be given halfway through the semester and a final exam at the end. Students must have an overall score of at least 50/100 points to pass this course.																														
Reading list	<u>Textbooks:</u> [1] Novak P., Moffat A.I.B., Nalluri C, and Narayanan, Hydraulic structures (4th Edition), Taylor & Francis Group. 2007. <u>Additional references:</u> [2] Larry W. Mays, Hydraulic design handbook, MacGraw - Hill Companies, 2004 [3] Khatsuria R.M, Hydraulic of spillways and energy dissipaters. Marcel Dekker, 2005. [4] QCVN 04-05: 2012/BNNPTNT “Quy chuẩn kỹ thuật quốc gia công trình thủy lợi – các quy định chủ yếu về thiết kế ” [5] Tiêu chuẩn ngành 14TCN157-2005 “Tiêu chuẩn thiết kế đập đất đầm nén” [6] Bộ Nông nghiệp và Phát triển Nông thôn. “Tiêu chuẩn kỹ thuật thiết kế đê biển”. 2012																														

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

CLO	PLO										
	a	b	c	d	e	f	g	h	i	j	k
1		x									x
2		x							x		x
3		x					x			x	x
4											x

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

Week	Topic	CLO	Learning activities	Assessments activities	Resources
1	Introduction to hydraulic structures	1	Lecture, Discussion, In class-Quiz	Quiz1	[1] [4]
2-3	Conceptually design the reservoirs	1,2,3	Lecture, Discussion In class-Quiz, HW	Quiz2 HW1	[1] [4]
4-5	Conceptually design the dams	1,2,3	Lecture, Discussion In class-Quiz, HW	Quiz3 HW2	[1] [5]
6-8	Conceptually design the spillways and dissipaters Midterm exam	1,2,3	Lecture, Discussion In class-Quiz, HW Midterm exam	Quiz4 HW3 Test	[1] [3]
9	Field trip to visit a multi purposed dam/reservoir or coastal defense project	1,4	Teamwork	Group report	
10	Introduction to fish passage	1	Lecture, Discussion In class-Quiz	Quiz5	[1] [2]
11-12	Introduction to coastal engineering and management	1	Lecture, Discussion In class-Quiz	Quiz6	[1] [2] [6]
13-14	Introduction to Environmental Impact Assessment (EIA)	2,3	Lecture, Discussion In class-Quiz	Quiz7	[1] [2] [6]
15	Group project presentation	3,4	Self-study, Discussion, presentation	Group project report	
	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
Class participation/In-class activities/quizzes (10%)	Qz(1-6) 50%Pass	Qz(2-4) 50%Pass	Qz(2-4) 50%Pass	
Homework exercises (5%)		HW(1-3) 60%Pass	HW(1-3) 60%Pass	
Field trip (5%)	Group report 80% pass			Group report 80% pass
Group project report and presentation (10%)		Group report 80% pass	Group report 80% pass	Class presentation 80% pass
Midterm exam (30%)	Q1, 60%Pass	Q2-4 60%Pass	Q2-4 60%Pass	
Final exam (40%)	Q1, 60%Pass	Q2-4 60%Pass	Q2- 60%Pass	

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics

- No

6. Date revised: May 27, 2025

7. Course coordinator/Lecturer

- School of Civil Engineering and Management
- Email: pngoc@hcmiu.edu.vn

Ho Chi Minh City, May 27, 2025

DEAN OF SCHOOL

(Signature)



Dr. Nguyễn Hoài Nghĩa



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Tall Buildings

Course Code: **CE407IU**

1. General information

Course name	- <i>(in English) Tall Buildings</i> - <i>(in Vietnamese) Nhà cao tầng</i>
Module designation	CE407IU – Tall Buildings The course aims at the development of ability for design of high-rise buildings. It offers the student with an opportunity to gain real life design experience, and to develop the ability to identify and solve civil engineering problems in a feasible and creative way, and to apply design procedures, codes of practice and computer software to design conventional steel and concrete high-rise buildings
Course type	☐ General knowledge ☐ Fundamental ☒ Specialized knowledge ☐ Internship/Project/Thesis ☐ Others:
Semester(s) in which the module is taught	3
Person responsible for the module	Assoc. Prof. Cao Thanh Ngoc Tran and Dr. Nguyen Linh Khanh Pham
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture and assignments.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (lecture, exercise, laboratory session, etc.): 37.5

	Private study including examination preparation, specified in hours ¹ : 90																											
Credit points	3 credits (Theory: 3 + Practice: 0) 4.64 ECTS (optional)																											
Number of periods	Theory: 45 Practice: 0																											
Required and recommended prerequisites for joining the module	Reinforced Concrete 2 – CE310IU Foundation Engineering – CE309IU Foundation Project – CE402IU																											
Module objectives/intended learning outcomes	Overall objectives are to equip CE students with knowledge about the design of high-rise buildings. Students who complete the course will be able to perform the following tasks: (1) Identify and calculate lateral loadings to superstructures of tall buildings. (2) Calculate the lateral loading to each structural member. (3) Conduct basic calculations on various foundation designs and supporting structures																											
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Introduction</td><td>1</td><td>I</td></tr><tr><td>Wind Loadings</td><td>3</td><td>T, U</td></tr><tr><td>Earthquake Loadings</td><td>2</td><td>T, U</td></tr><tr><td>Lateral resistance systems</td><td>2</td><td>T, U</td></tr><tr><td>Sheet pile wall</td><td>1</td><td>T</td></tr><tr><td>Braced cut</td><td>1</td><td>T</td></tr><tr><td>Foundation design</td><td>2</td><td>T, U</td></tr><tr><td>Foundation failure and Repair: Residential and Light Commercial Buildings</td><td>2</td><td>T</td></tr></table>	Topic	Weight	Level	Introduction	1	I	Wind Loadings	3	T, U	Earthquake Loadings	2	T, U	Lateral resistance systems	2	T, U	Sheet pile wall	1	T	Braced cut	1	T	Foundation design	2	T, U	Foundation failure and Repair: Residential and Light Commercial Buildings	2	T
Topic	Weight	Level																										
Introduction	1	I																										
Wind Loadings	3	T, U																										
Earthquake Loadings	2	T, U																										
Lateral resistance systems	2	T, U																										
Sheet pile wall	1	T																										
Braced cut	1	T																										
Foundation design	2	T, U																										
Foundation failure and Repair: Residential and Light Commercial Buildings	2	T																										

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

	Foundation failure and Repair: High rise and heavy construction	2	T
Examination forms	Constructed-response test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.		
Reading list	Text book: [1] Taranath, B.S. 2012, Reinforced Concrete Design of Tall Buildings, CRC Press, Boca Raton, FL. [2] Das, B. M. (2015). Principles of Foundation Engineering (7th ed.). Cengage Learning [3] Brown, R. W. (2001). Practical foundation engineering handbook. McGraw-Hill Education		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-3) and Program Intended Learning Outcomes (a-k) is shown in the following table:

- (1) CLO1: Identify and calculate lateral loadings to superstructures of tall buildings
- (2) CLO2: Calculate the lateral loading to each structural member.
- (3) CLO3: Conduct basic calculations on various foundation designs and supporting structures

No.	Program Intended Learning Outcome (ILO)										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
CLO1	x	x									x
CLO2		x								x	x
CLO3		x								x	x

Program Learning Outcome:

- (a) Understanding the physical world and using knowledge of mathematics along with natural science to represent and pursue research and establish and interpret empirical data sets by the use of quantitative and quantitative methods
- (b) Understanding of fundamentals of civil engineering field (e.g., construction geology, material science, construction physics, surveying, structural theory, technical design, construction informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction), and ability to utilize both classical and modern research methods to identify, interpret and integrate technical literature and database
- (c) Ability to analyze and prepare investment projects and understand the economic, environmental, and social impact of engineering solutions

- (d) Awareness of professional and ethical responsibilities of a civil engineer
- (e) Ability to function as a member of a multidisciplinary team (including international and mixed gender members) as well as having good knowledge of management and organization to perform projects to grow into an appropriate and responsible leadership role
- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies appear regularly
- (g) Ability to communicate on content and problems of civil engineering with both professional colleagues and individuals of a wider public in foreign languages and intercultural relations efficiently, including oral, written, and others
- (h) A broad education is necessary to understand the impact of engineering solutions in a global and social context, taking into account sustainability, environmental, ecological, and economic aspects
- (i) Understanding of contemporary issues of national, regional, and the world with a broad vision
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and day-life situations.

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction	1	Quiz 1	Lecture, Discussion	[1] Chapter 1
2, 3, 4	Wind Loadings - Static wind loadings - Dynamic wind loadings	1	Quiz 1	Lecture, Discussion	[1] Chapter 4
5,6	Earthquake Loadings: - Linear SDF systems - Inelastic SDF systems - MDF systems - Design Codes	1	Quiz 1	Lecture, Discussion	[1] Chapter 5
7-9	Lateral resistance systems; Midterm exam	2	Quiz 1; Midterm exam	Lecture, Discussion, Test	[1] Chapter 3
10-12	Sheet pile wall	3	Quiz 2	Lecture, Discussion	[2] Chapter 9
13, 14	Braced Cut	3	Quiz 2	Lecture, Discussion	[2] Chapter 10

15	Foundation design (Focus on structural designs)	3	In-class exercise	Lecture, Discussion	[2] Chapter 5& 11
16, 17	Foundation failure and Repair	3	Presentation	Lecture, Discussion	[3] Chapter 2&3
18-19	FINAL EXAM				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
In-class exercises/quizzes/attendance (30%)	Quiz 1 60%Pass		Quiz 2 60%Pass
Midterm exam (20%)		50%Pass	
Final exam (50%)			50%Pass

Note: %Pass: % students have scores greater than 50 out of 100.

5. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025

Dean of School of Civil Engineering and
Management

Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Bridge Engineering

Course Code: CE406IU

1. General information

Course name	- (in English) Bridge Engineering - (in Vietnamese) Thiết kế cầu
Course designation	The course will introduce a modern method of highway bridge analysis, design, and evaluation based on TCVN 11823:2017 that is referred by on American Association of State Highway and Transportation Officials LRFD Bridge Design Specification, 8th edition 2017. Course topics will include types of bridges, site design overview, Highway bridge loading, bridge analysis, bridge deck slab, prestressed concrete bridge design, and substructures design.
Course type	☐ General knowledge Fundamental ☐ ☒ Specialized knowledge Internship/Project/Thesis Others: ☐ ☐
Semester(s) in which the course is taught	8
Person responsible for the course	Dr. Pham Nguyen Linh Khanh
Language	English
Relation to curriculum	☒ Compulsory Elective ☐
Teaching methods	Lecture, lesson, homework, discussion

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 hrs Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 28.5 hrs + 9 hrs Private study including examination preparation, specified in hours ¹ : 90 hrs	
Credit points	3 credits (Theory: 3 + Practice: 0) 4.64 ECTS (<i>optional</i>)	
Number of periods	Theory: 45 Practice: 0	
Required and recommended prerequisites for joining the course	- Prerequisites: (Course code – Course name): CE210IU – Construction Material, CE304IU-Reinforced concrete 1, CE310IU-Reinforced concrete 2 - Corequisites: (Course code – Course name): None - Previous course (Course code – Course name): None	
Course objectives	The course will help the students to develop an understanding of an appreciation for basic concepts in proportioning and design of bridges in terms of aesthetics, geographical location, and functionality. It also helps the student develop an intuitive feeling about the sizing of bridge elements, i.e. developing a clear understanding of conceptual design. The students will understand the load flow mechanism and identify loads on bridges and carry out a design of bridge starting from conceptual design, selecting suitable bridge, geometry to sizing of its elements.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Understand basic definitions and design loads acting on bridge structures CLO2. Determine moment and shear forces at design states acting on any sections caused by design loads.
	Skills	CLO3. Design component structures of concrete bridges.
	Attitude	CLO4. Be aware of design in the economy, technology, and architecture.

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (2 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introduction to bridge engineering, historical perspective, bridge types and span length, selection of site	2	I, T
	Introduction to cross-section: Geometric design, hydraulics scour, clearance	2	I, T, U
	Bridge loads, load combinations and dynamics, design lanes	2	I, T, U
	Influence lines for statically determinate structures, and Distribution factors	2	I, T, U
	AASHTO prestressed girder design criteria for moment: ● Prestressed losses ● Steel and concrete stress limits ● Ultimate strength	3	I, T, U
	Prestressed concrete girder design criteria for shear	2	I, T, U
1. Bridge substructure – pier ● Abutment types ● Loading ● Load combinations	1	I, T, U	
	2. Bridge substructure –abutment ● Abutment types ● Loading ● Load combinations	1	I, T, U
Examination forms		Written examination: Mid-term and Final examinations	
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.		

Reading list	<u>Textbooks:</u> [1] American Association of State Highway and Transportation Officials <i>LRFD Bridge Design Specification</i>, 8th edition 2017. [2] TCVN 11823-1:2017: Highway Bridge Design Specification, 2017 <u>Additional references:</u> [3] Ed. Wai-Fah Chen and Lian Duan, <i>Bridge Engineering Handbook</i>, Boca Raton: CRC Press, 2000 [4] Ed. Wai-Fah Chen and Lian Duan, <i>Bridge Engineering, Substructure design</i>, 2003 by Taylor & Francis Group

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

	ILO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1										x	
2									x		
3										x	
4								x			

**Use Bloom's Taxonomy*

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments activities	Learning activities	Resources
1-2	- Introduction to bridge engineering, historical perspective, bridge types and span length, selection of site	1, 4	Attendance Q&A	Reading materials before class; Doing the lecture; Discussion;	[1] [2]
3-4	- Introduction to cross-section: Geometric design, hydraulics scour, clearance	1, 4	Attendance Q&A Homework 1	Reading materials before class; Doing the lecture; Discussion; and doing Quiz 1 in class	[1] [2]
5-6	- Bridge loads, load combinations and dynamics, design lanes	2, 4	Attendance Q&A Homework 2	Reading materials before class; Doing the lecture; Discussion; and doing Quiz 2 in class	[1] [2]
7-8	- Influence lines for statically determinate structures, and Distribution factors Midterm Examination	2, 4	Attendance Q&A Homework 3 Midterm Examination	Reading materials before class; Doing the lecture; Discussion; and doing Quiz 3 in class, Test	[1] [2]
9-11	AASHTO prestressed girder design criteria for moment: - Prestressed losses - Steel and concrete	3, 4	Attendance Q&A Homework 4	Reading materials before class; Doing the lecture; Discussion; and doing Quiz 4&5 in	[1] [2]

	stress limits - Ultimate strength			class	
12-3	- Prestressed concrete girder design criteria for shear	3, 4	Attendance Q&A Homework 5	Reading materials before class; Doing the lecture; Discussion; and doing Quiz 6 in class	[1] [2]
14	3. Bridge substructure – pier • Pier types • Loading • Load combinations	3, 4	Attendance Q&A Homework 6	Reading materials before class; Doing the lecture; Discussion;	[1] [2]
15	4. Bridge substructure – abutment • Abutment types • Loading • Load combinations	3, 4	Attendance Q&A	Reading materials before class; Doing the lecture; Discussion;	[1] [2]
	Final examination		Writing		

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 2 components, including progress assessment and final presentation. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3	CLO4
1	Progress assessment (PA, 30%)				
1.1	Class attendance (50% of PA)				Attended 80%Pass
1.2	In-class activity: Discussion and doing Quizzes in class (25% of PA)				Participate d In-class Q&A 60%Pass
1.3	Homework (25% of PA)				HW1-4, Submitted 80%Pass
2	Midterm exam (Mid, 30%)	Q1,2 60%Pass	Q1,2 60%Pass	Q3 60%Pass	Q1,2,3 60%Pass
3	Final exam (Fin, 40%)		Q1,2 60%Pass	Q1 70%Pass	Q1,2 70%Pass

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics: None

6. Date revised: May 27, 2025

7. Course coordinator/Lecturer

- School of Civil Engineering and Management
- Email: pnlkhanh@hcmiu.edu.vn

Ho Chi Minh, May 27, 2025

**DEAN OF SCHOOL OF
CIVIL ENGINEERING AND MANAGEMENT**

(Signature)

A handwritten signature in blue ink, consisting of stylized, overlapping loops and a long horizontal stroke extending to the right.

Nguyen Hoai Nghia



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Building Information Management

Course Code: CM310IU

1. General information

Course name	- (in English): Building Information Management - (in Vietnamese): Hệ thống quản lý thông tin công trình
Course designation	Face to Face
Course type	☐ General knowledge Fundamental ☒ Specialized knowledge Internship/Project/Thesis ☐ Others:..... ☐ ☐
Semester(s) in which the course is taught	Semester V and/or Semester VI
Person responsible for the course	Dr Nguyễn Văn Tiếp Dr Nguyễn Bá Quang Vinh Dr Phạm Thanh Tùng Dr Trần Thanh Hà
Language	English
Relation to curriculum	Compulsory

Teaching methods	Student-centred approach	
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 150 hours Contact hours (lecture, in class discussions): 45 hours Private study including examination preparation, specified in hours ¹ : 105	
Credit points	03 credits (Theory: 03 + Practice: 00) 4.64 ECTS	
Number of periods	Theory: 45 Practice: 00	
Required and recommended prerequisites for joining the course	N/A	
Course objectives	The aim of the course is to provide students with the insight of Building Information Modeling and its development. The applications of BIM in different partnerships of construction industry are also provided.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Have sufficient knowledge regarding BIM fundamentals and its historical development stages CLO2. Have acquired well-founded knowledge regarding applications of BIM with the involvements of stakeholders including owners, architects, engineers, contractors, subcontractors, and fabricators
	Skills	CL03. conduct construction management research, analyze and interpret BIM data, and use engineering judgments to draw conclusions

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	The course will provide students with knowledge in terms of characteristics of Building Information Modeling and its application in construction industry.
Examination forms	Quiz Presentation Multiple choice questions Case-based exams

Study and examination requirements	Requirements for successfully passing the module:																
	To pass this course, the students must:																
	• Achieve a composite mark of at least 50; and • Make a satisfactory attempt at all process assessment tasks.																
	GRADING POLICY																
	Grades can be based on the following:																
	<table><tr><th>Assessment Component</th><th>Assessment form</th><th>Percentage %</th></tr><tr><td rowspan="3">A1. Process assessment</td><td>A1.1 Quiz</td><td>10</td></tr><tr><td>A1.2 Presentation</td><td>10</td></tr><tr><td>A1.3 Attendance</td><td>10</td></tr><tr><td>A2. Midterm assessment</td><td>A2.1 Mid-term exam</td><td>20</td></tr><tr><td>A3. Final assessment</td><td>A3.1 Final exam</td><td>50</td></tr></table>	Assessment Component	Assessment form	Percentage %	A1. Process assessment	A1.1 Quiz	10	A1.2 Presentation	10	A1.3 Attendance	10	A2. Midterm assessment	A2.1 Mid-term exam	20	A3. Final assessment	A3.1 Final exam	50
	Assessment Component	Assessment form	Percentage %														
	A1. Process assessment	A1.1 Quiz	10														
		A1.2 Presentation	10														
		A1.3 Attendance	10														
A2. Midterm assessment	A2.1 Mid-term exam	20															
A3. Final assessment	A3.1 Final exam	50															
COURSE POLICIES																	
Attendance																	
Regular and punctual attendance at lectures and seminars is expected in this course. University regulations indicate that if students attend less than eighty percent of scheduled classes, they may be refused final assessment. Exemptions may only be made on eligible medical grounds.																	
Workload																	
It is expected that the students will spend at least <i>six</i> hours per week studying this course. This time should be made up of reading, research, working on exercises and problems, and attending classes. In periods where they need to complete assignments or prepare for examinations, the workload may be greater.																	
Over-commitment has been a cause of failure for many students. They should take the required workload into account when planning how to balance study with part-time jobs and other activities.																	
General Conduct and Behaviour																	
The students are expected to conduct themselves with consideration and respect for the needs of fellow students and teaching staff. Conduct which unduly disrupts or interferes with a class, such as ringing or talking on mobile phones, is not acceptable and students will be asked to leave the class. The use of laptops is also encouraged during law lessons only to search for materials online. More information on student conduct is available on the university webpage .																	
Keeping informed																	
The students should take note of all announcements made in lectures or on the course’s Blackboard, and another announced mean of communications. From time to time, the university will send important announcements to their university e-mail addresses without providing a																	

	paper copy. The students will be deemed to have received this information. Academic honesty and plagiarism Plagiarism is the presentation of the thoughts or work of another as one's own. Students are also reminded that careful time management is an important part of the study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and the proper referencing of sources in preparing all assessment items. The university regards plagiarism as a form of academic misconduct and has very strict rules regarding plagiarism. Special consideration Requests for special consideration (for final examination only) must be made to the Office of Academic Affairs within one week after the examination. General policy and information on special consideration can be found at the Office of Academic Affairs. Absence on the Mid-term is not allowed, or in special cases approved by Lecturer can be replaced with relevant Assignment. Meeting up with the lecturers after classes Students must make an appointment via emails if they want to meet up with the lecturer after classes and be on time. If there are any changes to the scheduled time, students must inform the lecturer immediately.
Reading list	Textbooks: 1. Eastman, C., Teicholz, P., Sacks, R., and Liston, K. (2011). A guide to Building Information Modeling for Owners, Managers, Designers, Engineers, and Contractors, 2nd ed. New Jersey: John Wiley & Sons. 2. Holzer, D. (2015). The BIM Manager's Handbook: Guidance for professionals in architecture, engineering, and construction. West Sussex: John Wiley & Sons. 3. BIM Handbook: A Guide to Building Information Modeling for Owners, Designers, Engineers, Contractors, and Facility Managers. Rafael Sacks, Chuck Eastman, Ghang Lee, Paul Teicholz. 2018. 3rd edition. Wiley. 978-1119287537. References: 1. Dzambazova, T, Krygiel, E., and Demchak, G. (2009). Introducing Revit Architecture 2010 – BIM for beginners. New Jersey: John Wiley & Sons.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-3) and Program/Student Learning Outcomes (SLO) (1 -10) is shown in the following table:

	SLO									
CLO	a	b	c	d	e	f	g	h	i	j
1			x		x					

2			x		x					
3					x					x

3. Planned learning activities and teaching methods

Week	Topics	Learning Outcome	Assessment	Teaching and learning activities	Resources
1-2	BIM introduction Introduction BIM: New Tools and New Processes What Is Not BIM Technology? What Are the Benefits of BIM? What Challenges Can Be Expected?	CL01		Lecture Class discussion	Lecture Room
3-5	BIM tools and parametric modeling The Evolution to Object-Based Parametric Modeling Parametric Modeling of Buildings Beyond Parametric Shapes BIM Environments, Platforms, and Tools Overview of the Major BIM Design Platforms BIM Platforms BIM model development steps	CL01, CL02	Quiz	Lecture Class discussion	Lecture Room
6-7	BIM for owners and facility managers BIM Application Areas for Owners BIM Tool Guide for Owners An Owner and Facility Manager's Building Model Leading the BIM Implementation on a Project	CL02, CL03	Quiz	Lecture Class discussion	Lecture Room
8-9	BIM for contractors BIM Processes to Develop a Contractor Building Information Model Reduction of Design Errors Using Clash Detection Quantity Takeoff and Cost Estimating	CL02, CL03	Quiz Presentation	Lecture Class discussion	Lecture Room

Week	Topics	Learning Outcome	Assessment	Teaching and learning activities	Resources
	Construction Analysis and Planning Integration with Cost and Schedule Control and Other Management Functions Practice of BIM for contractors Midterm exam		Midterm exam	Test	
10-14	BIM for architects and engineers Scope of Design Services BIM Use in Design Processes Building Object Models and Libraries Practice of BIM for architecture, structure, M&E	CL02, CL03	Quiz Presentation	Lecture Class discussion	Lecture Room
15	Related Vietnamese laws and regulations Reviews		Quiz	Lecture Class discussion	

4. Assessment plan

Assessment Type	CLO1	CLO2	CL03
In class evaluation (30%)	50% pass	50% pass	50% pass
Midterm examination (20%)	50% pass	50% pass	50% pass
Final examination (50%)	50% pass	50% pass	50% pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

N/A

6. Date revised: June 12, 2025

Ho Chi Minh City, June 12, 2025
School of Civil Engineering and Management

Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

**Course Name: ADVANCED ARTIFICIAL INTELLIGENCE IN CIVIL
ENGINEERING AND CONSTRUCTION MANAGEMENT**

Course Code: CE412IU

1. General information

Course name	- <i>ADVANCED ARTIFICIAL INTELLIGENCE IN CIVIL ENGINEERING AND CONSTRUCTION MANAGEMENT</i> - <i>TRÍ TUỆ NHÂN TẠO NÂNG CAO TRONG KỸ THUẬT VÀ QUẢN LÝ XÂY DỰNG</i>
Course designation	<i>The objective of this course is to provide the students with the advanced information of machine learning (ML) and analysis tools with their applications in civil engineering (CE) and construction management (CM). The course will emphasize on 1) traditional supervised algorithms such as support vector machines, 2) ensemble machine learning algorithms including bagging and boosting, 3) deep learning algorithms such as convolution neural networks, 4) fundamentals of tools used to handle large-scale data, and 5) tools used to handle ML algorithms. Fundamentals of these algorithms and tools and their applications in different problems related to CE and CM will be covered along with a course project.</i>
Course type	☐ General knowledge <i>Fundamental</i> ☐ ☒ Specialized knowledge <i>Internship/Project/Thesis</i> <i>Others:</i> ☐ ☐
Semester(s) in which the course is taught	

Person responsible for the course	<i>Nguyễn Bá Quang Vinh (PhD)</i>
Language	English
Relation to curriculum	Elective
Teaching methods	Lecture, presentation, discussion, and assignments
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 37.5 Private study including examination preparation, specified in hours ¹ : 90
Credit points	3 credits/ 4.64 ECTS
Number of periods	Theory: 45 Practice: 0
Required and recommended prerequisites for joining the course	Calculus, Mechanics of Material 1, Artificial Intelligence In Civil Engineering And Construction Management
Course objectives	The aim of this course is to - Recognizing problems in CE and CM that AI can be applied. - Have the ability to formulate the problems. - Analyzing and solving the problems using AI tools. - Conducting case study to utilize AI for solving practical problems in CE or CM. - Evaluating the impacts and limitations of different schemes

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1. an ability to understand the basic concepts in the field.	
		CLO2. an ability to apply mathematics and AI tools to solve CE and CM problems	
	Skill	CLO3. an ability to design and conduct experiments, to analyze and interpret CE and CM data, as well as to clean data to apply AI.	
CLO4. an ability to identify, formulate, and solve CE or CM problems by means of ML.			
Attitude	CLO5. Work independently and professionally.		
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introduction	1	I
	Representations, measurements, data types	1	T, U
	Traditional supervised algorithms ML	2	T, U
	Ensemble learning	3	T, U
	Deep learning	4	T, U
	Case studies	1	T, U
Course project	3	T, U	
Examination forms	Constructed-response test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged.		
	Assignments/Examination: Students must have GPA more than 50/100 points overall to pass this course.		

Reading list	<u>Textbooks:</u> [1] Deep Learning, Ian Goodfellow, Yoshua Bengio, and Aaron Courville, The MIT Press, 2016 (free online: http://www.deeplearningbook.org/) [2] Hands-on Machine Learning with Scikit-Learn & Tensorflow, Aurelien Geron, O'Reilly, 2017. <u>Additional references:</u> [1] ☐ Hands-on Machine Learning with Scikit-Learn & Tensorflow, Aurelien Geron, O'Reilly, 2017.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-5) and Program Intended Learning Outcomes (ILO) (a-k) is shown in the following table:

	ILO										
CLO	a	b	c	d	e	f	g	h	i	j	k
1		x									
2		x	x								
3				x	x						
4			x	x	x						
5						x	x				

Program Intended Learning Outcome:

- Understanding the physical world and using knowledge of mathematics and natural sciences to represent it in pursuing and establishing research by the use of quantitative and quantitative methods.
- Understanding the fundamentals of the civil engineering field (e.g., construction geology, material science, construction physics, surveying, structural theory, technical design, construction informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction)
- Ability to analyze and prepare investment projects and understand their economic, environmental, and social impacts
- Awareness of professional and ethical responsibilities of a civil engineer; ability to make rational decisions based on an ethical argumentation, think critically in order to find innovative and effective solutions for interdivision aqualitative and quantitative problems.
- Ability to function as a member of a multidisciplinary team (including multi-national and mixed-gender teams) as well as having good knowledge of management and organization to be able to take on leadership roles
- Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies emerge regularly, as well as take part in developing new technologies by engaging in research works having the ability to interpret and use empirical datasets, integrate technical literature and databases to solve specific civil engineering problems or fill knowledge gaps.
- Ability to communicate matters related to civil engineering to colleagues in the same profession or the general public, effectively using oral, written, and other forms of communication.
- A broad education necessary to understand the impacts of civil engineering solutions in a global and social context
- A broad understanding of contemporary issues in civil engineering in the national, regional,

and global level

- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and daily life situations.

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction: ML in modern CE and CM, Real-world application examples. Recapitulation of linear algebra required for ML	1,2,3,4, 5	Attendance Q&A Homework 1	Reading materials before class; Attending the lecture; Discussion;	
2	Representations, measurements, data types: Tools for data exploratory analysis and correlation analysis	1,2,3,4, 5	Attendance Q&A Homework 2	Reading materials before class; Attending the lecture; Discussion;	
3	Traditional supervised algorithms ML: Concept and implement in Python: - Linear Regression - Logistic regression,	1,2,3,4, 5	Attendance Q&A Homework 3	Reading materials before class; Attending the lecture; Discussion;	
4	Traditional supervised algorithms ML (cont.): Concept and implement in Python: - Support vector machine, - Decision tree	1,2,3,4, 5	Attendance Q&A Homework 4	Reading materials before class; Attending the lecture; Discussion;	
5	Ensemble learning: Concept and implement in Python of bagging model	1,2,3,4, 5	Attendance Q&A Homework 5	Reading materials before class; Attending the lecture; Discussion;	
6	Ensemble learning (cont.): Concept and implement in Python of boosting model	1,2,3,4, 5	Attendance Q&A Homework 6	Reading materials before class; Attending the lecture; Discussion;	

7	Ensemble learning (cont.): Concept and implement in Python of typical Ensemble Learning models	1,2,3,4,5	Attendance Q&A Homework 7	Reading materials before class; Attending the lecture; Discussion;	
8-9	Deep learning: Concept and implement in Python of simple Artificial Neural Networks Midterm exam	1,2,3,4,5	Attendance Q&A Homework 8, Midterm exam	Reading materials before class; Attending the lecture; Discussion; Test	
10- 11	Deep learning (cont.): Concept and implement in Python of Multi-Layer Perceptron Neural Networks	1,2,3,4,5	Attendance Q&A Homework 11	Reading materials before class; Attending the lecture; Discussion;	
12	Deep learning (cont.): Concept and implement in Python of Convolutional Neural Networks	1,2,3,4,5	Attendance Q&A Homework 12	Reading materials before class; Attending the lecture; Discussion;	
13	Deep learning (cont.): Concept and implement in Python of Recurrent Neural Networks	1,2,3,4,5	Attendance Q&A Homework 13	Reading materials before class; Attending the lecture; Discussion;	
14	Case studies: Invited speaker for new application of ML and DL	1,2,3,4,5	Attendance Q&A Homework 14	Reading materials before class; Attending the lecture; Discussion;	
15	Course project	1,2,3,4,5	Attendance Q&A Presentation	Reading materials before class; Attending the lecture; Discussion;	
16	Course project (cont.)	1,2,3,4,5	Attendance Q&A Presentation	Reading materials before class; Attending the lecture; Discussion;	

17	Course project (cont.)	1,2,3,4, 5	Attendance Q&A Presentation		
18	Final exam		Writing		

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3	CLO4	CLO5
1	Progress Assessment (PA, 40%)					
1.1	Class attendance (25% of PA)					Attended 80%Pass
1.2	In-class activity: Discussion and doing Quizzes in class (25% of PA)					Participated in class Q&A 60%Pass
1.3	Homeworks (50% of PA)			HW1-14, Submitted 80%Pass	HW1-14, Submitted 80%Pass	HW1-14, Submitted 80%Pass
2	Midterm exam (Mid, 30%)	Q1-5, 60%Pass	Q1-5, 60%Pass		Q1-5, 60%Pass	
3	Final exam (Fin, 30%)	Q1-5, 60%Pass	Q1-5, 60%Pass		Q1-5, 60%Pass	

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Date revised: May 25, 2025

Ho Chi Minh City, May 25, 2025
Dean of School



Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: GIS Applications in Civil Engineering

Course Code: CE413IU

1. General information

Course name	GIS Applications in Civil Engineering Ứng dụng GIS trong Xây dựng dân dụng
Course designation	CE413IU is a practical GIS course with particular reference to applications in Civil Engineering. This course does not require prior knowledge of GIS. The first part of the course will include introductory concepts and will cover basic topics in GIS including data types and common GIS processing and analysis tools, thematic mapping, etc. In the second part of the course, GIS procedures and techniques that are relevant to Civil Engineering will be covered through a series of case studies and exercises.
Course type	☐ General knowledge ☐ Fundamental ☒ Specialized knowledge ☐ Internship/Project/Thesis Others:.....
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Cabaltica Doliente Angeli, MSc.
Language	English
Relation to curriculum	Elective

Teaching methods	Lecture, class discussion, computer exercises								
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload:135 Contact hours (lecture, class discussion, computer exercise): 45 Private study including examination preparation, specified in hours ¹ : 90								
Credit points	3 credits (Theory: 03 + Practice: 00) 4.64 ECTS								
Number of periods	Theory: 45 Practice: 00								
Required and recommended prerequisites for joining the course	Recommended: CE307IU Surveying								
Parallel course									
Course objectives	This course aims to: - introduce students to GIS and its applications in civil engineering - make students learn spatial data handling, analysis and presentation								
Course learning outcomes	Upon successful completion of this course, students will be able to: <table border="1"> <thead> <tr> <th>Competency level</th><th>Course learning outcome (CLO)</th></tr> </thead> <tbody> <tr> <td>Knowledge</td><td>CLO1. create, acquire, and display spatial data GIS datasets</td></tr> <tr> <td>Skill</td><td>CLO2. use GIS tools to analyse spatial data CLO3. perform modelling, analysis and presentation for different GIS applications in civil engineering</td></tr> <tr> <td>Attitude</td><td></td></tr> </tbody> </table>	Competency level	Course learning outcome (CLO)	Knowledge	CLO1. create, acquire, and display spatial data GIS datasets	Skill	CLO2. use GIS tools to analyse spatial data CLO3. perform modelling, analysis and presentation for different GIS applications in civil engineering	Attitude	
Competency level	Course learning outcome (CLO)								
Knowledge	CLO1. create, acquire, and display spatial data GIS datasets								
Skill	CLO2. use GIS tools to analyse spatial data CLO3. perform modelling, analysis and presentation for different GIS applications in civil engineering								
Attitude									

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	1. Basic introduction to GIS concepts	1	I,T
	2. Projections and Coordinate Systems	1	I,T,U
	3. Common GIS data types	1	I, T, U
	4. Symbolizing features	1	I, T, U
	5. Acquiring spatial data, Digitization	1	I, T, U
	6. Spatial Operations	2	I, T, U
	7. Spatial Analysis	2	I, T, U
	8. Map making	1	I, T, U
	9. Case Studies & Exercises	5	U
Examination forms	Written examinations: Midterm and Final Exams Type: Constructed response test		
Study and examination requirements	Attendance: Students are expected to attend the lectures every week. University regulations indicate that if students attend less than 80% of scheduled classes they may be refused final assessment. Computer exercises: are given regularly for the students to understand the concepts better and to improve their problem-solving skills. Examinations: A midterm exam will be given halfway through the semester and a final exam at the end. Students must have an overall score of at least 50/100 points to pass this course.		
Reading list	References [1] Bernhardsen, Tor. <i>Geographic information systems: An introduction</i> . New York: John Wiley & Sons, 2001. [2] Paul A. Longley, Michael F. Goodchild, David J. Mauire, David W. Rhind. <i>Geographic Information Systems and Science</i> , John Wiley & Sons, 2005.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Learning Outcomes (ILO) is shown in the following table:

CLO	ILO										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1							X				
2										X	
3						X	X			X	

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Basic introduction to GIS concepts	01	Attendance, Q&A	Lecture, class discussion, computer practice	[1], [2]
2	Projections and Coordinate Systems	01	Attendance, Q&A	Lecture, class discussion, computer practice	[1], [2]
3	Common GIS data types	01	Attendance, Q&A	Lecture, class discussion, computer practice	[1], [2]
4	Symbolizing features	01	Attendance, Q&A, Exercise 1	Lecture, class discussion, computer practice	[1], [2]
5	Acquiring spatial data, Digitization	01	Attendance, Q&A, Exercise 2	Lecture, class discussion, computer practice	[1], [2]
6-8	Spatial Operations, Midterm Exam	02	Attendance, Q&A, Exercise 3, Midterm Exam	Lecture, class discussion, computer practice, Test	[1], [2]
9	Spatial Analysis	02	Attendance, Q&A, Exercise 4	Lecture, class discussion, computer practice	[1], [2]
10	Map Layout	03	Attendance, Q&A, Exercise 5	Lecture, class discussion, computer practice	[1], [2]
11-15	Case Studies & Exercises	03	Attendance, Q&A, Exercise 6-8	Lecture, class discussion, computer practice	
16					
17-18	Final exam				

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No.	Assessment Type	CLO1	CLO2	CLO3
1	Progress Assessment (30%)			
1.	Class Attendance (30% of PA)			
1.	In-class activities: Participation in discussion, quizzes; Other activities: homeworks, group exercise (70% of PA)	Ex1, Ex2, Ex5	Ex3, Ex4	Ex6, Ex7, Ex8
2	Midterm Exam (30%)	60%Pass	60%Pass	60%Pass
3	Final Exam (40%)	Q1 60%Pass		
		Q1 60%Pass		

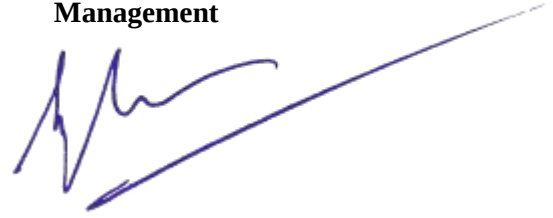
Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

- None

6. Date revised: May 27, 2025

**Ho Chi Minh City, May 27, 2025
Dean of School of Civil Engineering and
Management**

A handwritten signature in blue ink, consisting of stylized, overlapping loops and a long, sweeping horizontal stroke extending to the right.

Dr. Nguyen Hoai Nghia



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Construction Project Management

Course Code: CE414IU

1. General Information

Course name	- <i>(in English)</i> : Construction Project Management - <i>(in Vietnamese)</i> : Quản lý dự án xây dựng
Module designation	CE414IU – Construction Project Management In this course, students will study roles, responsibilities, and authority of project participants. They also study how to manage project participants, material, safety, waste, and environment. The jobsite layout design and control are also a part of the course.
Course type	☐ General knowledge ☐ Fundamental ☒ Specialized knowledge ☐ Internship/Project/Thesis ☐ Others:
Semester(s) in which the module is taught	3
Person responsible for the module	Dr. Nguyen, Hoai Nghia, MSc. Nguyen, Pham Duy Phuong
Language	English
Relation to curriculum	Elective
Teaching methods	Lecture, presentation, and assignments.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 135 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 45

	Private study including examination preparation, specified in hours ¹ : 90																					
Credit points	03 credits (Theory: 03 + Practice: 00) 4.64 ECTS																					
Number of periods	Theory: 45 Practice: 00																					
Required and recommended prerequisites for joining the module	None																					
Module objectives/intended learning outcomes	Overall objectives are to equip IU students with knowledge of jobsite management including jobsite layout design and control; labor management, material management, safety management, waste management, and environment management; and meeting skills. Students who complete the course will be able to perform the following tasks: (1) Having knowledge of project participants’ roles, responsibilities, and authority (2) Having enhanced ability to design and control jobsite layout (3) Manage labor, material, safety, waste, and environment.																					
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Construction project team</td><td>2</td><td>I</td></tr><tr><td>Jobsite layout and control</td><td>3</td><td>T, U</td></tr><tr><td>Meeting, negotiations, and dispute resolution</td><td>2</td><td>T</td></tr><tr><td>Jobsite labor relations and control</td><td>2</td><td>T</td></tr><tr><td>Material management</td><td>1</td><td>T</td></tr><tr><td>Personnel and safety management</td><td>3</td><td>T</td></tr></table>	Topic	Weight	Level	Construction project team	2	I	Jobsite layout and control	3	T, U	Meeting, negotiations, and dispute resolution	2	T	Jobsite labor relations and control	2	T	Material management	1	T	Personnel and safety management	3	T
Topic	Weight	Level																				
Construction project team	2	I																				
Jobsite layout and control	3	T, U																				
Meeting, negotiations, and dispute resolution	2	T																				
Jobsite labor relations and control	2	T																				
Material management	1	T																				
Personnel and safety management	3	T																				

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

	Waste and environmental management and sustainable construction practices	2	T
Examination forms	Constructed-response test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.		
Reading list	Textbook: [1] Minks, W.R. and Johnston, H. (2017). <i>Construction Jobsite Management</i> , 4th ed. Boston: Cengage Learning. [2] Thomas, H.R. and Ellis, R.D. Jr. (2017). <i>Construction Site Management and Labor Productivity Improvement</i> , Virginia: ASCE Press. References: [1] Howarth, T. and Greenwood, D. (2018). <i>Construction Quality Management – Principle and Practice</i> , 2nd ed. New York: Routledge. [2] Fisk, E.R. and Reynolds, W.D. (2014). <i>Construction Project Administration</i> , 10th ed. New Jersey: Pearson		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-3) and Program/Student Learning Outcomes (a-j) is shown in the following table:

- (1) CLO1: Having knowledge of project participants' roles, responsibilities, and authority
- (2) CLO2: Having enhanced ability to design and control jobsite layout
- (3) CLO3: Manage labor, material, safety, waste, and environment.

No.	Program Learning Outcome										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
CLO1		x									
CLO2		x				x					
CLO3					X	x					

Program Learning Outcome:

- (a) Understanding the physical world and using knowledge of mathematics and natural sciences to represent it in pursuing and establishing research by the use of quantitative and quantitative methods.
- (b) Understanding the fundamentals of the civil engineering field (e.g., construction geology, material science, construction physics, surveying, structural theory, technical design, construction informatics, soil mechanics, fluid mechanics, and computational techniques,

analyzing data for design, build, and appraisal construction)

- (c) Ability to analyze and prepare investment projects and understand their economic, environmental, and social impacts
- (d) Awareness of professional and ethical responsibilities of a civil engineer; ability to make rational decisions based on an ethical argumentation, think critically in order to find innovative and effective solutions for interdivision aqualitative and quantitative problems.
- (e) Ability to function as a member of a multidisciplinary team (including multi-national and mixed-gender teams) as well as having good knowledge of management and organization to be able to take on leadership roles
- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies emerge regularly, as well as take part in developing new technologies by engaging in research works having the ability to interpret and use empirical datasets, integrate technical literature and databases to solve specific civil engineering problems or fill knowledge gaps.
- (g) Ability to communicate matters related to civil engineering to colleagues in the same profession or the general public, effectively using oral, written, and other forms of communication.
- (h) A broad education necessary to understand the impacts of civil engineering solutions in a global and social context
- (i) A broad understanding of contemporary issues in civil engineering in the national, regional, and global level
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and daily life situations.

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Construction project team Roles, responsibilities, and authority of project participants Traditional contract project delivery system Construction management delivery system Design-Build delivery system	L.O. 1	Quiz1	Lecture Class discussion	[1] Chapter 1

Week	Topic	CLO	Assessments	Learning activities	Resources
2-3	Jobsite layout and control Material Handling Labor productivity Equipment management Site constraints Jobsite security Organizing jobsite layout	L.O. 2	Quiz2	Lecture Class discussion	[1] Chapter 2
4-5	Meeting, negotiations, and dispute resolution Partnering meeting and workshop session Contractor's preconstruction planning and organization meeting Project meeting Post project review and evaluation Negotiations Dispute resolution	L.O. 1	Quiz3 Presentation	Lecture Class discussion	[1] Chapter 3, 4
6-7	Jobsite labor relations and control Labor productivity Jobsite labor organization Labor agreements Supervision and control of labor	L.O. 3	Quiz4 Presentation	Lecture Class discussion	[1] Chapter 7
8-9	Material management Material management plans Material procurement Delivery and receiving Storing Distribution Midterm Exam	L.O. 3	Quiz 6 Midterm exam	Lecture Class discussion Test	[1] Chapter 9
10-11	Personnel and safety management Safety policy Accident prevention Substance abuse Personal protective equipment Hazardous materials communication Safety communication	L.O. 3	Quiz7	Lecture Class discussion	[1] Chapter 10

Week	Topic	CLO	Assessments	Learning activities	Resources
	Accident reporting and investigation Environmental protection and safety				
12-13	Waste and environmental management and sustainable construction practices Jobsite environmental management plans Waste management in construction phase Storm water management Indoor air quality and requirements during construction	L.O. 3	Quiz 8 Presentation 2	Lecture Class discussion	[1] Chapter 11
14, 15	The Economy and construction Measuring economic activity From circular flow model to reality Manipulating the level of economic activity Supply-side economic Inflation and how it is measured Causes of inflation Cures for inflation	3	Quiz 9	Lecture Class discussion	[1] Chapter 12
16	Reservation week				
17-18	FINAL EXAM				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
In-class exercises/quizzes (10%)	Qz1, Qz3 50%Pass	Qz2 50%Pass	Qz4 – Qz9 50%Pass
Homework exercises/ Presentation (20%)		Presentation 1 50%Pass	Presentation 1 50%Pass
Midterm exam (20%)	50% Pass	50% Pass	

Final exam (50%)		50% Pass	50% Pass

Note: %Pass: % students have scores greater than 50 out of 100.

5. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025

**Dean of School of Civil Engineering and
Management**



Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Construction
Management

COURSE SYLLABUS

Course Name

Course Name: CONSTRUCTION MEASUREMENT AND COST ESTIMATING

Course Code: **CM202IU**

1. General Information

Course name	CM202IU – Construction Measurement And Cost Estimating CM202IU – Đo bóc khối lượng và ước tính chi phí
Module designation	In this course, students will study about quantity measurement and cost estimation. The measured quantity is used to estimate construction cost and developed procurement and contract documents.
Course type	☐ General knowledge ☐ Fundamental ☒ Specialized knowledge ☐ Internship/Project/Thesis ☐ Others:
Semester(s) in which the module is taught	4
Person responsible for the module	Dr. Nguyen, Hoai Nghia
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, and assignments.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (lecture, exercise, laboratory session, etc.): 37.5

	Private study including examination preparation, specified in hours ¹ : 90																		
Credit points	3 credits (Theory: 03 + Practice: 00) 4.64 ECTS																		
Number of periods	Theory: 45 Practice: 00																		
Required and recommended prerequisites for joining the module	- Prerequisites: - Corequisites: - Previous course: Construction Material (CE210IU), Reinforced Concrete 1 (CE304IU), Introduction to Construction Management																		
Module objectives/intended learning outcomes	Overall objectives Upon successful completion of this course, the students should be able to demonstrate knowledge of: • Roles of quantity surveyors and construction industry. • Measurement and quantification. • Construction cost estimating. Students who complete the course will be able to perform the following tasks: (1) Understand roles of quantity surveyors and construction industry. (2) Be able to measure and quantify construction quantity (3) Be able to estimate construction																		
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Quantity surveyors and construction industry</td><td>2</td><td>I</td></tr><tr><td>Measurement and quantification</td><td>6</td><td>T</td></tr><tr><td>Forecasting costs and value</td><td>4</td><td>T</td></tr><tr><td>Pricing and tendering</td><td>2</td><td>T, U</td></tr><tr><td>Related Vietnamese laws and regulations</td><td>1</td><td>T, U</td></tr></table>	Topic	Weight	Level	Quantity surveyors and construction industry	2	I	Measurement and quantification	6	T	Forecasting costs and value	4	T	Pricing and tendering	2	T, U	Related Vietnamese laws and regulations	1	T, U
Topic	Weight	Level																	
Quantity surveyors and construction industry	2	I																	
Measurement and quantification	6	T																	
Forecasting costs and value	4	T																	
Pricing and tendering	2	T, U																	
Related Vietnamese laws and regulations	1	T, U																	

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Examination forms	Constructed-response test
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.
Reading list	Textbook: • [Duncan Cartlidge, Quantity Surveyor's Pocket Book, 2009, 1st edition. • Parviz F. Rad, Project Estimating and Cost Management, 2002. • Sean D.C. Ostrowski, Measurement Using the New Rules of Measurement, 2013, 1st

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-3) and Program/Student Learning Outcomes (a-k) is shown in the following table:

- (1) CLO1: Understand roles of quantity surveyors and construction industry
- (2) CLO2: Be able to measure and quantify construction quantity
- (3) CLO3: Be able to estimate construction

No.	Program Intended Learning Outcome (ILO)										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
CLO1			x		x						
CLO2										x	
CLO3										x	

Program Learning Outcome:

- (a) Understanding the physical world and using knowledge of mathematics and natural sciences to represent it in pursuing and establishing research by the use of quantitative and quantitative methods.
- (b) Understanding the fundamentals of the civil engineering field (e.g. construction geology, material science, construction physics, surveying, structural theory, technical design, construction informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction)
- (c) Ability to analyze and prepare investment projects and understand their economic, environmental, and social impacts
- (d) Awareness of professional and ethical responsibilities of a civil engineer
- (e) Ability to function as a member of a multidisciplinary team (including multi-national and

mixed-gender teams) as well as having good knowledge of management and organization to be able to take on leadership roles

- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies emerge regularly as well as take part in developing new technologies by engaging in research works having the ability to interpret and use empirical datasets, integrate technical literature and databases to solve specific civil engineering problems or fill knowledge gaps.
- (g) Ability to communicate matters related to civil engineering to colleagues in the same profession or the general public, effectively using oral, written, and other forms of communication.
- (h) A broad education necessary to understand the impacts of civil engineering solutions in a global and social context
- (i) A broad understanding of contemporary issues in civil engineering in the national, regional, and global level
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and daily life situations

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1-2	Quantity surveyors and construction industry	1	Homework	Lecture Class discussion	
3-8	Measurement and quantification Midterm exam	2	Presentation 1, 2, 3 Homework Midterm exam	Lecture Class discussion Test	
9-10	Forecasting costs and value	3	Presentation 4, 5 Quiz	Lecture Class discussion	
11-14	Pricing and tendering	3	Homework Quiz	Lecture Class discussion	
15	Related Vietnamese laws and regulations	3	Homework	Lecture Class discussion	
16	Reservation week				

Week	Topic	CLO	Assessments	Learning activities	Resources
17-18	FINAL EXAM				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
In-class exercises/quizzes (25%)	50%Pass	Qz4, Qz5 50%Pass	50%Pass
Homework exercises/ Presentation (15%)		Presentation 50%Pass	Presentation 50%Pass
Midterm exam (20%)	50% Pass	50% Pass	
Final exam (40%)		50% Pass	50% Pass

Note: %Pass: % students have scores greater than 50 out of 100.

5. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025

Dean of School

Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
**School of Civil Engineering and Construction
Management**

COURSE SYLLABUS

Course Name: CONSTRUCTION PROCUREMENT AND TENDERING

Course Code: CM302IU

1. General Information

Course name	- (in English): <i>Construction Procurement and Tendering</i> - (in Vietnamese): <i>Đấu thầu và mua sắm</i>
Course designation	CM302IU – CONSTRUCTION PROCUREMENT AND TENDERING This course is designed to provide students knowledge about procurement methods in construction projects. The advantages and disadvantages, procedures, and application of different procurement methods are introduced. The preparation and invitation of tenders are also mentioned in this course.
Course type	☐ General knowledge ☐ Fundamental ☒ Specialized knowledge ☐ Internship/Project/Thesis ☐ Others:
Semester(s) in which the module is taught	5
Person responsible for the module	Dr. Nguyen, Hoai Nghia, Dr. Nguyen, Van Tiep, MSc. Nguyen, Pham Duy Phuong
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, and assignments.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 135 Contact hours (lecture): 45

	Private study including examination preparation, specified in hours ¹ : 90		
Credit points	3 credits (Theory: 45 + Practice: 0) 4.64 ECTS (<i>optional</i>)		
Number of periods	Theory: 45 Practice: 0		
Required and recommended prerequisites for joining the module	CM305IU (Construction Cost Management)		
Course objectives	Overall objectives Students who complete the course will be able to perform the following tasks: (1) Be able to brief the rights, duties and responsibilities of project team members (2) Understand different procurement methods (3) Understand tender preparation and invitation procedures		
Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO3: Understand tender preparation and invitation procedures	
	Skill	CLO2: Understand different procurement methods	
	Attitude	CLO1: Be able to brief the rights, duties and responsibilities of project team members	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize)		
	Topic	Weight	Level
	Briefing the project team	1	I
	Procurement methods	5	T, U

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

	Preparing for tenders	4	T, U
	Inviting tenders	4	T, U
	Negotiating and contract awarding		
	Related Vietnamese laws and regulations	1	I
Examination forms	Constructed-response test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.		
Reading list	Textbook: [1] Mark Hackett and Gary Statham, The Aqua Group Guide to Procurement, Tendering and Contract Administration, 2016, 2nd edition. [2] Martin Brook, Estimating and Tendering for Construction Work, 2008, 4th edition.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-3) and Program/Student Learning Outcomes (a-k) is shown in the following table:

- (1) CLO1: Be able to brief the rights, duties and responsibilities of project team members
- (2) CLO2: Understand different procurement methods
- (3) CLO3: Understand tender preparation and invitation procedures

No.	Program Learning Outcome									
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
CLO1		x			x	x				
CLO2		x			x	x				
CLO3		x			x	x				

Program Learning Outcome:

- (a) An ability to acquire and apply the foundation knowledge in terms of natural and social science to understand principles of construction management.
- (b) An ability to understand basic principles of economy management, business management models, digital transformation in construction (BIM, AI), and utilize statistical tools and techniques for economic analysis.
- (c) An ability to understand and utilize mathematical tools, problem-solving methods including technical and economic tasks and problems, and professional knowledge in construction management for managing and controlling variety aspects of construction projects.

- (d) An ability to identify project objectives, scope and legal documents required as well as to be able to evaluate social-economic benefits of construction project investments; conduct literature research, collect and interpret data based on the methods of academic research.
- (e) An ability to grasp, analyse and evaluate methods and processes in construction management to solve complex problems across time, cost and quality management as well as apply artificial intelligence and building information modelling to improve the project management performance.
- (f) An ability to use tools and techniques required for identifying, analysing, and evaluating the problems as well as thinking independently, logically, and critically in seeking appropriate solutions; to work on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- (g) An ability to communicate effectively with a range of audiences and actively work individually and as part of an international group as well as become accustomed to the responsibilities of leadership
- (h) An ability to comprehensively use English language in construction management, express themselves in a logical and convincing way both orally and in writing and communicate with their specialist colleague.
- (i) An ability to recognize ethics and professional responsibility in civil engineering and construction management; and have suitable communication and interaction with people.
- (j) An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Briefing the project team	1		Lecture Class discussion	[1] Chapter 1
2, 3, 4, 5, 6	Procurement methods	2	Quiz 1	Lecture Class discussion	[1] Chapter 2
7, 8	Preparing for tenders Midterm exam	3	Presentation 1, 2 Quiz Midterm exam	Lecture Class discussion Test	[1] Chapter 3, 4
9, 10	Preparing for tenders	3	Presentation 3, 4 Quiz	Lecture Class discussion	[1] Chapter 8
11 – 14	Inviting tenders Negotiating and contract awarding	3	Presentation 5, 6, 7 Quiz	Lecture Class discussion	[1] Chapter 9
15	Related Vietnamese laws and regulations	3	Quiz	Lecture Class discussion	[1] Chapter 10

Week	Topic	CLO	Assessments	Learning activities	Resources
16	Reservation week				
17-18	FINAL EXAM		Written exam		

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
In-class exercises/quizzes (10%)	50%Pass	50%Pass	50%Pass
Homework exercises/ Presentation (15%)			50%Pass
Attendance (15%)	50% Pass	50% Pass	50% Pass
Midterm exam (20%)	50% Pass	50% Pass	
Final exam (40%)		50% Pass	50% Pass

Note: %Pass: % students have scores greater than 50 out of 100.

5. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025

Dean of School



Dr. Nguyễn Hoài Nghĩa



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name

Course Name: Contract Management – FIDIC contracts

Course Code: CM404IU

1. General Information

Course name	CM404IU – Contract Management – FIDIC contracts CM404IU – Quản lý hợp đồng – Hợp đồng FIDIC
Module designation	In this course, students will study knowledge of construction contract management and the FIDIC contracts.
Course type	☐ <i>General knowledge</i> <i>Fundamental</i> ☐ ☒ <i>Specialized knowledge</i> <i>Internship/Project/Thesis</i> <i>Others:</i> ☐ ☐
Semester(s) in which the module is taught	7 or 8
Person responsible for the module	Dr. Nguyen, Hoai Nghia, Dr. Nguyen, Van Tiep, MSc. Nguyen, Pham Duy Phuong
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, and assignments.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (lecture, exercise, laboratory session, etc.): 37.5

	Private study including examination preparation, specified in hours ¹ : 90																														
Credit points	3 credits (Theory: 03 + Practice: 00) 4.64 ECTS																														
Number of periods	Theory: 45 Practice: 00																														
Required and recommended prerequisites for joining the module	- Prerequisites: - Corequisites: - Previous course:																														
Module objectives/intended learning outcomes	Overall objectives are to provide students with the insight of contract management and the FIDIC contracts’ contents. Students who complete the course will be able to perform the following tasks: (1) Having knowledge of contract management (2) Having knowledge of FIDIC contracts and its applications																														
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Introduction to conditions of contract</td><td>1</td><td>I</td></tr><tr><td>Insurance and security</td><td>1</td><td>T</td></tr><tr><td>Administration of the contract</td><td>1</td><td>T, U</td></tr><tr><td>Defaults and disputes</td><td>1</td><td>T, U</td></tr><tr><td>Subcontracts</td><td>1</td><td>T, U</td></tr><tr><td>Change Orders and Variations</td><td>1</td><td>T, U</td></tr><tr><td>Delays and extensions</td><td>1</td><td>T, U</td></tr><tr><td>Interim valuations</td><td>1</td><td>T, U</td></tr><tr><td>Completion of the project</td><td>1</td><td>T, U</td></tr></table>	Topic	Weight	Level	Introduction to conditions of contract	1	I	Insurance and security	1	T	Administration of the contract	1	T, U	Defaults and disputes	1	T, U	Subcontracts	1	T, U	Change Orders and Variations	1	T, U	Delays and extensions	1	T, U	Interim valuations	1	T, U	Completion of the project	1	T, U
Topic	Weight	Level																													
Introduction to conditions of contract	1	I																													
Insurance and security	1	T																													
Administration of the contract	1	T, U																													
Defaults and disputes	1	T, U																													
Subcontracts	1	T, U																													
Change Orders and Variations	1	T, U																													
Delays and extensions	1	T, U																													
Interim valuations	1	T, U																													
Completion of the project	1	T, U																													

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

	FIDIC contracts	5	T, U
	Related Vietnamese laws and regulations	1	T
Examination forms	Constructed-response test		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.		
Reading list	Textbook: [1] Goldfayl, G. (2011). Construction contract administration, 2 nd ed. Sydney: A UNSW press book. [2] FIDIC contracts. References: [1] Murdoch, J. and Hughes W. (2000). Construction contracts – Law and management, 3 rd ed. London: Spon Press		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-3) and Program/Student Learning Outcomes (a-j) is shown in the following table:

- (1) CLO1: A deep understanding of contract management
- (2) CLO2: A deep understanding of FIDIC contracts and its applications

No.	Program Learning Outcome									
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
CLO1	x		x	x						
CLO2	x		x	x			x			

Program Learning Outcome:

- (a) An ability to acquire and apply the foundation knowledge in terms of natural and social science to understand principles of construction management.
- (b) An ability to understand basic principles of economy management, business management models, digital transformation in construction (BIM, AI), and utilize statistical tools and techniques for economic analysis.
- (c) An ability to understand and utilize mathematical tools, problem-solving methods including technical and economic tasks and problems, and professional knowledge in construction management for managing and controlling variety aspects of construction projects.
- (d) An ability to identify project objectives, scope and legal documents required as well as to be able to evaluate social-economic benefits of construction project investments; conduct literature research, collect, and interpret data based on the methods of academic research.

- (e) An ability to grasp, analyse and evaluate methods and processes in construction management to solve complex problems across time, cost and quality management as well as apply artificial intelligence and building information modelling to improve the project management performance.
- (f) An ability to use tools and techniques required for identifying, analysing, and evaluating the problems as well as thinking independently, logically, and critically in seeking appropriate solutions; to work on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- (g) An ability to communicate effectively with a range of audiences and actively work individually and as part of an international group as well as become accustomed to the responsibilities of leadership
- (h) An ability to comprehensively use English language in construction management, express themselves in a logical and convincing way both orally and in writing and communicate with their specialist colleague.
- (i) An ability to recognize ethics and professional responsibility in civil engineering and construction management; and have suitable communication and interaction with people.
- (j) An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

3. Planned learning activities and teaching methods

Theory

Week	Topic	CLO	Assessment	Learning activities	Resources
1	Introduction to conditions of contract The contract Standard conditions of contract Definitions of contractual terms Contractual obligations The contract documents The works The site Quantities Schedules of rates Special conditions	1	Quiz 1	Lecture Class discussion	[1] Chapter 1
2	Insurance and security Insurance Security	1	Quiz 2	Lecture Class discussion	[1] Chapter 2
3	Administration of the contract Administration The works Progress and programming of the works Contract sum adjustments Notices	1	Quiz 3	Lecture Class discussion	[1] Chapter 3

Week	Topic	CLO	Assessment	Learning activities	Resources
4	Defaults and disputes Insolvency Default Termination Disputes	1	Quiz 4	Lecture Class discussion	[1] Chapter 4
5	Subcontracts Subcontracts Provisional sums Separate contracts Provisional quantities	1	Presentation 1	Lecture Class discussion	[1] Chapter 5
6	Change Orders and Variations Change orders Variations Procedures Valuations Errors in quantities	1	Quiz 5	Lecture Class discussion	[1] Chapter 6
7	Delays and extensions Extensions of time for delay Extensions and reductions of time for variations Delay or disruption costs Counting of days Force majeure Midterm Exam	1	Quiz 6 Midterm Exam	Lecture Class discussion Test	[1] Chapter 7
8	Interim valuations Interim valuations Retention Payment of workers and subcontractors Rise and fall	1	Quiz 7	Lecture Class discussion	[1] Chapter 8
9	Completion of the project Practical completion Defects liability period Final claim, certificate and payment	1	Quiz 8	Lecture Class discussion	[1] Chapter 9
10-14	FIDIC contracts Introduction and principle Types of FIDIC contracts Responsibilities of the main parties' clauses	2	Presentation 2	Lecture Class discussion	[2]

Week	Topic	CLO	Assessment	Learning activities	Resources
	Management of projects clauses Tests on completion clauses Financial clauses and procedures clauses Suspension and termination clauses Risk, liability, and force majeure clauses Claims, disputes and arbitration clauses				
15	Related Vietnamese laws and regulations	2	Quiz 9	Lecture Class discussion	[2]
16-17	FINAL EXAM				

4. Assessment plan

Assessment Type	CLO1	CLO2
In-class exercises/quizzes (10%)	Qz1, Qz2, Qz3, Qz4, Qz5 Qz6, Qz7, Qz8 50%Pass	Qz9 50%Pass
Homework exercises/ Presentation (20%)	Presentation 1 50%Pass	Presentation 2 50%Pass
Midterm exam (20%)	50% Pass	50% Pass
Final exam (50%)	50% Pass	50% Pass

Note: %Pass: % students have scores greater than 50 out of 100.

5. Date revised: May 27, 2025

Ho Chi Minh City, May 27, 2025

Dean of School of Civil Engineering and Management
(Signature)

Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
 School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: SUSTAINABLE CONSTRUCTION

Course Code: **CE415IU**

1. General information

Course name	- <i>Sustainable Construction</i> - <i>Xây dựng bền vững</i>
Course designation	This course provides students with knowledge of green building, including green building fundamentals, green building assessment, green building design, and green building implementation.
Course type	☐ <i>General knowledge</i> <i>Fundamental</i> ☐ ☒ <i>Specialized knowledge</i> <i>Internship/Project/Thesis</i> <i>Others:</i> ☐ ☐
Semester(s) in which the course is taught	Semester 7
Person responsible for the course	MSc. Đinh Viết Duy, Dr. Pham Thanh Tung
Language	English
Relation to curriculum	☐ Compulsory ☒ Elective
Teaching methods	Lecture, presentation, discussion, and assignments

Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): - Lecture: 28.5 - Discussion: 9 Private study including examination preparation, specified in hours: 90	
Credit points	3 credits (Theory: 3 + Practice: 0) 4.64 ECTS (<i>optional</i>)	
Number of periods	Theory: 15 Practice: 0	
Required and recommended prerequisites for joining the course	- Prerequisites: - Corequisites: - Previous course: Civil Architecture	
Course objectives	The aim of this course is to provide: • An understanding of green building fundamentals, including main concepts, major concerns, and notable movement. • An understanding of green building assessment, including the use of LEED Building Rating System and Green Globes Building Rating Tools. • An understanding of green building design, including sustainable site and landscape, low-energy building, hydrologic cycle, building materials and products, carbon footprint, and indoor environmental quality. • An understanding of green building implementation, including construction operations and commissioning, green building economics, and sustainable construction.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1: Demonstrate green building fundamentals CLO2: Present green building implementations
	Skill	CLO3: Assessing sustainability aspects in construction CLO4: Applying green building design in construction
	Attitude	

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Green Building Fundamentals	2	I,
	Green Building Assessment	3	T, U
	Green Building Design	7	T, U
	Green Building Implementation	3	I, T
Examination forms	Constructed-response test		
Study and examination requirements	● Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. ● Assignments/Examination: Students must have GPA more than 50/100 points overall to pass this course.		
Reading list	● Textbooks: [1] C.J., Kibert, Sustainable Construction Green Building Design and Delivery, 4th ed., Wiley, 2016. ● Reference: [1] Hu., Ming, Green building costs: the affordability of sustainable design, Taylor & Francis, 2024. [2] M., Montoya, Green building fundamentals : practical guide to understanding and applying fundamental sustainable construction practices and the leed system, 2nd ed., Pearson, 2011.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program/Student Learning Outcomes (PLO) is shown in the following table:

No.	Program Learning Outcome										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
CLO1		x						x			
CLO2		x	x					x			
CLO3										x	
CLO4										x	

Program Learning Outcome:

- Understanding the physical world and using knowledge of mathematics and natural sciences to represent it in pursuing and establishing research by the use of quantitative and quantitative methods.
- Understanding the fundamentals of the civil engineering field (e.g., construction geology, material science, construction physics, surveying, structural theory, technical design, construction informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction)

- (c) Ability to analyze and prepare investment projects and understand their economic, environmental, and social impacts
- (d) Awareness of professional and ethical responsibilities of a civil engineer; ability to make rational decisions based on an ethical argumentation, think critically in order to find innovative and effective solutions for interdivision of qualitative and quantitative problems.
- (e) Ability to function as a member of a multidisciplinary team (including multi-national and mixed-gender teams) as well as having good knowledge of management and organization to be able to take on leadership roles
- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies emerge regularly, as well as take part in developing new technologies by engaging in research works having the ability to interpret and use empirical datasets, integrate technical literature and databases to solve specific civil engineering problems or fill knowledge gaps.
- (g) Ability to communicate matters related to civil engineering to colleagues in the same profession or the general public, effectively using oral, written, and other forms of communication.
- (h) A broad education necessary to understand the impacts of civil engineering solutions in a global and social context
- (i) A broad understanding of contemporary issues in civil engineering in the national, regional, and global level
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and daily life situations.

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments activities	Learning activities	Resources
1	Green Building Background	1	Attendance	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 1, 2
2	Ecological Design	1	Attendance Quiz 1	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 3
3	Green Building Assessment	2	Attendance	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 4
4	LEED Building Rating System Green Globes Building Assessment System	2	Attendance Quiz 2 Presentation 1	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 5, 6
5-6	Green Building Design Process	3	Attendance Quiz 3	Reading materials before class; Doing	[1] Chapter 7

				the lecture; Discussion;	
7	Sustainable Site and Landscape	3	Attendance	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 8
8	Midterm exam; Low-Energy Building Strategies	3	Writing Attendance	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 9
9	Built Environment Hydrologic Cycle	3	Attendance	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 10
10	Building Materials and Products	3	Attendance	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 11
11	Built Environment Carbon Footprint	3	Attendance	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 12
12	Indoor Environmental Quality	3	Attendance Presentation 2	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 13
13	Construction Operations and Commissioning	4	Attendance	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 14
14	Green Building Economics	4	Attendance Quiz 4	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 15
15	The Cutting Edge of Sustainable Construction	4	Attendance Presentation 3	Reading materials before class; Doing the lecture; Discussion;	[1] Chapter 16
16-17	FINAL EXAM		WRITING		

4. Assessment plan

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3	CLO4
1	Progress Assessment (PA, 30%)				
1.1	Class attendance (25% of PA)	Attended 80%Pass	Attended 80%Pass	Attended 80%Pass	Attended 80%Pass
1.2	Quizzes	Quiz 1	Quiz 2	Quiz 3	Quiz 4

	(25% of PA)	60%Pass	60%Pass	60%Pass	60%Pass
1.3	Presentations (50% of PA)		P1 80%Pass	P2 80%Pass	P3 80%Pass
2	Midterm exam (Mid, 20%)	60%Pass	60%Pass	60%Pass	
3	Final exam (Fin, 50%)			60%Pass	60%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics

6. Date revised: 20/05/2025

7. Course coordinator/Lecturer

- School/Department: School of Civil Engineering and Management
- Email: pttung@hcmiu.edu.vn

Ho Chi Minh City, 20/05/2025

**DEAN OF SCHOOL OF CIVIL
ENGINEERING AND MANAGEMENT**

(Signature)

Dr. Nguyen Hoai Nghia



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Business

COURSE SYLLABUS

Course Name: Principles of Marketing

Course Code: **BA003IU**

1. General information

Course designation	<i>The course named “Principles of Marketing” provides the students with necessary information on the basic concepts of marketing and its principles. It focuses on the understanding of Market Demand and Customers Behaviors as well as Marketing strategies developed by firms in terms of Pricing, Product, Place, Promotion, etc. The course also mentions various methods to market research and environmental factors that affects the marketing activities.</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Ms. Dang Thi Uyen Thao
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lectures, projects, quizzes, examinations.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours: 38 (15 classes, 1 class = 3 periods, 1 period = 50 minutes) Private study including examination preparation, specified in hours: 90
Credit points	03 credits/4.64 ECTS
Required and recommended prerequisites for joining the course	None

Course objectives	This course is an introduction to the field of marketing. In this course, the students will start to examine the most basic concepts in marketing – customer needs, wants, and demand to understand the marketplace. Next, main steps in designing a customer-driven marketing strategy are also explored. This course specially focuses on constructing an integrated marketing program that delivers superior value by using the marketing mix (the four Ps) – product/service design, pricing, distribution, and promotion. At last, other new contents of modern marketing, such as customer relationship management and partner relationship management are also briefly mentioned.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Understand marketing terminology and concepts and the principles used in developing marketing programs in a firm. CLO6. Understand basic characteristic of B2B and B2C marketing. CLO7. Understand the differences of goods and service characteristic in marketing
	Skill	CLO2. Identify wants, environmental factors and personal factors that shape marketing activities for certain target markets CLO3. Demonstrate knowledge of the individual components of a marketing mix CLO4. Demonstrate knowledge of key business communication strategies within the marketing field CLO5. Identify the organizational processes involved in the planning, implementation and control of marketing activities
	Attitude	

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Chapter 1: Creating and Capturing Customer Value	1	I, T
	Chapter 2: Company and Marketing Strategy- Partnering to Build Customer Engagement, Value, and Relationships	1	I, T
	Chapter 3: Analysing the marketing environment	1	I, T, U
	Chapter 5: Understanding consumer buyer behaviour	2	I, T, U
	Chapter 6: Business Markets and Business Buying Behavior	1	I, T
	Chapter 7: Customer-Driven Marketing Strategy: Creating Value for Target Customers	2	I, T, U
	Chapter 8: Product, Services, and Brands: Building Customer Value	1	I, T, U
	Chapter 10: Pricing: Understanding and Capturing Customer Value	1	I, T
	Chapter 12: Marketing Channels: Delivering Customer Value	1	I, T
	Chapter 14: Communicating Customer Value: Integrated Marketing Communications Strategy	1	I, T, U
Chapter 15: Advertising and Public Relations	1	I, T, U	
Examination forms	Essay questions, case studies		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.		
Reading list	[1] Textbook: Philip Kotler and Gary Armstrong (2015), Principles of Marketing, 16th Edition , Prentice Hall, Upper Saddle River, New Jersey [2] Slides and other materials are provided in the Blackboard		

2. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Chapter 1: Creating and Capturing Customer Value	1	Individual Writing Assignment	Lecture, Discussion	[1], [2]
2	Chapter 2: Company and Marketing Strategy- Partnering to Build Customer Engagement, Value, and Relationships	1	Individual Writing Assignment	Lecture, Discussion	[1], [2]
3	Chapter 3: Analysing the marketing environment	2	Group assignment	Lecture, Discussion	[1], [2]
4, 5	Chapter 5: Understanding consumer buyer behaviour	2	Case Analysis	Lecture, Discussion	[1], [2]
6	Chapter 6: Business Markets and Business Buying Behavior	6	Quizzes	Lecture, Discussion	[1], [2]
7, 8	Chapter 7: Customer-Driven Marketing Strategy: Creating Value for Target Customers	1, 5	Case Analysis	Lecture, Discussion	[1], [2]
9	Midterm				
10, 11	Chapter 8: Product, Services, and Brands: Building Customer Value	3, 7	Case Analysis	Lecture, Discussion	[1], [2]
12	Chapter 10: Pricing: Understanding and Capturing Customer Value	3	Individual Writing Assignment	Lecture, Discussion	[1], [2]
13	Chapter 12: Marketing Channels: Delivering Customer Value	3	Quizzes	Lecture, Discussion	[1], [2]
14	Chapter 14: Communicating Customer Value: Integrated Marketing Communications Strategy	3, 4	Individual Writing Assignment	Lecture, Discussion	[1], [2]
15	Chapter 15: Advertising and Public Relations	3, 4	Group assignment	Lecture, Discussion	[1], [2]
16	Revision				
17	Final exam				

3. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5	CLO6	CLO7
Quizzes (5%)			Qz1 60%Pass			Qz2 60%Pass	
Individual Writing Assignment (5%)	Asgmt 1 60%Pass		Asgmt 2 60%Pass	Asgmt 3 60%Pass			
Case Analysis (5%)							
Class participation and preparation (5%)							
Group assignment (10%)		60%Pass	60%Pass	60%Pass			

Mid-term Exam (30%)	Q1 50%Pass	Q1 50%Pass			Q2 50%Pass	Q3 60%Pass	
Final exam (40%)			Q1 50%Pass	Q2 50%Pass			Q3 50%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

4. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:	HW/Assignment:		
Date:	Evaluator:		
	Max.	Score	Comments
Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content	10		
Introduction demonstrates thorough knowledge of relevant background and prior work	15		
Analysis and discussion demonstrate good subject mastery	30		
Summary and conclusions appropriate and complete	5		
Organization (10%)			
Distinct introduction, body, conclusions	5		
Content clearly and logically organized, good transitions	5		
Presentation (20%)			
Correct spelling, grammar, and syntax	10		
Clear and easy to read	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1

Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.

Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

5. Date revised: July 17th, 2022

Ho Chi Minh City, 17/7/2022

Dean of School of Business



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Business

COURSE SYLLABUS

Course Name: Business Communication

Course Code: BA006IU

1. General information

Course designation	<i>This course is designed to provide students with a strong foundation in communicating at the workplace, focusing on: (1) communicating in the digital-age workplace, (2) developing business writing skills, (3) embracing professionalism at work, (2) developing business presentation skills, (4) preparing for successful job search, resumes, cover letters, and job interviews.</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	MSc. Pham Thanh Huyen
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, project, presentation.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (lecture, exercise, laboratory session, etc.): 37.5 Self-study includes examination preparation, specified in hours ¹ : 90
Credit points	3 credits/4.64 ECTS

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Required and recommended prerequisites for joining the course	None	
Course objectives	This course is designed to give students a comprehensive view of communication, its scope and importance in business, and the role of communication in establishing a favourable outside the firm environment, as well as an effective internal communications program. The various types of business communication media are covered. This course also develops an awareness of the importance of succinct written expression to modern business communication.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Identify the role and process of communication as a means of achieving organizational objectives. CLO2. Define communication and explain communication barriers. CLO3. Identify the different types of writing performed by business professionals in each of the various functional areas of business.
	Skill	CLO4. Strengthen perception skills by embracing professionalism; by recognizing nonverbal responses; by improving listening skill; and by analyzing personal value systems; role and status, and cultural differences in organizational communication. CLO5. Apply a clear, concise, convincing, and correct style of writing for business purposes. CLO6. Complete an accurate, complete resume and cover letter.
	Attitude	CLO7. Conduct well-prepared interviews and complete follow-up employment correspondence. CLO8. Demonstrate the ability to present effective oral reports.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Communicating in the Digital-Age Workplace	1	I
	Professionalism at Work: Business Etiquette, Ethics, Teamwork, and Meetings	1	T
	Business Presentations	1	T, U
	Planning Business Messages	0.5	I, T
	Organizing and Drafting Business Messages	0.5	I, T
	Revising Business Messages	0.5	I, T
	Short Workplace Messages and Digital Media	0.5	I, T
	Positive Messages	1	T, U
	Negative Messages	1	T, U
	Persuasive and Sales Messages	1	T, U
	Informal Reports	1	I, T
Proposals and Formal Reports	1	I, T	
The Job Search and Resumes in the Digital Age	1	T, U	
Interviewing and Following Up	1	T, U	
Examination forms	Short-answer questions, Messages writing questions		
Study and examination requirements	. Attend more than 80% of class meetings in order to take the final exam (Your name will be called randomly to answer questions during class discussion. If you do not show up to answer the question, you will be marked as absent for that class.) . Show respect to the instructor and classmates. . Actively participate in class activities . Fulfil tasks given by instructor after class . Access Blackboard for announcements, assignments, and materials of the course		
Reading list	Main textbooks: Mary Ellen Guffey & Dana Loewy, Essentials of Business Communication, 11th edition, Thompson South Western.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program Intended Learning Outcomes (ILO) (1-6) is shown in the following table:

CLO	ILO					
	1	2	3	4	5	6
1	x	x		x	x	
2	x	x			x	
3	x	x				
4	x	x	x	x		
5	x	x	x			
6				x	x	x
7				x		x
8	x	x			x	x

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Chapter 1: Communicating in the Digital-Age Workplace	1,2		Lecture	Textbook, Blackboard
2	Chapter 11: Professionalism at Work: Business Etiquette, Ethics, Teamwork, and Meetings	4	Assignment 1	Lecture	Textbook, Blackboard
3	Chapter 12: Business Presentations	8		Lecture	Textbook, Blackboard
4	Chapter 2: Planning Business Messages Chapter 3: Organizing and Drafting Business Messages	3, 5		Lecture	Textbook, Blackboard
5	Chapter 4: Revising Business Messages Chapter 5: Short Workplace Messages and Digital Media	3,5		Lecture	Textbook, Blackboard
6	Chapter 6: Positive Messages	3,5	Assignment 2	Lecture	Textbook, Blackboard
7	Chapter 7: Negative Messages	3,5		Lecture	Textbook, Blackboard
8	Midterm Review	1,2,3,4, 5,8	Presentation	Tutorial	
9	Midterm		Examination		
10	Chapter 8: Persuasive and Sales Messages	3,5	Assignment 3 Presentation	Lecture	Textbook, Blackboard

11	Chapter 9: Informal Reports	3,5	Presentation	Lecture	Textbook, Blackboard
12	Chapter 10: Proposals and Formal Reports	3,5	Presentation	Lecture	Textbook, Blackboard
13	Chapter 13: The Job Search and Resumes in the Digital Age	6	Presentation	Lecture	Textbook, Blackboard
14	Chapter 14: Interviewing and Following Up	7	Presentation	Lecture	Textbook, Blackboard
15	Group Presentation	1,2,4,8	Presentation		
16	Group Presentation	1,2,4,8	Presentation		
17	Final exam		Examination		

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5	CLO6	CLO7	CLO8
Assignments (50%)	A1 70%Pass	A1 70%Pass	A2 70%Pass	A3 70%Pass	A2, 3 70%Pass	A1 70%Pass		Presentation 70%Pass
Midterm exam (20%)	Q1 60%Pass	Q1 60%Pass	Q3 60%Pass	Q2 60%Pass	Q3 60%Pass			
Final exam (30%)				Q1 60%Pass	Q3 60%Pass	Q2 60%Pass	Q2 60%Pass	

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

6. Date revised: July 12, 2022

Ho Chi Minh City, dd/mm/yyyy
Head/Dean of Department/School
(Signature)

<Full Name>



VIETNAM NATIONAL UNIVERSITY HCMC INTERNATIONAL UNIVERSITY

School of Business

COURSE SYLLABUS

Course Name: Business Ethics

Course Code: BA020IU

Semester ... – Academic Year 202...-202...

1. General information

Course description	This course introduces students to the relevance and importance of ethics and social responsibility in business. It aims to increase student's awareness and understanding of ethical issues in business and to provide them with useful conceptual tools to guide analysis and decisions. After the completion of the course, students are expected to identify, think critically, and suggest solutions to ethical issues encountered at the individual, organizational, and societal levels.
Semester(s) in which the course is taught	1, 2
Lecturer	
Language	English
Relation to curriculum	R (Reinforced), M (Mastered) → focus on Comprehension, Application, and Analysis in the Bloom taxonomy (levels 2, 3, 4).
Teaching methods	Lecture, presentation, discussion
Workload (incl. contact hours, self-study hours)	Total workload: 127.5 hours (estimated) Teaching hours (including lectures, in-class discussions, assignments, quizzes, and presentations): 37.5 Self-study (including take-home assignments, individual or teamwork after class hours, and preparation for examinations): 90
Credit points	3 credits/4.64 ECTS
Required and recommended prerequisites for joining the course	None

Course objectives	The aim of the course is to communicate theoretical and practical insights and developments in the fields of business ethics and sustainable business. Students learn the characteristics of ethical issues in business. They become acquainted with the theoretical basis of business ethics: stakeholder-theory, theories of responsibility and normative ethical theory, intercultural ethics; as well as with theories and practices on the implementation of business ethics.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge: Bloom 4 - Analyze Skill: Oral communication	CLO1. Analyze ethical issues and corporate social responsibility in oral form (M)
	Knowledge: Bloom 2 - Understand Skill: Written communication	CLO2. Recognize ethical issues that arise in business and social situations in written form (R)
	Knowledge: Bloom 3 – Apply Skill: Oral and written communication	CLO3. Employ various ethical theories and ethical concepts to interpret actions taken in business ethics (R)
	Attitude (Affective: Bloom 3) Skill: Oral and written communication	CLO4. Propose appropriate ethical behaviors in business and society context. (M)
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)	
Examination forms	Short questions; essay	

Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged.		
	Assignments/Examination: Students must have more than 50/100 points overall to pass this course.		
	Topic	Weight	Level
	Understanding Ethics	1	I, T, U
	Defining Business Ethics	1	I, T
	Organizational Ethics	1	I, T
	Corporate Social Responsibility	1	I, T, U
	Corporate Governance	1	I, T
	The Role of Government	1	I, T
	Blowing the Whistle	1	I, T
	Ethics and Technology	1	I, T
	Ethics and Globalization	1	I, T, U
Making It Stick: Doing What’s Right in a Competitive Market	1	I, T	
Workshop “Ethical considerations in reality”	1	T, U	
Reading list	Main textbook: G Ghillyer, A. W. (2021) <i>Business Ethics Now</i> . 6th edn. New York: McGraw-Hill Education.		
	Reference book: Ferrell, O. C., Fraedrich, J. and Ferrell, L. (2022) <i>Business Ethics: Ethical Decision Making and Cases</i> . 13th edn. Cengage.		

2. Learning Outcomes Matrix

The relationship between Course Learning Outcomes (CLO) (1-4) and Program Intended Learning Outcomes (ILO) (1-9) is shown in the following table:

CLO	ILO								
	1	2	3	4	5	6	7	8	9
1				M					
2				R					
3				R					
4					M	R			

3. Planned learning activities and teaching methods

Week	Topic	Reading	CLO	Learning activities	Sources
1	Class introduction and Group registration		1, 2, 3, 4		(Ghillyer, 2021) (Ferrell, Fraedrich and Ferrell, 2022)
2	Understanding Ethics	Textbook – Chapter 1		Lecture, Discussion	
3	Defining Business Ethics	Textbook – Chapter 2		Lecture, Presentation, Discussion	
4	Organizational Ethics	Textbook – Chapter 3		Lecture, Presentation, Discussion	
5	Corporate Social Responsibility	Textbook – Chapter 4		Lecture, Discussion	
6	Corporate Governance	Textbook – Chapter 5		Lecture, Presentation, Discussion	
7	Workshop “Ethical considerations in reality”			Discussion	
8	Review for Midterm Exam				
9 - 10	Midterm exam	No class			
11	The Role of Government	Textbook – Chapter 6		Lecture, Presentation, Discussion	
12	Blowing the Whistle	Textbook – Chapter 7		Lecture, Presentation, Discussion	
13	Ethics and Technology	Textbook – Chapter 8		Lecture, Presentation, Discussion	
14	Ethics and Globalization	Textbook – Chapter 9		Lecture, Discussion	
15	Making It Stick: Doing What’s Right in a Competitive Market	Textbook – Chapter 10		Lecture, Presentation, Discussion	
16	Workshop “Ethical considerations in reality”			Discussion	
17	Review for Final Exam				
18	Reserved week				
19-20	Final exam	No Class			

4. Assessment plan

Assessment Type	Weight	CLO1	CLO2	CLO3	CLO4
Attendance, class participation, group presentation, group assignments, individual assignments	30%	70% Pass	70% Pass	70% Pass	70% Pass
Midterm exam	30%	70% Pass	70% Pass	70% Pass	70% Pass
Final exam	40%	70% Pass	70% Pass	70% Pass	70% Pass

Note: %Pass: Target that % of students having scores achieving the CLO.

5. Rubrics

Criteria	Levels of quality			
	Inadequate (0 – 39)	Adequate (40 – 69)	Good (70 – 84)	Excellent (85 – 100)
Ability to identify and explain ethical issues and/or affected stakeholders (30%)	Central ethical issues/involved stakeholders are not defined appropriately. Misunderstanding of issues related to the question.	Central ethical issues/some involved stakeholders are identified but not clearly explained.	Central ethical issues/ various involved stakeholders are identified and explained clearly.	Central ethical issues/all potential involved stakeholders are identified and explained completely.
Application of ethical principles (30%)	Missing or inappropriate use of ethical principles or ethical concepts.	Some relevant ethical principles are employed, which link to the question. But the discussion does not demonstrate multiple perspectives of a particular ethical principle when applied in a case.	Some relevant ethical principles are employed, which link to the question. The discussion demonstrates multiple perspectives of a particular ethical principle when applied in a case.	All relevant ethical principles are employed. All aspects of ethical principles are explicitly completely articulated.

Proposals for ethical issues and sustainability (30%)	An incomplete analysis; possible solutions are not explored fully. Analysis was not carried out sufficiently and is fundamentally flawed. Solutions are illogical.	Acceptable actions are stated but may not be clear or complete. Solutions and ethical analysis are logical but still be superficial at some level.	Possible solutions are explored and articulated clearly. Solutions and ethical analysis are logical and clearly presented.	Possible and creative actions that stay within acceptable ethical boundaries have been presented in detail. Solutions and ethical analysis are articulated at a level that demonstrate extensive reflection and insight.
Presentation of ideas (coherent organization/structure in oral and/or written form, grammar, punctuation, word-use effectiveness) (10%)	Carelessly focus on presenting information, organization is not logical, many spelling and grammar mistakes.	Organization is sometimes not logical or not coherent. May contain a few spelling and grammar mistakes.	Presentation of ideas is clear, coherent, and logical. Rarely found spelling or grammar mistakes.	Presentation of ideas is extremely clear, coherent, and logical. There is almost no spelling or grammar mistakes while the word use is fluent and effective.



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

**Course Name: INTRODUCTION TO BUSINESS
ADMINISTRATION**

Course Code: BA115IU

1. General information

Course designation	<i>Employing the interactive learning and problem-based teaching approach, this course emphasises the interaction between lecturers and students. The lecture materials will be uploaded in Blackboard to help the students to preview the materials and to concentrate on listening and critical thinking during the lecture. This will help students to interact with the lecturer during the classroom. The sessions for presentations and discussions comprise company case studies as well as answering some theoretical and conceptual questions, which help the students to see how the concepts are applied in the real business context. Students will present the case to the class and discuss with the peers. Guest speakers are invited to talk about selected topics or real life experiences.</i>
Semester(s) in which the course is taught	7, 8
Person responsible for the course	
Language	English
Relation to curriculum	<i>Elective</i>
Teaching methods	Lecture, discussion, and assignments.

Workload (incl. contact hours, self-study hours)	Total workload: 127.5 (Estimated) Contact hours: - lecture: 28.5 - Discussion: 9 Private study including examination preparation, specified in hours¹: 90
Credit points	3 credits/4.64ECTS
Required and recommended prerequisites for joining the course	No
Course objectives	<i>This course is designed to provide the student with the below objectives</i> - <i>To provide knowledge of functional areas of business management and the integration among them.</i> - <i>To give students a strong awareness of global issues, including an understanding of approaches to business ethics, business environment and multinational issues.</i> - <i>To develop students' basic research, analysis, writing, teaming, and presentation skills.</i> - <i>To develop students' applied critical thinking skills and communication through the development of a portfolio of a firm in an industry in which they are interested.</i>

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. <i>Explain how rapidly the business world is changing and the importance of life long learning.</i> CLO2. <i>Explain how global issues influence business entities.</i> CLO3. <i>Understanding forms of business of ownership.</i> CLO4. <i>Develop a high level of familiarity with four function of business management.</i> CLO5. <i>Understaing basic characteristic of production and operation management.</i> CLO6. <i>Explain theories about motivation.</i> CLO7. <i>Understanding basic characteristic of HRM in an organisation.</i> CLO8. <i>Understanding basic characteristic of marketing mix.</i>

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (teach); U (Utilize)		
	Topic	Weight	Level
	Classification of structures Managing Within The Dynamic Business Environment	1	T, U
	How Economics Affects Business	1	T, U
	Choosing a Form of Business Ownership	1	T, U
	Management, Leadership, And Employee Empowerment	1	T, U
	Adapting Organizations To Today’s Markets	1	T, U
	Producing World-Class Goods and Services	1	T, U
	Motivating Employees And Building Self-Managed Teams	1	T, U
	HRM: Finding and Keeping the Best Employees	1	T, U
	Marketing: Building Customer Relationships	1	T, U
Developing and Pricing Products and Services	1	T, U	
Distributing Products Quickly and Efficiently	1	T, U	
Using Effective Promotional Techniques	1	T, U	
Examination forms	Constructed-response test		

Study and examination requirements	<i>1. Attend more than 80% of contact hours in order to be accepted to the final examination</i> <i>2. Actively participate in class activities.</i> <i>3. Fulfill tasks given by instructor after class.</i> <i>4. Use their own laptop in class only for learning purpose.</i> <i>5. Read the textbook in advance.</i> <i>6. Access the Blackboard for up-to-date information and material of the course, for online supports from teachers and other students and for practicing and assessment.</i>
Reading list	Textbooks: [1] William G. Nickels, James M. McHugh, Susan M. McHugh – Understanding Business, 11th edition , McGraw-Hill

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program Intended Learning Outcomes (ILO) (a-k) is shown in the following table:

	ILO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x	x									x
2	x	x									x
3		x								x	x
4		x								x	x

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Managing Within The Dynamic Business Environment: Taking Risks And Making Profits	1, 2		Lecture, Discussion	[1] Chapter 1
2	How Economics Affects Business: the Creation and Distribution of Wealth	1, 2	Short essay 1	Lecture, Discussion	[1] Chapter 2
3	Choosing a Form of Business Ownership	3		Lecture, Discussion	[1] Chapter 5
4	Management, Leadership, And Employee Empowerment	4	Short essay 2	Lecture, Discussion	[1] Chapter 7
5	Adapting Organizations To Today's Markets	4		Lecture, Discussion	[1] Chapter 8
6	Review for midterm	1, 2, 3, 4, 5		Lecture, Discussion	

7-8	Midterm				
9	Producing World-Class Goods and Services	5		Lecture, Discussion	[1] Chapter 9
10	Motivating Employees And Building Self-Managed Teams	6		Lecture, Discussion	[1] Chapter 10
11	HRM: Finding and Keeping the Best Employees	7		Lecture, Discussion	[1] Chapter 11
12	Marketing: Building Customer Relationships	8		Lecture, Discussion	[1] Chapter 13
13	Developing and Pricing Products and Services	8		Lecture, Discussion	[1] Chapter 14
14	Distributing Products Quickly and Efficiently	7		Lecture, Discussion	[1] Chapter 15
15	Using Effective Promotional Techniques	7		Lecture, Discussion	[1] Chapter 16
16	COURSE REVIEW	1-7		Lecture, Discussion	
17	GROUP PRESENTATION AND REPORT SUBMISSION	1-7			
18-19	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5	CLO6	CLO7	CLO8
In-class exercises/quizzes/attendance (30%)	Essays 60%Pass	Essays 60%Pass	Report 60%Pass	Essays 60%Pass	Report 60%Pass	Report 60%Pass	Report 60%Pass	Report 60%Pass
Midterm exam (30%)			50%Pass		50%Pass	50%Pass	50%Pass	
Final exam (40%)	50%Pass	50%Pass	50%Pass	50%Pass	50%Pass	50%Pass	50%Pass	50%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Date revised: 04/11/2022

	<i>Ho Chi Minh City, Dean of School of Civil Engineering and Management (Signature)</i> <i>Dr. Nguyen Hoai Nghia</i>



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: INTRODUCTION TO SOCIOLOGY

Course Code: BA116IU

1. General information

Course designation	<i>Introduction to the Social Sciences is designed to introduce the student to the broad and exciting field of the social sciences which embraces a diverse mixture of disciplines of anthropology, sociology, psychology, economics, history, geography, and political science, ect. The course will focus on the field of sociology and its key themes as they relate to the study of management and business as well as modern society. This facilitates the development of awareness of the language and methodology associated with the study of the social sciences. This course will utilize an interdisciplinary approach to study and understand human behavior and various contemporary social issues.</i>
Semester(s) in which the course is taught	7, 8
Person responsible for the course	
Language	English
Relation to curriculum	<i>Elective</i>
Teaching methods	Lecture, discussion, and assignments.

Workload (incl. contact hours, self-study hours)	Total workload: 127.5 (Estimated) Contact hours: - lecture: 28.5 - Discussion: 9 Private study including examination preparation, specified in hours¹: 90	
Credit points	3 credits/4.64 ECTS	
Required and recommended prerequisites for joining the course	No	
Course objectives	<i>This course aims at providing a basic understanding of the nature of social sciences. It introduces an overview of the fields of studies within social sciences. You should be able to do the following upon completion of this class:</i> <i>Explaining several reasons for studying the social sciences.</i> <i>Describing the methods used by social scientists to conduct research.</i> <i>Identifying and discuss key issues involved in debates about social change in areas such as: group and organization, gender, social interaction and network (structure), culture, etc.</i> <i>Developing critical thinking skills as course topics are discussed and debated.</i> <i>Improving writing skills through essays and in-class writing assignments.</i>	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. <i>Know and understand the underlying concepts and principles of social science as they relate to the study of business management.</i> CLO2. <i>Organize ideas gained from theoretical understanding of social science principles and apply them to business and management situations.</i>

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>																											
	Weight: lecture session (3 hours)																											
	Teaching levels: I (Introduce); T (teach); U (Utilize)																											
	<table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Overview of the Social Sciences and Sociology</td><td>2</td><td>T, U</td></tr><tr><td>Understanding Sociology</td><td>2</td><td>T, U</td></tr><tr><td>Sociological Research</td><td>2</td><td>T, U</td></tr><tr><td>Culture</td><td>2</td><td>T, U</td></tr><tr><td>Social Interaction and Social Structure</td><td>2</td><td>T, U</td></tr><tr><td>Groups and Organizations</td><td>2</td><td>T, U</td></tr><tr><td>The family and Intimate Relationships</td><td>2</td><td>T, U</td></tr><tr><td>Stratification by Gender and Age</td><td>1</td><td>T, U</td></tr></table>	Topic	Weight	Level	Overview of the Social Sciences and Sociology	2	T, U	Understanding Sociology	2	T, U	Sociological Research	2	T, U	Culture	2	T, U	Social Interaction and Social Structure	2	T, U	Groups and Organizations	2	T, U	The family and Intimate Relationships	2	T, U	Stratification by Gender and Age	1	T, U
	Topic	Weight	Level																									
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	Groups and Organizations	2	T, U																									
The family and Intimate Relationships	2	T, U																										
Stratification by Gender and Age	1	T, U																										
Examination forms	Constructed-response test																											
Study and examination requirements	<i>1. Attend more than 80% of contact hours in order to be accepted to the final examination</i> <i>2. Actively participate in class activities.</i> <i>3. Fulfill tasks given by instructor after class.</i> <i>4. Use their own laptop in class only for learning purpose.</i> <i>5. Read the textbook in advance.</i> <i>6. Access the Blackboard for up-to-date information and material of the course, for online supports from teachers and other students and for practicing and assessment.</i>																											
Reading list	Textbooks: [1] Schaefer, R. T. (2006), Sociology: A Brief Introduction, 6th ed., McGraw Hill.																											

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program Intended Learning Outcomes (ILO) (a-k) is shown in the following table:

	ILO										
CLO	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	x	x									x
2	x	x									x

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1-2	Overview of the Social Sciences and Sociology <i>Anthropology History Geography Psychology</i> <i>Political science and International Relations</i> <i>Economics and Business Administration Sociology</i> <i>Society, social organisation and social change</i>	1, 2	Assignment 1	Lecture, Discussion	[1] Chapter 1
3-4	Understanding Sociology <i>What is Sociology?</i> <i>The Sociological Imagination</i> <i>Sociology and the Social Sciences</i> <i>Sociology and Common Sense</i> <i>What is Sociological Theory? The Development of Sociology Major Theoretical Perspectives</i> <i>Functionalist Perspective Conflict Perspective Feminist Perspective Interactionist Perspective The Sociological Approach</i> <i>Developing a Sociological Imagination</i>	1, 2	Assignment 2	Lecture, Discussion	[1] Chapter 1
5-6	Sociological Research <i>What is the scientific method? Defining the Problem Reviewing the Literature Formulating the Hypothesis</i> <i>Collecting and Analyzing the Data Developing the Conclusion</i> <i>In Summary: The Scientific Method Major Research Designs</i> <i>Surveys Observation Experiments</i> <i>Use of Existing Sources Ethics of Research</i> <i>Confidentiality Research Funding Value Neutrality</i>	1-2	Assignment 3	Lecture, Discussion	[1] Chapter 2

	<i>Technology and Sociological Research</i>				
7-8	Midterm				
9-10	Culture <i>Development of Culture Around the World Cultural Universals</i> <i>Innovation</i> <i>Globalization, Diffusion, and Technology Sociobiology</i> <i>Elements of Culture</i> <i>Language Norms Sanctions Values</i> <i>Culture and the Dominant Ideology</i> <i>Cultural Variation</i> <i>Aspects of Cultural Variation</i> <i>Attitudes toward Cultural Variation</i>	1, 2	Assignment 4	Lecture, Discussion	[1] Chapter 3
11-12	Social Interaction and Social Structure <i>Social Interaction And Reality</i> <i>Defining and Reconstructing Reality</i> <i>Negotiated Order</i> <i>Elements of Social Structure</i> <i>Statuses</i> <i>Social Roles Groups</i> <i>Social Networks and Technology</i> <i>Social Institutions</i> <i>Social Structure in Global Perspective</i> <i>Durkheim's Mechanical and Organic Solidarity Tönnies's Gemeinschaft and Gesellschaft</i> <i>Lenski's Sociocultural Evolution Approach</i>	1, 2	Assignment 5	Lecture, Discussion	[1] Chapter 5
13-14	Groups and Organizations <i>Understanding Groups</i> <i>Types of Groups Studying Small Groups</i> <i>Understanding Organizations</i> <i>Formal Organizations and Bureaucracies Characteristics of a Bureaucracy Bureaucracy and</i>	1, 2	Assignment 6	Lecture, Discussion	[1] Chapter 6

	<i>Organizational Culture Voluntary Associations</i> <i>The Changing Workplace</i> <i>Organizational Restructuring</i> <i>Telecommuting</i> <i>Electronic Communication</i>				
15-16	The family and Intimate Relationships <i>Global View of the Family</i> <i>Composition: What Is the Family?</i> <i>Kinship Patterns: To Whom Are We Related? Authority Patterns: Who Rules?</i> <i>Studying the Family</i> <i>Functionalist View Conflict View</i> <i>Interactionist View Feminist View</i> <i>Marriage and Family</i> <i>Courtship and Mate Selection</i> <i>Variations in Family Life and Intimate Relationships</i> <i>Child-Rearing Patterns in Family Life</i> <i>Divorce</i> <i>Statistical Trends in Divorce Factors Associated with Divorce Impact of Divorce on Children</i> <i>Diverse Lifestyles</i> <i>Cohabitation Remaining Single</i> <i>Marriage without Children Lesbian and Gay Relationships</i>	1, 2	Assignment 7	Lecture, Discussion	[1] Chapter 14
17	Stratification by Gender and Age <i>Social Construction of Gender</i> <i>Gender Roles in the United States</i> <i>Cross-Cultural Perspective</i>	1, 2	Assignment 8	Lecture, Discussion	[1] Chapter 11
18-19	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2
In-class exercises/quizzes/attendance (30%)	Assignments 1-8 60%Pass	Assignments 1-8 60%Pass
Midterm exam (30%)	50%Pass	50%Pass
Final exam (40%)	50%Pass	50%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Date revised: 04/11/2022

	<i>Ho Chi Minh City, Dean of School of Civil Engineering and Management (Signature)</i> <i>Dr. Nguyen Hoai Nghia</i>



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Business

COURSE SYLLABUS

Course Name: INTRODUCTION TO MICROECONOMICS

Course Code: **BA117 IU**

1. General information

Course designation	<i>Microeconomics is the introductory course in economics. The course is designed to teach you the basic tools of microeconomic analysis. Microeconomics is the branch of economics that deals with the interaction of households and firms in individual markets. Some of the issues we will study include how prices and output levels are determined, what happens when governments intervene in markets, when do markets “fail”, how do markets produce an “efficient” use of a society’s scarce resources and are market outcomes equitable. Learning “to think like an economist” should make you a more informed student, consumer, worker and voter.</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Professor Nguyen Van Phuong
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lectures, projects, quizzes, examinations.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours: 38 (15 classes, 1 class = 3 periods, 1 period = 50 minutes) Private study including examination preparation, specified in hours: 90
Credit points	03 credits/4.64 ECTS

Required and recommended prerequisites for joining the course	None	
Course objectives	At the completion of this course students will be able to: • Determine how elasticity affects consumer demand and firms' production decisions. • Recognize the role that utility plays in consumer consumption choices. • Understand a body of social science knowledge and its disciplinary perspective.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	• CLO1. Recognize the importance that economic models play in economic analysis. • CLO2. Understand opportunity cost and how this concept can be applied in all facets of life. • CLO3: Understand markets characterized by monopoly and imperfect competition.
	Skill	• CLO4. Use supply and demand analysis to predict changes in price/quantities in markets, including when government policies play essential roles in these markets. • CLO5: Apply the relationship between production and costs to determine the profit-maximizing output of firms in different market types.
	Attitude	

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Teaching levels: I (Introduce); T (Teach); U (Utilize)				
	Wk	Topic	Date	Textbook (Mankiw)/Readings	Group Presentation
	1	Course Introduction Basic Concepts of the Economics	Mar/09	Chapter 1 - Lecture Notes/ Chapter 1 & Chapter 3 (Textbook)	
	2	Basic Concepts of the Economics	Mar/16	Chapter 1 - Lecture Notes/ Chapter 2 & Chapter 3 (Textbook)	
	3	Supply – Demand & Market Prices	Mar/23	Chapter 2 - Lecture Notes/ Chapter 4, Chapter 6, Chapter 7 (Textbook)	1
	4	Supply – Demand & Market Prices (con't)	Mar/30	Chapter 2-Lecture Notes/ Chapter 4, Chapter 6, Chapter 7 (Textbook)	2
	5	Elasticity and Its Applications	Apr/6	Chapter 3-Lecture Notes/ Chapter 5 (textbook)	3
	6	Theories of Consumer Choice	Apr/13	Chapter 4 - Lecture Notes/ Chapter 21 (Textbook)	4
	7	MID-TERM	Apr/20		5&6
	8	Production and the Cost of production	Apr/27	Chapter 5- Lecture Notes/ Chapter 13 (Textbook)	7
	9	Perfect competitive market	May/04	Chapter 6 - Lecture Notes/ Chapter 14 (Textbook)	8
	10	Monopoly	May/11	Chapter 7 - Lecture Notes/ Chapter 15 (textbook)	9
	11	Monopolistic competition & Oligopoly	May/18	Chapter 8 - Lecture Notes/ Chapter 16, 17 (textbook)	10
	12	Monopolistic competition & Oligopoly (Cont')	May/25	Chapter 8 - Lecture Notes/ Chapter 16, 17 (textbook)	11
	13	Market for factor inputs	Jun/04	Chapter 9 - Lecture Notes/ Chapter 18 (Textbook)	12
		Final Exam			
Examination forms	Essay questions, case studies				

Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.
Reading list	Principles of Microeconomics, 8th Edition, 2018, by N. Gregory Mankiw, or <i>Principles of Economics, 8th Edition, 2018, by N. Gregory Mankiw.</i> (Earlier versions are acceptable.)

2. Planned learning activities and teaching methods

Wk	Topic	Date	Textbook (Mankiw)/Readings	Group Presentation
1	Course Introduction Basic Concepts of the Economics	Mar/09	Chapter 1 - Lecture Notes/ Chapter 1 & Chapter 3 (Textbook)	
2	Basic Concepts of the Economics	Mar/16	Chapter 1 - Lecture Notes/ Chapter 2 & Chapter 3 (Textbook)	
3	Supply – Demand & Market Prices	Mar/23	Chapter 2 - Lecture Notes/ Chapter 4, Chapter 6, Chapter 7 (Textbook)	1
4	Supply – Demand & Market Prices (con't)	Mar/30	Chapter 2-Lecture Notes/ Chapter 4, Chapter 6, Chapter 7 (Textbook)	2
5	Elasticity and Its Applications	Apr/6	Chapter 3-Lecture Notes/ Chapter 5 (textbook)	3
6	Theories of Consumer Choice	Apr/13	Chapter 4 - Lecture Notes/ Chapter 21 (Textbook)	4
7	MID-TERM	Apr/20		5&6
8	Production and the Cost of production	Apr/27	Chapter 5- Lecture Notes/ Chapter 13 (Textbook)	7
9	Perfect competitive market	May/04	Chapter 6 - Lecture Notes/ Chapter 14 (Textbook)	8
10	Monopoly	May/11	Chapter 7 - Lecture Notes/ Chapter 15 (textbook)	9
11	Monopolistic competition & Oligopoly	May/18	Chapter 8 - Lecture Notes/ Chapter 16, 17 (textbook)	10
12	Monopolistic competition & Oligopoly (Cont')	May/25	Chapter 8 - Lecture Notes/ Chapter 16, 17 (textbook)	11
13	Market for factor inputs	Jun/04	Chapter 9 - Lecture Notes/ Chapter 18 (Textbook)	12
	Final Exam			

3. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5	CLO6	CLO7
Class participation and preparation (10%)							
Group assignment (20%)		60%Pass	60%Pass	60%Pass			
Mid-term Exam (30%)	Q1 50%Pass	Q1 50%Pass			Q2 50%Pass	Q3 60%Pass	
Final exam (40%)			Q1 50%Pass	Q2 50%Pass			Q3 50%Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

4. Rubrics (optional)

4.1. Grading checklist

Grading checklist for Written Reports			
Student:		HW/Assignment:	
Date:		Evaluator:	
	Max.	Score	Comments
Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content	10		
Introduction demonstrates thorough knowledge of relevant background and prior work	15		
Analysis and discussion demonstrate good subject mastery	30		
Summary and conclusions appropriate and complete	5		
Organization (10%)			
Distinct introduction, body, conclusions	5		
Content clearly and logically organized, good transitions	5		
Presentation (20%)			
Correct spelling, grammar, and syntax	10		
Clear and easy to read	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

4.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.

1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

4.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective,	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.

	thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	position (perspective, thesis/ hypothesis).		
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness)	Delivery techniques (posture, gesture, eye contact, and vocal	Delivery techniques (posture, gesture, eye contact, and vocal	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the

	make the presentation compelling, and speaker appears polished and confident.	expressiveness) make the presentation interesting, and speaker appears comfortable.	expressiveness) make the presentation understandable, and speaker appears tentative.	understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

5. Date revised: July 17th, 2022

Ho Chi Minh City, 17/7/2022
Dean of School of Business



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Business

COURSE SYLLABUS

Course Name: Introduction to Psychology

Course Code: BA118IU

1. General information

Course designation	<i>Introduction to Psychology focuses on the application of scientific psychology to human life. Emphasis is on "normal" behavior and its antecedents. Includes the study of broad categories of human behavior through various psychological models, Psychology is an introductory course that studies the foundations of human behaviors, thoughts, and emotions. The course will approach various topics from a scientific perspective, using systematic investigation and critical thinking methods rather than personal impressions and "common sense". The knowledge of Psychology is very useful for students who need to learn people as producers and consumers.</i>
Semester(s) in which the course is taught	1, 2,3
Person responsible for the course	Nguyen Vo Hien Chau, MBA.
Language	English
Relation to curriculum	Elective
Teaching methods	Lecture, project, discussion, presentation.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (whether lecture, class discussion, project preparation.): 37.5 Private study including examination preparation, specified in hours ¹ : 90
Credit points	3 credits/4.64 ECTS

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Required and recommended prerequisites for joining the course	None								
Course objectives	The chief aims of this course are for students to learn: ○ The subject of human behavior, ○ The methods of social sciences, ○ The resources for continuous learning after the course, ○ The applications in both professional and personal realms, and ○ The enjoyment of learning.								
Course learning outcomes	Upon the successful completion of this course students will be able to: <table> <tr> <th>Competency level</th><th>Course learning outcome (CLO)</th></tr> <tr> <td>Knowledge</td><td>CLO1. Learn how people behave—what they see, what they feel, how they work, how they love, what make them happy, and so on.</td></tr> <tr> <td>Skill</td><td> CLO2. Learn how to use a vast array of information, from websites to scholarly articles to books, so that students can continue to learn, to grow in the understanding of human behavior for the rest of their lives. CLO3: Learn how to detect wrong information—what some of them are, how they come about, how they are advocated, why they are wrong, what the is contrary evidence, and how to take the next step </td></tr> <tr> <td>Attitude</td><td>CLO4: Learn how to apply them to students' life. This applies to students, to their career, and to their personal relationships such as with friends, parents, future children, bosses, peers, and opponents.</td></tr> </table>	Competency level	Course learning outcome (CLO)	Knowledge	CLO1. Learn how people behave—what they see, what they feel, how they work, how they love, what make them happy, and so on.	Skill	CLO2. Learn how to use a vast array of information, from websites to scholarly articles to books, so that students can continue to learn, to grow in the understanding of human behavior for the rest of their lives. CLO3: Learn how to detect wrong information—what some of them are, how they come about, how they are advocated, why they are wrong, what the is contrary evidence, and how to take the next step	Attitude	CLO4: Learn how to apply them to students' life. This applies to students, to their career, and to their personal relationships such as with friends, parents, future children, bosses, peers, and opponents.
Competency level	Course learning outcome (CLO)								
Knowledge	CLO1. Learn how people behave—what they see, what they feel, how they work, how they love, what make them happy, and so on.								
Skill	CLO2. Learn how to use a vast array of information, from websites to scholarly articles to books, so that students can continue to learn, to grow in the understanding of human behavior for the rest of their lives. CLO3: Learn how to detect wrong information—what some of them are, how they come about, how they are advocated, why they are wrong, what the is contrary evidence, and how to take the next step								
Attitude	CLO4: Learn how to apply them to students' life. This applies to students, to their career, and to their personal relationships such as with friends, parents, future children, bosses, peers, and opponents.								

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introduction to the Class Discovering Psychology?	2.5	I, T
	Sensation and Perception	2.5	I, T, U
	Learning	2.5	T, U
	Memory	1.5	T, U
	Remembering and forgetting	1	T, U
	Intelligence	1.5	T, U
	Emotional Intelligence	1	T, U
	Motivation	2.5	T, U
	Personality	2.5	I, T, U
	Adolescence and adulthood	1.5	T, U
	Major Depressive Disorder	1	T
	Health, Stress and Coping	2.5	T
	Anxiety Disorder	1	I, T, U
	Mood Disorder	1	I, T, U
	Therapies	0.5	I, T, U
	Social psychology	2.5	T, U
Cialdini 6 principles of persuasion	2.5	T, U	
How do we love and cheat	2.5	T, U	
Examination forms	Multiple-choice questions Quiz and Essay Questions Exam.		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.		

Reading list	<u>Textbook required:</u> [1] Rod Plotnik and Haig Kouyoumdjian, <i>Introduction to Psychology</i>, ninth edition <u>Further reading:</u> [2] Helen Fisher, <i>Anatomy of Love – A natural history of Mating Marriage and Why we Stray</i>, 2016. [3] Robert B. Cialdini, <i>Influence – the Psychology of Persuasion</i>, 2007 [4] David H. Barlow, <i>Clinical Handbook of Psychological Disorders</i>, 2008

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program Intended Learning Outcomes (ILO) (1-6) is shown in the following table:

	ILO					
CLO	1	2	3	4	5	6
1						
2						
3						
4						

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction to the Class Discovering Psychology?		Class Discussion Topic 1: What is your favorite psychology topic?	Lecture, Discussion	[1]
2	Sensation and Perception		Class Discussion Topic 2A: Choose your favorite case about sensation and perception (E.g. Why most Fast-Food restaurant choose Red as their main logo color?) You can choose another related topic, but please consult with me in advance. Topic 2B: Different perception about love/beauty/money/happiness	Lecture, Discussion, HW	[1]
3	Learning		Group presentation and Class Discussion Topic 3: Should we use punishment or reinforcement to	Lecture, Discussion, HW Group presentation	[1]

			improve people performance (You can choose to work either in Education, Human Resource Management, or social life field)		
4	Memory		Group presentation Topic 4: Explain how 3 main types of memory work in a marketing funnel? (For this topic, you should choose a specific brand to analyze)	Lecture, Discussion, HW	[1]
4	Remembering and forgetting			Lecture, Discussion, HW	[1]
5	Intelligence		Group presentation and Class Discussion Topic 5A: The importance of applying multiple intelligence theory in career orientation.	Lecture, Discussion, HW	[1]
5	Emotional Intelligence		Topic 5B: The importance of Emotional Intelligence in study and work.(you should compare and contrast people with high and low EQ)		[1]
6	Motivation		Group presentation and Class Discussion Topic 6: What motivate us to work? Is money the most wanted reward in an organization? (Think about when you graduate, which factors may affect your career selection)	Lecture, Discussion, HW	[1]
7	Personality		Group presentation and Class Discussion Topic 7: How much do you understand yourself? (Pros and Cons of each element in Big 5 traits) How your personality fit with your dream job?	Lecture, Discussion, HW	[1]
8	Anxiety Disorder		Group presentation and Class Discussion	Lecture, Discussion	[1][4]

			Topic 8: People awareness of Major Depressive Disorder, when and how to seek for help.		
8	Mood Disorder			Lecture, Discussion	[1][4]
8	Therapies			Lecture, Discussion	[1][4]
9,10	Midterm Weeks				
11	Adolescence and adulthood		Group presentation and Class Discussion Topic 9: The effects of Generation gap between parents and children - Common problems and how to overcome	Lecture, Exercise	[1]
11	Major Depressive Disorder			Lecture, Discussion, HW	[1]
12	Health, Stress and Coping		Group presentation and Class Discussion Topic 10: How stress affects student life and how to deal with it? (You should define the stressors before discussing about the solution)	Lecture, Discussion, HW	[1]
13	Social psychology		Group presentation and Class Discussion Topic 12: How social proof influence people purchasing decision.		[1]
14	Cialdini 6 principles of persuasion		Group presentation and Class Discussion Topic 14: Apply principles of Persuasion to analyze how a livestream affect customer purchasing decision shorturl.at/couQ1 (You can choose a specific Livestream and analyze it)		[3]
15	How do we love and cheat		Group presentation and Class Discussion		[2]

			Topic 13: Sex before marriage, should or should not? Pros and Cons of each decision.		
16	Final Exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
Individual Quiz (10%)	Quiz 1-10 90%Pass			
Group Presentation (20%)		Presentation Part 2,3 50%Pass		Presentation Part 3 80% Pass
Midterm exam (30%)	Q1 50%Pass	Q2 50% Pass	Q3 60% Pass	Q4 80% Pass
Final Exam (40%)	Q1 50%Pass	Q2 50% Pass	Q3 60% Pass	Q4 80% Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Plan			
Student:		HW/Assignment:	
Date:		Evaluator:	
	Max.	Score	Comments
Technical content			
Issue/problem identification	15		
Short, simple, and clear argument/question/issue raised	15		
Apply theory to analyze to realistic case. Clearly analyze how the theory work or not work to the case.	30		
Group Opinion	10		
Presentation (10%)			
Well-designed, well-structured with logic flow of argument	20		
Clear voice, gesture, and presentation skills	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description

5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

6. Date revised: August 2nd, 2022

Ho Chi Minh City, 02/08/2022

Head/Dean of Department/School

(Signature)

<Full Name>



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
Department/School of Business

COURSE SYLLABUS

Course Name: INTRODUCTION TO MACROECONOMICS

Course Code: BA119IU

1. General information

Course designation	<i>This subject will provide the fundamental macroeconomic theories and concepts of economic as they apply within the contemporary work environment.</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	
Language	English
Relation to curriculum	<i>Compulsory</i>
Teaching methods	Lecture, lesson, project, seminar.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours: 37.5 (15 sessions, 1 session = 3 periods, 1 period = 45 minutes) Expected self-study hours: 90 (reading, research, working on group assignments)
Credit points	3 Credits/4.64 ECTS
Required and recommended prerequisites for joining the course	None

Course objectives	This course is designed to introduce students to the concepts, models, policies, and analysis in macroeconomics. After taking this course, the students should be able to: - Analyze the economic situation in their country and develop plans for effective response. - Measure a country’s economic performance and macroeconomic indicators such as unemployment, inflation, the balance of payment, etc. - Understand the effect of various kinds of government policies on the economy and develop activities to deal with the negative effects.	
Course learning outcomes	Upon the successful completion of this course, students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge (I, R)	CLO1. Identifying how to measure a nation’s income, cost of living, unemployment rate, and other important macroeconomic indicators in the economy through group assignments/class discussions. CLO2. Explain macroeconomic policies such as monetary policy and fiscal policy, and environmental factors that can affect a country’s performance and enhance economic growth. CLO3. Describe the challenges and opportunities that countries are facing today such as inflation, net capital outflow, trade deficit/ surplus, budget deficit/surplus, investment, and national saving, economic fluctuations...
	Skill	CLO4. Explain the macroeconomic practices of an organization through assignments and presentations. CLO5. Develop communication skills via in-class presentations (70% of students get 2/4 in the skill assessment rubrics). CLO6. Develop teamwork skills via group assignments (70% of students get 2/4 in the skill assessment rubrics).
	Attitude	CLO7. Apply professional ethics, moral, and proper understanding of integrity, responsibility, accountability.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Learning levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Measuring a Nation's Income	1	I, T
	Measuring Cost of Living	1	I, T
	Production and Growth	1	I,T, U
	Saving, Investment and Financial Investments	1	T, U
	Unemployment Rate	1	I, T
	The Monetary System	2	I, T
	Money Growth & Inflation	1	I, T
	Open- Economy Macroeconomics: Basic Concepts	1	I, T
	A Macroeconomic Theory of the Open Economy.	1	T, U
	Aggregate Demand and Aggregate Supply	2	I, T
	The Influence of Monetary and Fiscal Policies on Aggregate Demand	2	T, U
	Short-run tradeoffs between inflation and the unemployment rate	1	T, U
Examination forms	Multiple-choice questions, short-answer questions / essays		
Study and examination requirements	- Attend more than 80% of contact hours in order to be accepted to the final examination - Actively participate in class activities - Fulfill tasks given by the instructor after class - Use their own laptop in class only for learning purposes - Read the textbook in advance - Access the course Blackboard for up-to-date information and material of the course.		

Reading list	Main textbooks: <i>Mankiw, N.G., 2017, Principles of Macroeconomics or Principles of Economics, 8th Edition, South-Western, Cengage Learning. (Version 1)</i> <i>or Mankiw, N.G., 2017, Principles of Economics, 8th Edition, South-Western, Cengage Learning (Version 2)</i> <i>(These two versions of the textbooks are similar in main contents and chapters. If you have obtained a copy of version 2 for Introduction to Microeconomics then you can reuse the textbook for this class.)</i> Other data sources: [1] Wall Street Journal: www.ws.com [2] Yahoo Finance: http://finance.yahoo.com [3]. Bloomberg Net: www.bloomberg.com [4] Financial Times: www.ft.com [5] IMF: www.imf.org [6] World Bank: www.worldbank.com [7] ADB: https://www.adb.org

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-7) and Program Intended Learning Outcomes (ILO) (1-6) is shown in the following table:

CLO	ILO					
	1	2	3	4	5	6
1	x	X	x	x	x	x
2	x	X	x	x	x	x
3	x	X	x	x	x	x
4		X	x	x	x	x
5			x	x	x	x
6			x	x	x	x
7			x	x	x	x

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Measuring a nation's income • Measurement of GDP • Components of GDP • Characteristics of GDP • Real versus Nominal GDP • GDP and Economic Well-Being	1,2,5	Tests Peer evaluations Class-performance evaluations	Lecture, Group discussion, Group's assignment guidelines	Textbook, Chapter 23
2	Measuring the Cost of Living • The Consumer Price	1,2,5	Tests Peer evaluations	Lecture, group discussion	Textbook, Chapter 24

	- Index - Correcting Economic Variables for the - Effects of Inflation - GDP Deflator versus Consumer Price Index - Real and Nominal Interest Rate		Class-performance evaluations		
3	Production and Growth - Economic Growth around the World - Productivity: Its Role and Determinants - Economic Growth and Public Policies. - The Importance of the Long-term growth.	1-3	Tests Peer evaluations Class-performance evaluations	Lecture, group discussion	Textbook, Chapter 25
4	Saving, Investment and the country's financial system - Financial institutions in the US. Economy - Saving, Investment in the national income - Accounts - Market for loanable fund	1,4	Tests Peer evaluations Class-performance evaluations	Lecture, group discussion	Textbook, Chapter 26
5	Unemployment and Its Natural Rate - Identifying Unemployment - Job Search - Minimum-Wage Laws - Unions and Collective Bargaining - Theories of Efficiency Wages	1,2, 3	Tests Peer evaluations Class-performance evaluations	Lecture, group discussion	Textbook, Chapter 28
6 + 7	The Monetary System - The Meaning of Money - The Federal Reserve System - Banks and the Money Supply	1,4,5	Tests Peer evaluations Class-performance evaluations	Lecture, group discussion	Textbook, Chapter 29
8	Money Growth and Inflation - The Classical Theories of Inflation - The Costs of Inflation	1, 3	Tests Peer evaluations Class-performance evaluations	Lecture, group discussion	Textbook, Chapter 30
9	Midterm				
10	Open-Economy Macroeconomics: Basic Concepts - The International Flows of Goods and Capital - The Price of International	1,2,3	Tests Peer evaluations Class-performance evaluations	Lecture, group discussion	Textbook, Chapter 31 Case study: The Nominal Exchange rate during a hyperinflation.

	Transactions: Real and Nominal Exchange Rate • The First Theory of Exchange rate determination: • Purchasing Power Parity				
11	A Macroeconomic Theory of the Open Economy. • Supply and Demand for Loanable Funds and For Foreign Currency Exchange • Equilibrium in the Open Economy • How policies and Events affect an Open Economy	2-4	Tests Peer evaluations Class-performance evaluations	Lecture, group discussion	Textbook, Chapter 32
12 + 13	Aggregate Demand and Aggregate Supply • Three key facts about the economic fluctuation. • Explaining short-run economic fluctuation • The aggregate Demand Curve (AD) • The Aggregate Supply Curve (AS) • Two causes of economic fluctuations	1-5	Tests Peer evaluations Class-performance evaluations	Lecture, group discussion Submission of group assignments.	Textbook, Chapter 33
14+15	The Influence of Monetary and Fiscal Policies on Aggregate Demand • How Monetary policy influences Aggregate Demand? • How fiscal policy influences Aggregate demand • Using policies to stabilize the economy.	4, 6	Tests Peer evaluations Class-performance evaluations	Lecture, group discussion	Textbook, Chapter 34
16	The Short-run trade-off between inflation and unemployment. • The Phillips Curve • Shifts in the Phillips curve: The role of Expectation • Shifts in the Phillip curves: the Role of supply shocks • Cost of reducing inflation	LO3-6	Tests Peer evaluations Class-performance evaluations	Lecture, group discussion	Textbook: Chapter 35
17	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5	CLO6	CLO7
In-class exercises/quizzes (10%)	70 %Pass	70 %Pass	70 %Pass	70 %Pass	70 %Pass	70 %Pass	70 %Pass
Homework exercises (20%)	70 %Pass	70 %Pass	70 %Pass	70 %Pass	70 %Pass	70 %Pass	70 %Pass
Mid-term exam (30%)	70 %Pass	70 %Pass	70 %Pass	70 %Pass	70 %Pass	70 %Pass	70 %Pass
Final exam (40%)	70 %Pass	70 %Pass	70 %Pass	70 %Pass	70 %Pass	70 %Pass	70 %Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

6. Date revised:

	<i>Ho Chi Minh City, dd/mm/yyyy</i> <i>Head/Dean of Department/School</i> <i>(Signature)</i> <i><Full Name></i>

GRADING RUBRIC FOR WRITTEN COURSEWORK

MIDTERM EXAMINATION – Subject (ID subject)

Academic year: 2022 – 2023 (term ...)

Criteria	INADEQUATE 10% – 49%	ADEQUATE 50% - 59%	ABOVE AVERAGE 60% - 74%	EXEMPLARY ≥ 75%
Organisation and clarification	Does not organise ideas logically and with clarification. Limited evidence of coherence Ideas lack consistence	Generally organised logically, with evidence of progression Occasionally, there may be a lack of focus or ideas may be tangential	Clear organization and progression. Responds appropriately and relevantly, although some ideas are underdeveloped.	Response is focused, detailed and non-tangential. Shows a high degree of attention to logic and reasoning of points. Clearly leads the reader to the conclusion and stirs thought regarding the topic
Originality and usefulness of the analysis	Demonstrates an incomplete grasp of the task. There is no overall sense of creative coherence. Arguments are addressed incompletely.	Shows ability to identify issues, gather the facts and develop claims. Argument are addressed well but no links with evidence	Shows strong ability to identify issues, gather the facts and develop claims as well as link claims with evidence. Overall, an acceptable solution is offered and explained	Shows strong ability to identify issues, gather the facts and develop claims as well as link claims with evidence. Satisfactory solutions are offered and supported
Use of data/information	Shows little information from sources. Poor handling of sources	Shows moderate amount of source information incorporated. Some key points supported by sources. Quotations may be poorly integrated into	Draws upon sources to support most points. Some evidence may not support arguments or may appear where inappropriate. Quotations integrated well	Draws upon primary and secondary source information in useful and illuminating ways to support key points. Excellent integration of quoted material into paragraphs. Source cited

		paragraphs. Some possible problems with source citations	into paragraphs. Sources cited correctly	correctly
Use of frameworks	Shows limited ability to structure problems in correspondence to theoretical frameworks	Shows effort to link problems with the theoretical frameworks. There are still some mistakes	Shows ability to structure problems in correspondence to theoretical frameworks correctly. Minor mistakes in resolving problems	Shows ability to structure problems in correspondence to theoretical frameworks correctly. The problems are well resolved
Quality of arguments	Shows little attempt to offer support for key claims or to relate evidence to analysis. The reasons offered are irrelevant.	Shows argument of poor quality. Weak, undeveloped reasons are offered to support key claims	Shows clear, relevant and logical arguments.	Shows identifiable, reasonable and sound arguments. Clear reasons are offered to support key claims.



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Business

COURSE SYLLABUS

Course Name: Business Computing Skills

Course Code: BA120IU

1. General information

Course designation	<i>This course is designed to combine knowledge of business and information technologies. It explores the breadth of Information and Communications Technology (ICT), including business hardware and software, professional computing ethics and behaviors as well as design information systems. Also, students will be knowledgeable about computing terminology, the fundamentals of database management, presentation graphics and an introduction to data analysis. The course will prepare students to work in a variety of industries, involving business administration, economics, finance, and accounting.</i>
Semester(s) in which the course is taught	2, 3
Person responsible for the course	Dr. Nguyen, Ngoc Truong Minh
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, Lesson, Practical Problems
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours: 37.5 (7.5 hours of lecture and 30 hours of exercise) Private study including examination preparation, specified in hours ¹ : 90
Credit points	03 credits/4.64 ECTS
Required and recommended prerequisites for joining the course	None
Course objectives	This course accentuates the abilities of computer systems and their applications in business. The course will provide a solid foundation of knowledge about skills that students must develop to effectively use computerized decision tools for typical business problems. Specific objectives include: • explore basic relationships of computer products and concepts • create MS Access objects, enter criteria into data, form expressions and

¹ When calculating contact time, each contact hour is counted as a full hour because the organization of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

	create functions, and customize the appearance of forms and reports • create document templates in MS Word that will help businesses streamline their correspondence, use mail merge, print mailing labels, templates, newsletters, and flyers • analyze data with practical analysis of real business problems and streamline office tasks to present it in a way the managers can use • acquire strong ability in using MS Excel software as tools in decision-making. This course will provide a complete learning in MS Excel.			
Course Learning Outcomes	Upon the successful completion of this course, students will be able to:			
	Competency Level	Course Learning Outcomes (CLOs)		
	Knowledge	CLO1. Summarize different technical knowledge to support management and supervisors. CLO2. Describe written directions and specific documents for business general purposes.		
	Skills	CLO3. Identify critically the use of information and communications technologies (ICT). CLO4. Classify Internet and office skills including e-mail management, web research, and document exchange. CLO5. Generalize technical computer-based skills needed to prepare documents, presentations, and spreadsheets using Microsoft’s Office Suite Software (including Access, Word, and Excel).		
	Attitude	CLO6. Recognize the advantages and disadvantages of ICT and the Internet in general and in business activities particularly.		
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: Lecture Session (01 class)² Learning levels: I (Introduce); R (Re-enforce); M (Master)			
	Topic		Weight	Level
	Introduction to Information Systems		1	I
	Computer Hardware and Software		1	I
	The Internet, Personal Email Account		1	I, R
	MS Access – Creating Relational Tables		1	I, R
	MS Access – Basic and Advanced Queries		1	I, R
	MS Access – Forms and Reports Customization		1	I
	MS Word – Creating Templates		1	I, R
	MS Word – Mail Merge and Protecting Documents		1	I
	MS Excel – Formulas and Functions		1	I
	MS Excel – Charting		1	I
	MS Excel – Pivoting Data (Table and Chart)		2	I, R
	MS Excel – Sorting and Filtering		1	I
	MS Excel – Data Validation, What-If Analysis		2	I, R
	MS Excel – Introduction to VBA		1	I

² Total: 15 classes; 1 class = 03 periods; 01 period = 50 minutes

Examination forms	Multiple-Choice Questions, Problem-Solving Questions
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.
Reading list	[1] James A. O'Brien, George Marakas (2017), Introduction to Information Systems, 12 th edition, Mc-Graw Hill. [2] Ron McFadyen (2021), Relational Databases and Microsoft Access 365. [3] Joan Lambert, Microsoft Word 2019 [4] Michael Alexander, Dick Kusleika (2019), Excel 2019 Bible, Wiley. [5] Hector Guerrero (2016), Excel Data Analysis Modeling and Simulation, Springer.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLOs) (1-6) and Program/Student Learning Outcomes (PLOs) (1-9) is shown in the following table:

CLOs	PLOs									
	1	2	3	4	5	6	7	8	9	10
1			x							
2			x							
3					x					
4						x				
5						x				
6				x		x				

3. Planned learning activities and teaching methods

Week	Topics	CLOs	Assessments	Learning Activities	Resources
1	Introduction to Information Systems	3,6	In-class Ex.	Lecture, Discussion, Group Work	[1]
2	Computer Hardware and Software	3,6	In-class Ex.	Lecture, Discussion, Group Work	[1]
3	The Internet, Personal Email Account	3,4,6	In-class Ex. Quiz 1	Lecture, Discussion	[1]
4	MS Access – Creating Relational Tables	1,2,5	In-class Ex.	Lecture, Discussion	[2]
5	MS Access – Basic and Advanced Queries	1,2,5	In-class Ex.	Lecture, Discussion	[2]
6	MS Access – Forms and Reports Customization	1,2,5	In-class Ex. Quiz 2	Lecture, Discussion	[2]
7	MS Word – Creating Templates	1,2,5	In-class Ex.	Lecture, Discussion	[3]
8	MS Word – Mail Merge and Protecting Documents	1,2,4, 5	In-class Ex. Quiz 3	Lecture, Discussion	[3]

9-10	Midterm	1,2,3,4,5,6			
11	MS Excel – Formulas and Functions	1,4,5	In-class Ex.	Lecture, Discussion	[4]
12	MS Excel – Charting	1,4,5	In-class Ex.	Lecture, Discussion	[4]
13	MS Excel – Pivoting Data (Table and Chart)	1,4,5	In-class Ex. Quiz 4	Lecture, Discussion	[4]
14	MS Excel – Sorting and Filtering	1,4,5	In-class Ex.	Lecture, Discussion	[4]
15	MS Excel – Data Validation, What-If Analysis	1,4,5	In-class Ex. Quiz 5	Lecture, Discussion	[4]
16	MS Excel – Introduction to VBA	1,4,5	In-class Ex.	Lecture, Discussion	[5]
17	Revision	1,4,5		Review-Test	
18	Final exam	1,4,5			

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5	CLO6
In-class Exercises/Quizzes (30%)	x 70% Pass	x 70% Pass	x 70% Pass	x 70% Pass	x 70% Pass	x 70% Pass
Midterm Exam (30%)	x 70% Pass	x 70% Pass	x 70% Pass	x 70% Pass	x 70% Pass	x 70% Pass
Final Exam (40%)	x 70% Pass			x 70% Pass	x 70% Pass	

Note: % Pass – Target that % of students having scores greater than 70 out of 100.

5. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:		HW/Assignment:	
Date:		Evaluator:	
	Max.	Score	Comments
Technical Content (60%)	60		
<i>Abstract clearly identifies purpose and summarizes principal content</i>	10		
<i>Introduction demonstrates thorough knowledge of relevant background and prior work</i>	15		
<i>Analysis and discussion demonstrate good subject mastery</i>	30		
<i>Summary and conclusions appropriate and complete</i>	5		
Organization (10%)	10		

<i>Distinct introduction, body, conclusions</i>	5		
<i>Content clearly and logically organized, good transitions</i>	5		
Presentation (20%)	20		
<i>Correct spelling, grammar, and syntax</i>	10		
<i>Clear and easy to read</i>	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response.
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted.

Note: This rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Criteria	COMPLETELY FAIL Below 10%	INADEQUATE 10% - 49%	ADEQUATE 50% - 59%	ABOVE AVERAGE 60% - 74%	EXEMPLARY ≥ 75%
Organization and clarification	<i>No evidence of organization and coherence.</i>	<i>Does not organize ideas logically and with clarification. Limited evidence of coherence. Ideas lack consistence.</i>	<i>Generally organized logically, with evidence of progression. Occasionally, there may be a lack of focus or ideas may be tangential.</i>	<i>Clear organization and progression. Responds appropriately and relevantly, although some ideas are underdeveloped.</i>	<i>Response is focused, detailed and non-tangential. Shows a high degree of attention to logic and reasoning of points. Clearly leads the reader to the conclusion and stirs thought regarding the topic.</i>



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Business**

COURSE SYLLABUS

Course Name: Principles of Management

Course Code: BA123IU

1. General information

Course designation	<i>This subject will provide the fundamental theories and concepts of management as they apply within the contemporary work environment.</i>
Semester(s) in which the course is taught	1, 2, 3
Person responsible for the course	
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture; Case study; Group discussion
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours: 37.5 (15 sessions, 1 session = 3 periods, 1 period = 45 minutes) Expected self-study hours: 90 (reading, research, working on group assignments)
Credit points	3 credits/4.64 ECTS
Required and recommended prerequisites for joining the course	None

Course Description	Students will be provided with the fundamental theories and concepts of management as they apply within the contemporary work environment. The course is an introduction to the basic concepts on management roles such as planning and controlling, organization, leadership and motivation. Through this course, students will become acquainted with different management approaches and the challenges for management in the twenty-first century.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge (I, R)	CLO1. Identifying how managers use leadership theories, motivation theories, and other basic concepts of teamwork and communication in high-performance organizations through group assignments. CLO2. Explain four management functions: planning, organizing, leading, and controlling CLO3. Describe the challenges and opportunities that organizations are facing today such as globalization, diversity, technology, and social responsibility.
	Skill (R)	CLO4. Explain the managerial practices of an organization through assignments and presentations. CLO5. Develop communication skills via in-class presentations (70% of students get 2/4 in the skill assessment rubrics). CLO6. Develop teamwork skills via group assignments (70% of students get 2/4 in the skill assessment rubrics).
	Attitude	CLO7. Follow ethical issues in managerial situations.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Learning levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introducing Management	1	I, T
	Management Learning Past to Present	1	I, T
	Environment, Innovation, and Sustainability	1	I, T
	Global Management and Cultural Diversity	1	T, U
	Planning Processes and Techniques	1	I, T
	Control Processes and Systems	1	I, T
	Organization Structures and Designs	1	I, T
	Leading and Leadership Development	2	I, T
	Individual Behavior	1	T, U
	Motivation Theory and Practice	2	I, T
Teams and Teamwork	1	T, U	
Communication and Collaboration	1	T, U	
Examination forms	Short-answer questions		
Study and examination requirements	Regular and punctual attendance at lectures is expected in this course. University regulations indicate that if students attend less than eighty percent of scheduled classes, they may not be considered for final assessment. Discussions are strongly encouraged. Students must gain more than 50/100 points overall to pass this course.		
Reading list	[1] Schermerhorn, John R. 2013. <i>Management</i> . 12th ed. John Wiley & Sons, Inc. [2] Schermerhorn, J., Davidson, P., Woods, P., Factor, A., Simon, A. and McBarron, E., 2017. <i>Management, 6th Asia-Pacific Edition</i> . 6th ed. Sydney: John Wiley. [3] DuBrin, Andrew J. 2008. <i>Essentials of Management</i> . 8th ed. Cengage Learning.		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-7) and Program Learning Outcomes (PLO) (1,3,4,5,6) is shown in the following table:

CLOs	PLOs				
	1	3	4	5	6
1	x	x	x	x	x
2	x	x	x	x	x
3	x	x	x	x	x
4		x	x	x	x
5		x	x	x	x
6		x	x	x	x
7		x	x	x	x

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessment	Learning activities	Resources
1	Chapter 1: Introduction to Management	1;2;	MCQs; Case analysis	Lecture, Group discussion, Group's assignment guidelines	[1] Chapter 1.
2	Chapter 2: Management Learning Past to Present	1;2; 3	MCQs; Case analysis	Lecture, Group discussion	[1] Chapter 2.
3	Chapter 4: Environment, Innovation, and Sustainability	1;2; 3	MCQs; Case analysis	Lecture, Group discussion	[1] Chapter 4.
4	Chapter 5: Global Management and Cultural Diversity	1;2; 3	MCQs; Case analysis	Lecture, Group discussion	[1] Chapter 5.
5	Chapter 8: Planning Processes and Techniques	2; 4	MCQs; Case analysis	Lecture, Group discussion	[1] Chapter 8.
6	Chapter 9: Control Processes and Systems	2; 4	MCQs; Case analysis	Lecture, Group discussion	[1] Chapter 9.
7	Chapter 11: Organization Structures and Designs	2; 4	MCQs; Case analysis	Lecture, Group discussion	[1] Chapter 11.
8	Group assignments	4; 5; 6; 7	Oral presentatio	Oral Presentations;	

			n (70%*)	Q&A (for CLO 7); Feedback	
9	MIDTERM EXAM	1;2; 3;4; 5;6; 7	Short-answer questions; MCQs; Case analysis 70%*		
10	Chapter 14: Leading and Leadership Development	2; 4	MCQs; Case analysis	Lecture, Group discussion	[1] Chapter 14.
11	Chapter 15: Individual Behaviour	2; 4	MCQs; Case analysis	Lecture, Group discussion	[1] Chapter 15.
12	Chapter 16: Motivation Theory and Practice	2; 4	MCQs; Case analysis	Lecture, Discussion,	[1] Chapter 16.
14	Chapter 17: Teams and Teamwork	1; 6; 7	MCQs; Case analysis	Lecture, Group discussion	[1] Chapter 17.
	Chapter 18: Communication and Collaboration	1; 5; 7	MCQs; Case analysis	Lecture, Group discussion	[1] Chapter 18.
15	Group assignment	4; 5; 6; 7	MCQs; Case analysis	Oral Presentations; Q&A (for CLO 7); Feedback	
16	Final examination	1;2; 3;4; 5;6; 7	Short-answer questions; MCQs; Case analysis 70%*		

Note: * Target that 70% of students having scores greater than 70 out of 100.

4. Rubrics (optional)

GRADING RUBRIC FOR WRITTEN COURSEWORK
MIDTERM EXAMINATION – Subject (ID subject)
Academic year: 2022 – 2023 (term ...)

Criteria	INADEQUATE 10% – 49%	ADEQUATE 50% - 59%	ABOVE AVERAGE 60% - 74%	EXEMPLARY ≥ 75%
Organisation and clarification	Does not organise ideas logically and with clarification Limited evidence of coherence Ideas lack consistence	Generally organised logically, with evidence of progression Occasionally, there may be a lack of focus or ideas may be tangential	Clear organization and progression. Responds appropriately and relevantly, although some ideas are underdeveloped	Response is focused, detailed and non-tangential. Shows a high degree of attention to logic and reasoning of points. Clearly leads the reader to the conclusion and stirs thought regarding the topic
Originality and usefulness of the analysis	Demonstrates an incomplete grasp of the task. There is no overall sense of creative coherence. Arguments are addressed incompletely.	Shows ability to identify legal issues, gather the facts and develop claims. Argument are addressed well but no links with evidence	Shows strong ability to identify legal issues, gather the fact and develop claims as well as link claims with evidence. Overall, an acceptable solution is offered and explained	Shows strong ability to identify legal issues, gather the facts and develop claims as well as link claims with evidence. Satisfactory solutions are offered and supported
Use of data/information	Shows little information from sources. Poor handling of sources	Shows moderate amount of source information incorporated. Some key points supported by sources. Quotations may be poorly integrated into paragraphs. Some possible problems with source citations	Draws upon sources to support most points. Some evidence may not support arguments or may appear where inappropriate. Quotations integrated well into paragraphs. Sources cited correctly	Draws upon primary and secondary source information in useful and illuminating ways to support key points. Excellent integration of quoted material into paragraphs. Source cited correctly
Use of	Shows ability limited to	Shows effort to link problems with the	Shows ability to structure problems	Shows ability to structure problems in

frameworks	structure problems in correspondence to theoretical frameworks	theoretical frameworks. There are still some mistakes	in correspondence to theoretical frameworks correctly. Minor mistakes in resolving problems	correspondence to theoretical frameworks correctly. The problems are well resolved
Quality of arguments	Shows little attempt to offer support for key claims or to relate evidence to analysis. Reasons offered are irrelevant.	Shows argument of poor quality. Weak, undeveloped reasons are offered to support key claims	Shows clear, relevant and logical arguments.	Shows identifiable, reasonable and sound arguments. Clear reasons are offered to support key claims.

5.

6. Date revised: August 23, 2022

	<i>Ho Chi Minh City, 23/08/2022</i> <i>Head/Dean of Department/School</i>



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
Department of Accounting/School of Business

COURSE SYLLABUS
Course Name: Organizational Behavior
BA130IU

1. General information

Course designation	<i>The course is organized around three determinants of behavior in organizations: 1) individuals, 2) groups/teams, and 3) organizational structure. Particular emphasis will be placed on individual difference, attitude, motivation, job satisfaction, communication, leadership, stress, change, and organizational culture. Vigorous class discussions, presentations, cases, activities, along with group projects and self quizzes will provide the basis for the learning environment in the classroom.</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Mai Ngọc Khương Room: O1.306 Telephone: N/A E-mail: mnkhuong@hcmuii.edu.vn Consultation Hours: Fri, 1:00pm – 4:00 pm
Language	English

Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, group project
Workload (incl. contact hours, self-study hours)	<i>(Estimated) Total workload: 127.5</i> <i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 37.5</i> <i>Private study including examination preparation, specified in hours¹: 90</i>
Credit points	3 credits/4.64 ECTS
Required and recommended prerequisites for joining the course	None
Course objectives	After taking this class, the students should all be able: - To demonstrate an understanding of the effects that individuals and groups have on organizations, and apply that understanding to the solving organizational problems. - To demonstrate an understanding of the theories and concepts of individual, group and organizational behavior as they apply to organizational decision-making. - To apply concepts and theories about individual style and perception to solving organizational problems. - To apply theories of motivation to the management of organizations. - To use systematic problem-solving approaches in developing solutions to organizational problems. - To exhibit clear and concise written reports and oral presentations skills to communicate understanding and application of theories, topics and concepts. - To effectively participate individually, and as a member of small and large teams, in the completion of all course assignments.

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course learning outcomes	Upon the successful completion After completing the course, students should have developed skills in: <table border="1"> <tr> <th>Competency level</th><th>Course learning outcome (CLO)</th></tr> <tr> <td>Knowledge</td><td> LO1. Compare the effects of various psychological factors on individual behavior LO2. Examine major inter-personal forces that alter human behaviors in team/group context in oral form. (Discuss) LO3. Classify the potential effects of organizational-level factors (such as structure, culture and change) on organizational behavior </td></tr> <tr> <td>Skill</td><td> LO4. Apply a motivational theory to a realistic motivational problem in an organizational context; provide management recommendations consistent with theory </td></tr> <tr> <td>Attitude</td><td> LO5. Solve typical organizational-level issues to achieve overall organizational success in the context of cultural diversity and global sustainability. </td></tr> </table>	Competency level	Course learning outcome (CLO)	Knowledge	LO1. Compare the effects of various psychological factors on individual behavior LO2. Examine major inter-personal forces that alter human behaviors in team/group context in oral form. (Discuss) LO3. Classify the potential effects of organizational-level factors (such as structure, culture and change) on organizational behavior	Skill	LO4. Apply a motivational theory to a realistic motivational problem in an organizational context; provide management recommendations consistent with theory	Attitude	LO5. Solve typical organizational-level issues to achieve overall organizational success in the context of cultural diversity and global sustainability.
Competency level	Course learning outcome (CLO)								
Knowledge	LO1. Compare the effects of various psychological factors on individual behavior LO2. Examine major inter-personal forces that alter human behaviors in team/group context in oral form. (Discuss) LO3. Classify the potential effects of organizational-level factors (such as structure, culture and change) on organizational behavior								
Skill	LO4. Apply a motivational theory to a realistic motivational problem in an organizational context; provide management recommendations consistent with theory								
Attitude	LO5. Solve typical organizational-level issues to achieve overall organizational success in the context of cultural diversity and global sustainability.								
Content	This course is designed to give students the basic knowledge of human behavior in organizations and how to apply this knowledge to increase the organization effectiveness.								
Examination forms	Multiple-choice questions								

Study and examination requirements	In order to pass this course, the students must: – achieve a composite mark of at least 50; – attend at least 80 percent of the total sessions of the course; – make a satisfactory attempt at all assessment tasks (see below).
Reading list	<u>Text book</u> [1] · Robbins, S. P. and Judge, T. A. (2013), <i>Essentials of Organizational Behavior</i>, 12th edition, Pearson Education. <u>Reference book:</u> [2] · John W. Newstrom, (2014), <i>Organizational Behavior-Human Behavior at Work</i>, 14th Edition, International Edition, McGraw Hill. [3] · Hellrigel, D., Slocum, J., & Woodman (2010), <i>Organizational Behavior</i>, 13th edition, Thomson-South Western. – <u>Additional material</u> The instructor will provide his/her lecture notes and additional reading available on Blackboard. However this is not an automatic entitlement for students doing this subject. Note that this is not a distance-learning course, and the students are expected to attend lectures and take notes. This way, the students will get the additional benefit of class interaction and demonstration.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-...) and Program/Student Learning Outcomes (SLO) (1 -...) is shown in the following table:

	PLO					
CLO	1	2	3	4	5	6
1	x					
2	x		x			
3	x		x			
4		x	x			
5					x	x

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessment	Learning activities	Resource
1	Chapter 1: What is Organizational Behavior	1		Lecture	[1]
2	Chapter 2: Diversity in Organizations Chapter 3: Attitudes and Job Satisfaction	1	Group project1	Lecture	[1]
3	Chapter 4: Personality and Values	1	Group project2	Lecture	[1]
4	Chapter 5: Perception and Individual Decision Making	1	Group project3	Lecture	[1]
5	Chapter 6: Emotions and Moods	1	Group project4	Lecture	[1]
6	Chapter 7: Motivation Concepts	1,4	Group project5	Lecture	[1]
7	Chapter 8: Motivation: From Concepts to Applications	1,4	Group project6	Lecture	[1]
8	Chapter 9: Foundations of Group Behavior	1	Group project7, Quiz1	Lecture	[1]
9	Mid-term exam	1,4	MCQ exam		
10	Chapter 10: Understand Work Teams	2	Group project8	Lecture	[1]
11	Chapter 11: Power and Politics	2,5	Group project9	Lecture	[1]
12	Chapter 13: Leadership	2,5	Group project10	Lecture	[1]
13	Chapter 14: Foundations of Organization Structure	3	Group project11	Lecture	[1]
14	Chapter 15: Organizational Culture	3,5	Group project12	Lecture	[1]
15	Chapter 17:	3,5	Group	Lecture	[1]

	Organizational Change and Stress Management		project13		
16	Chapter 18: Conflict and Negotiation	3,5	Group project14, Quiz2	Lecture	[1]
17	Final exam	2,3,5	MCQ exam		

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5
Quizzes (20%)	Qz1 70%Pass	Qz2 70%Pass	Qz2 70%Pass		
Group Project (10%)				GP1,2,3,4, 5,6 70%Pass	GP7,8,9,10,11,12,13,14 70%Pass
Midterm exam (30%)	50% Pass			50% Pass	
Final exam (40%)		50% Pass	50% Pass		50% Pass

LEARNING ASSESSMENT

GRADING RUBRIC FOR WRITTEN COURSEWORK

MIDTERM EXAMINATION – Subject (ID subject)

Academic year: 2022 – 2023 (term ...)

Criteria	INADEQUATE 10% – 49%	ADEQUATE 50% - 59%	ABOVE AVERAGE 60% - 69%	GOOD 70% - 84%	EXEMPLARY ≥ 85%
Organisation and clarification	Does not organise ideas logically and with clarification. Limited evidence of coherence Ideas lack consistence	Generally organised logically, with evidence of progression Occasionally, there may be a lack of focus or ideas may be tangential	Clear organization and progression. Responds appropriately and relevantly, although some ideas are underdeveloped.		Response is focused, detailed and non-tangential. Shows a high degree of attention to logic and reasoning of points. Clearly leads the reader to the conclusion and stirs thought regarding the topic
Originality and usefulness of the analysis	Demonstrates an incomplete grasp of the task. There is no overall sense of creative coherence. Arguments are addressed incompletely.	Shows ability to identify legal issues, gather the facts and develop claims. Argument are addressed well but no links with evidence	Shows strong ability to identify legal issues, gather the facts and develop claims as well as link claims with evidence. Overall, an acceptable solution is offered and explained		Shows strong ability to identify legal assadsassues, gather the facts and develop claims as well as link claims with evidence. Satisfactory solutions are offered and supported
Use of data/information	Shows little information from sources. Poor handling of sources	Shows moderate amount of source information incorporated.	Draws upon sources to support most points.		Draws upon primary and secondary source information in useful and illuminating ways to support key points.

		Some key points supported by sources. Quotations may be poorly integrated into paragraphs. Some possible problems with source citations	Some evidence may not support arguments or may appear where inappropriate. Quotations integrated well into paragraphs. Sources cited correctly		Excellent integration of quoted material into paragraphs. Source cited correctly
Use of frameworks	Shows limited ability to structure problems in correspondence to theoretical frameworks	Shows effort to link problems with the theoretical frameworks. There are still some mistakes	Shows ability to structure problems in correspondence to theoretical frameworks correctly. Minor mistakes in resolving problems		Shows ability to structure problems in correspondence to theoretical frameworks correctly. The problems are well resolved
Quality of arguments	Shows little attempt to offer support for key claims or to relate evidence to analysis. The reasons offered are irrelevant.	Shows argument of poor quality. Weak, undeveloped reasons are offered to support key claims	Shows clear, relevant and logical arguments.		Shows identifiable, reasonable and sound arguments. Clear reasons are offered to support key claims.

	1.	City, dd/mm/yyyy	Ho Chi Minh
	2.	Department/School	Head/Dean of
	3.		(Signature)
	4.		
	5.		<Full Name>



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Business

COURSE SYLLABUS

Course Name: Management Information System

Course Code: BA169IU

1. General information

Course designation	<i>This subject will provide a broad introduction to four key aspects of data science: data retrieval and manipulation, data visualization, statistical computation and machine learning, and presentation and communication.</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Dr. Ha Minh Tri Dr. Nguyen Hong Anh
Language	English
Relation to curriculum	Elective
Teaching methods	Lecture, lesson, project
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (please specify whether lecture, exercise, etc.): 37.5 Private study including examination preparation, specified in hours ¹ : 90
Credit points	3 credits/4.64 ECTS
Required and recommended prerequisites for joining the course	None

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course objectives	This course is designed to introduce students to the concepts, analysis, and activities involved in management of information system. More specific, students will get to know about Enterprise Resource Planning system (ERP) and how to apply this system to manage business from every perspectives.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Describe what MIS is and how it is important for business. CLO2. Get to know ERP and other popular systems are in used in business today. CLO3. Understanding different kinds of data and how to collect and process them. CLO4: How to apply MIS to achieve Operational excellence and customer intimacy. CLO5: How to use MIS to shape business strategy. CLO6: How to apply MIS to support E-commerce CLO7: How to use MIS to manage knowledge and intelligence within organization.
	Skill	CLO8: In use of ERP and Camtasia for individual project.
	Attitude	CLO4. Reason around ethical and privacy issues in data and ethical practices.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introduction to Management Information System & How it is important for business.	1	I, T
	MIS for collaboration and e-global business.	1	T, U
	MIS in designing business strategy	2	T, U
	Ethical and social issues relating to MIS	1	T
	Mis in the term of Operational excellence and customer intimacy.	2	T, U
	Mis in supporting E-commerce	2	T
	Mis in managing knowledge and artificial intelligence.	2	T, U
	Project guideline	2	T U
Examination forms	Short-answer questions		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.		
Reading list	[E-commerce 2021–2022: business. technology. society., Global Edition 17th Edition by Kenneth Laudon (Author), Carol Traver (Author) ISBN-13: 978-1292409313 ISBN-10: 1292409312		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program/Student Learning Outcomes (SLO) (1-6) is shown in the following table:

CLO	SLO					
	1	2	3	4	5	6
1	x					
2	x					
3						x
4				x		

3. Planned learning activities and teaching methods

We ek	Topic	CL O	Assessm ents	Learning activities	Resour ces
1	Introduction to Management Information System & How it is important for business.	1		Lecture, Discussion, Inclass	[1].0. [2].1.
2	MIS for collaboration and e-global business.	2		Lecture, Discussion, Inclass	[1].9.
3-4	MIS in designing business strategy	2		Lecture, Discussion, Inclass	[2].2.
5	Ethical and social issues relating to MIS	2	Quiz	Lecture, Discussion, Inclass	[1]. 2, 4 [2]. 2
6	Project	3		Project	
					[2]. 3
7	Midterm				
8-9	Mis in the term of Operational excellence and customer intimacy.	2	HW3	Lecture, Discussion, Inclass	[2]. 4. [1]. 18.
10-11	Mis in supporting E-commerce	2		Lecture, Discussion, Inclass	[3]. 10
12-13	Mis in supporting E-commerce	2	HW4	Lecture, Discussion, Inclass	[2]. 8
14-15	ERP project Review for final exam	2	Quiz15	Lecture, Discussion, Inclass	[1]. 12, 13 [2]. 9, 16
16	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
In-class exercises/quizzes (15%)	Qz1 60%Pass	Qz6 60%Pass		

Project HW (15%)	HW2 50%Pass		HW2 50%Pass	
Midterm exam (30%)		Q2 50%Pass		
Final exam (40%)	Part 50%Pass	Part 50%Pass		

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:	HW/Assignment:		
Date:	Evaluator:		
	Max.	Score	Comments
Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content	10		
Introduction demonstrates thorough knowledge of relevant background and prior work	15		
Analysis and discussion demonstrate good subject mastery	30		
Summary and conclusions appropriate and complete	5		
Organization (10%)			
Distinct introduction, body, conclusions	5		
Content clearly and logically organized, good transitions	5		
Presentation (20%)			
Correct spelling, grammar, and syntax	10		
Clear and easy to read	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1

Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

6. Date revised: January 12, 2022

Ho Chi Minh City, dd/mm/yyyy
Head/Dean of Department/School
(Signature)

<Full Name>



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Business

COURSE SYLLABUS

Course Name: Management Information System

Course Code: BA169IU

1. General information

Course designation	<i>This subject will provide a broad introduction to four key aspects of data science: data retrieval and manipulation, data visualization, statistical computation and machine learning, and presentation and communication.</i>
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Dr. Ha Minh Tri Dr. Nguyen Hong Anh
Language	English
Relation to curriculum	Elective
Teaching methods	Lecture, lesson, project
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (please specify whether lecture, exercise, etc.): 37.5 Private study including examination preparation, specified in hours ¹ : 90
Credit points	3 credits/4.64 ECTS
Required and recommended prerequisites for joining the course	None

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Course objectives	This course is designed to introduce students to the concepts, analysis, and activities involved in management of information system. More specific, students will get to know about Enterprise Resource Planning system (ERP) and how to apply this system to manage business from every perspectives.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Describe what MIS is and how it is important for business. CLO2. Get to know ERP and other popular systems are in used in business today. CLO3. Understanding different kinds of data and how to collect and process them. CLO4: How to apply MIS to achieve Operational excellence and customer intimacy. CLO5: How to use MIS to shape business strategy. CLO6: How to apply MIS to support E-commerce CLO7: How to use MIS to manage knowledge and intelligence within organization.
	Skill	CLO8: In use of ERP and Camtasia for individual project.
	Attitude	CLO4. Reason around ethical and privacy issues in data and ethical practices.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Introduction to Management Information System & How it is important for business.	1	I, T
	MIS for collaboration and e-global business.	1	T, U
	MIS in designing business strategy	2	T, U
	Ethical and social issues relating to MIS	1	T
	Mis in the term of Operational excellence and customer intimacy.	2	T, U
	Mis in supporting E-commerce	2	T
	Mis in managing knowledge and artificial intelligence.	2	T, U
	Project guideline	2	T U
Examination forms	Short-answer questions		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.		
Reading list	[E-commerce 2021–2022: business. technology. society., Global Edition 17th Edition by Kenneth Laudon (Author), Carol Traver (Author) ISBN-13: 978-1292409313 ISBN-10: 1292409312		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program Intended Learning Outcomes (ILO) (1-6) is shown in the following table:

CLO	ILO					
	1	2	3	4	5	6
1	x					
2	x					
3						x
4				x		

3. Planned learning activities and teaching methods

We ek	Topic	CL O	Assessm ents	Learning activities	Resour ces
1	Introduction to Management Information System & How it is important for business.	1		Lecture, Discussion, Inclass	[1].0. [2].1.
2	MIS for collaboration and e-global business.	2		Lecture, Discussion, Inclass	[1].9.
3-4	MIS in designing business strategy	2		Lecture, Discussion, Inclass	[2].2.
5	Ethical and social issues relating to MIS	2	Quiz	Lecture, Discussion, Inclass	[1]. 2, 4 [2]. 2
6	Project	3		Project	
					[2]. 3
7	Midterm				
8-9	Mis in the term of Operational excellence and customer intimacy.	2	HW3	Lecture, Discussion, Inclass	[2]. 4. [1]. 18.
10-11	Mis in supporting E-commerce	2		Lecture, Discussion, Inclass	[3]. 10
12-13	Mis in supporting E-commerce	2	HW4	Lecture, Discussion, Inclass	[2]. 8
14-15	ERP project Review for final exam	2	Quiz15	Lecture, Discussion, Inclass	[1]. 12, 13 [2]. 9, 16
16	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
In-class exercises/quizzes (15%)	Qz1 60%Pass	Qz6 60%Pass		

Project HW (15%)	HW2 50%Pass		HW2 50%Pass	
Midterm exam (30%)		Q2 50%Pass		
Final exam (40%)	Part 50%Pass	Part 50%Pass		

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:	HW/Assignment:		
Date:	Evaluator:		
	Max.	Score	Comments
Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content	10		
Introduction demonstrates thorough knowledge of relevant background and prior work	15		
Analysis and discussion demonstrate good subject mastery	30		
Summary and conclusions appropriate and complete	5		
Organization (10%)			
Distinct introduction, body, conclusions	5		
Content clearly and logically organized, good transitions	5		
Presentation (20%)			
Correct spelling, grammar, and syntax	10		
Clear and easy to read	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

6. Date revised: January 12, 2022

Ho Chi Minh City, dd/mm/yyyy
Head/Dean of Department/School
(Signature)

<Full Name>



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Industrial Engineering and Management

COURSE SYLLABUS
Course Name: Production Management

Course Code: **IS019IU**

1. General information

Course designation	Introduction to production systems. Production planning and control in decision making. Forecasting. Aggregate production planning. Capacity planning. Materials requirement planning. Advanced techniques and approaches in modern production planning and control for designing production systems.
Semester(s) in which the course is taught	4
Person responsible for the course	Tran Van Ly
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, homework.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (please specify whether lecture, exercise, etc.): 37.5 Private study including examination preparation, specified in hours ¹ : 90
Credit points	3 credits/4.64 ECTS

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Required and recommended prerequisites for joining the course	None		
Course objectives	Students will be provided with knowledge and skills of forecasting, inventory, aggregate planning, MPS/MRP, facility layout and location, and production scheduling & sequencing.		
Course learning outcomes	Upon the successful completion of this course students will be able to:		
	Competency level	Course learning outcome (CLO)	
	Knowledge	CLO1. Understand the adequate knowledge and analysis for decision making in modern production systems, such as forecasting, inventory, aggregate planning. CLO2. Understand the approaches and techniques in MPS/MRP, facility layout and location, and production scheduling & sequencing.	
	Skill	CLO3. Work effectively in group project of production activities/processes in a specific context; combining the techniques to improve the practical cases. Respond to the needs of community and industrial sectors	
	Attitude	CLO4. Identify and follow strictly ethical disciplines in operations	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Lecture 1: Introduction to Production Management	1	I, T
	Lecture 2: Forecasting	1	I, T
	Lecture 3: Inventory Management	2	I, T
	Lecture 4: Aggregate Planning	1	I, T
	Lecture 5: Modern Production System	2	I, T
	Lecture 6: Material Requirement Planning (MRP)	2	I, T
	Lecture 7: Facility layout and Location	2	I, T
Lecture 8: Scheduling & Sequencing	1	I, T	
Examination forms	Short-answer questions, exercises		

Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.
Reading list	[1] Russell & Taylor, Operations Management, Along the Supply Chain. 7th ed., John Wiley & Son, Inc. [2] W. J. Hopp and M. L. Spearman (2008), Factory Physics: The Foundations of Manufacturing Management, 3rd ed., Irwin/McGraw-Hill. [3] D. Sipper and R. L. Bulfin, (1997), Production: Planning, Control, and Integration, McGraw Hill. [4] Edward A. Silver, David F. Pyke and Rein Peterson, Inventory Management and Production Planning and Scheduling, 3rd ed., John Wiley & Sons.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program Intended Learning Outcomes (ILO) (1-7) is shown in the following table:

CLO	ILO						
	1	2	3	4	5	6	7
1		x					
2		x					
3						x	
4				x			

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Lecture 1: Introduction to Production Management	1		Lecture, Group work	[1]. 1
2	Lecture 2: Forecasting	1	HW 1	Lecture, Group work	[1].12
3 & 4	Lecture 3: Inventory Management	1,3,4	HW 2	Lecture, Group work	[1].13
5	Lecture 4: Aggregate Planning	1,3,4	HW 3	Lecture, Group work	[1]. 14
6 & 7	Lecture 5: Modern Production System	3		Lecture, Group work	[1]. 16
8	Review for Midterm				
	Midterm				

9 & 10	Lecture 6: Material Requirement Planning (MRP)	2, 3, 4	HW 4	Lecture, Group work	[1]. 15
11&12	Lecture 7: Facility layout and Location	2, 3, 4	HW5	Lecture, Group work	[1]. 7
13	Lecture 8: Scheduling & Sequencing	2, 3, 4	HW 6	Lecture, Group work	[1]. 17
14	Project Presentation	2, 3, 4		Problems solving Group work	[1].
15	Review for Final Exam				
	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
Homework exercises (30%)	HW1-2 50%Pass	HW4, HW5, HW6 50%Pass	HW1-6 50%Pass	HW1-6 50%Pass
Midterm exam (30%)	Q1 50%Pass	Q2 50%Pass	Q3, Q4 50%Pass	
Final exam (40%)	Q1 50%Pass	Q2 50%Pass	Q3, Q4 50%Pass	

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:		HW/Assignment:	
Date:		Evaluator:	
	Max.	Score	Comments
Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content	10		
Introduction demonstrates thorough knowledge of relevant background and prior work	15		
Analysis and discussion demonstrate good subject mastery	30		
Summary and conclusions appropriate and complete	5		
Organization (10%)			
Distinct introduction, body, conclusions	5		
Content clearly and logically organized, good transitions	5		

Presentation (20%)			
Correct spelling, grammar, and syntax	10		
Clear and easy to read	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.

Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

6. Date revised: March 23, 2022

Ho Chi Minh City, dd/mm/yyyy

***Dean of School Industrial Engineering and
Management***

(Signature)

Dr. Nguyen Van Hop



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Industrial Engineering and Management

COURSE SYLLABUS
Course Name: Project Management

Course Code: **IS026IU**

1. General information

Course designation	This course is developed to provide the principal concept on project management which was characterized by the project management body of knowledge guide (PMBOK Guide). This guide emphasizes the five project process groups of initiating, planning, executing, controlling and closing, and the nine knowledge areas of project integration, scope, time, cost, quality, human resources, communication, risk, and procurement management.
Semester(s) in which the course is taught	4
Person responsible for the course	Tran Van Ly
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, homework.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (please specify whether lecture, exercise, etc.): 37.5 Private study including examination preparation, specified in hours ¹ : 90
Credit points	3 credits/4.64 ECTS

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Required and recommended prerequisites for joining the course	None	
Course objectives	Students will be provided with knowledge and skills of constructing the network (AON & AOA), GANNT Chart, solving the network; Resource allocation, resource loading & levelling; Project budgeting & cost estimation, risk management; Project quality management; Project human resource management; Project procurement management; Project executing, monitoring & control to closing the project	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Able to align the project to the organization's strategic plans and business justification throughout its lifecycle; to identify project goals, constraints, deliverables, performance criteria, control needs, and resource requirements in consultation with stakeholders. CLO2. Able to manage the scope, cost, timing, and quality of the project, at all times focused on project success as defined by project stakeholders Able to Implement general business concepts, practices, and tools to facilitate project success.
	Skill	CLO3. Work effectively in group project in a specific context; combining the techniques to conduct practical cases. Respond to the needs of community and industrial sectors
	Attitude	CLO4. Able to Apply appropriate legal and ethical standards. Adapt project management practices to meet the needs of stakeholders from multiple sectors of the economy (i.e. consulting, government, arts, media, and charity organizations); Identify and follow strictly ethical disciplines in project management

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i>		
	Weight: lecture session (3 hours)		
	Teaching levels: I (Introduce); T (Teach); U (Utilize)		
	Topic	Weight	Level
	Lecture 1: Introduction to Project Management	1	I, T
	Lecture 2: Project management processes for a project	1	I, T
	Lecture 3: Work breakdown structure	1	I, T
	Lecture 4: Project scheduling	1	I, T
	Lecture 5: Resource allocation	1	I, T
	Lecture 6: Logical Framework	2	I, T
	Lecture 7: Project cost management	1	I, T
	Lecture 8: Project risk management	1	I, T
	Lecture 9: Project quality management	1	I, T
	Lecture 10: Project human resource management	1	I, T
	Lecture 11: Project procurement management	1	I, T
Lecture 12: Project executing, monitoring & control.	1	I, T	
Lecture 13: Project closing	1	I, T	
Examination forms	Short-answer questions, exercises		
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.		
Reading list	[1] Book name: A Guide to the project management body of knowledge (PMBOK® Guide). 5 th Edition, Newtown Square, Pa. : Project Management Institute, Inc. [2] Project management: A managerial approach / Jack R. Meredith, Samuel J. Mantel. 7 th Edition, Hoboken, N.J. : Wiley ; Chichester : John Wiley [distributor], 2009. [3] The project management life cycle/ Jason West land. Kogan Page Limited, 2006		

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Program/Student Learning Outcomes (SLO) (1-7) is shown in the following table:

	SLO						
CLO	1	2	3	4	5	6	7
1		x					
2		x					
3						x	
4				x			

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Lecture 1: Introduction to Project Management, project life cycle and organization	1		Lecture, Group work	[1].
2	Lecture 2: Project management processes for a project - Common project management process interactions. - Project management process groups. - Initiating process group - Planning process group	1	HW 1	Lecture, Group work	[1].
3	Lecture 3: Work breakdown structure	1,3,4	HW 2	Lecture, Group work	[1].
4	Lecture 4: Project scheduling. - Constructing the network: AON & AOA - Gantt chart - Solving the network - Using Microsoft Project software	1,3,4	HW 3	Lecture, Group work	[1].
5	Lecture 5: Resource allocation - Critical path method – Crashing a project - Resource allocation problem - Resource loading - Resource leveling - Constrained resource scheduling	1,3,4	HW 4	Lecture, Group work	[1].
6 & 7	Lecture 6: Logical Framework Approach (LFA)	3		Lecture, Group work	[1].
8	Review for Midterm				
	Midterm				
9	Lecture 7: Project cost management Project budgeting & Cost estimation - Top-Down budgeting - Bottom-Up budgeting - Improving the process of cost estimation	2, 3, 4	HW 5	Lecture, Group work	[1].

10	Lecture 8: Risk management. - Risk management planning - Risk identification - Risk analysis - Risk monitoring and control - Using Crystal Ball software		HW 6	Lecture, Group work	
11	Lecture 9: Project quality management - Plan quality - Perform quality assurance - Perform quality control	2, 3, 4	HW 7	Lecture, Group work	[1].
12	Lecture 10: Project human resource management - Develop human resource plan - Acquire project team - Develop project team - Manage project team	2, 3, 4	HW 8	Lecture, Group work	[1].
13	Lecture 11: Project procurement management - Plan procurements - Conduct procurements - Administer procurements - Close procurements	2, 3, 4	HW 9	Lecture, Group work	[1].
14	Lecture 12: Project executing, monitoring & control.	2, 3, 4	HW 10	Lecture, Group work	[1].
15	Lecture 13: Project closing Project Presentation Review for Final Exam	2, 3, 4		Problems solving Group work	[1].
	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4
Homework exercises (30%)	HW1-2 50%Pass	HW4, HW5, HW6 50%Pass	HW7-8 50%Pass	HW9-10 50%Pass
Midterm exam (30%)	Q1 50%Pass	Q2 50%Pass	Q3, Q4 50%Pass	
Final exam (40%)	Q1 50%Pass	Q2 50%Pass	Q3, Q4 50%Pass	

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:	HW/Assignment:		
Date:	Evaluator:		
	Max.	Score	Comments

Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content	10		
Introduction demonstrates thorough knowledge of relevant background and prior work	15		
Analysis and discussion demonstrate good subject mastery	30		
Summary and conclusions appropriate and complete	5		
Organization (10%)			
Distinct introduction, body, conclusions	5		
Content clearly and logically organized, good transitions	5		
Presentation (20%)			
Correct spelling, grammar, and syntax	10		
Clear and easy to read	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.

Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.

Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

6. Date revised: March 23, 2022

Ho Chi Minh City, dd/mm/yyyy

***Dean of School Industrial Engineering and
Management***

(Signature)

Dr. Nguyen Van Hop



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Computer Science and Engineering

COURSE SYLLABUS

Course Name: Theoretical Models in Computing

Course Code: IT063

1. General information

Course designation	This course is oriented to those undergraduate students who require a working knowledge of numerical methods
Semester(s) in which the course is taught	3
Person responsible for the course	Dr. Ha Viet Uyen Synh
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, project, seminar.
Workload (incl. contact hours, self-study hours)	Total workload: 195 Contact hours: 45 (lecture) + 30 (laboratory) Private study including examination preparation, specified in hours: 120
Credit points	Number of credits : 4 credits/7.09 ECTS Lecture: 3 Laboratory: 1
Required and recommended prerequisites for joining the course	
Course objectives	This course is oriented to those undergraduate students who require a working knowledge of numerical methods. Topics to be covered include solving nonlinear equations and linear systems, interpolation and least square method, numerical evaluation of derivatives, integral and solution of differential equations. The focus will be on understanding the solving techniques and the engineering meaning of diver problems, and not on rigorous proofs. ❖
Course learning outcomes	CLO 1. Solve numerically nonlinear equations by bisection, iterative and Newton methods.

	CLO 2. Solve big linear systems by exact and iterative methods. CLO 3. Fit data by interpolation polynomials, Spline $\diamond$ polynomials and least square methods. CLO 4. Evaluate numerically derivatives and integrals. CLO 5. Solve numerically Boundary value problems by Euler, Euler improved and Finite Difference methods. CLO 6. Study diverse engineering problems by numerical methods <table><tr><th>Competency level</th><th>Course learning outcome (CLO)</th></tr><tr><td>Knowledge</td><td>1,2,3,4,5</td></tr><tr><td>Skill</td><td>6</td></tr><tr><td>Attitude</td><td></td></tr></table>	Competency level	Course learning outcome (CLO)	Knowledge	1,2,3,4,5	Skill	6	Attitude																							
Competency level	Course learning outcome (CLO)																														
Knowledge	1,2,3,4,5																														
Skill	6																														
Attitude																															
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Chapter 1. Introduction</td><td>3</td><td>I</td></tr><tr><td>Chapter 2. Errors & Taylor Series</td><td>3</td><td>T,U</td></tr><tr><td>Chapter 3. Roots of Non-linear Equations</td><td>3</td><td>T,U</td></tr><tr><td>Chapter 4. Linear Algebraic Equations</td><td>6</td><td>T,U</td></tr><tr><td>Chapter 5. Optimization</td><td>6</td><td>T,U</td></tr><tr><td>Chapter 6. Curve Fitting & Interpolation</td><td>6</td><td>T,U</td></tr><tr><td>Chapter 7. Numerical Differentiation and Integration</td><td>6</td><td>T,U</td></tr><tr><td>Chapter 8. Ordinary Differential Equations</td><td>6</td><td>T,U</td></tr><tr><td>Chapter 9. Partial Differential Equations</td><td>6</td><td>T,U</td></tr></table>	Topic	Weight	Level	Chapter 1. Introduction	3	I	Chapter 2. Errors & Taylor Series	3	T,U	Chapter 3. Roots of Non-linear Equations	3	T,U	Chapter 4. Linear Algebraic Equations	6	T,U	Chapter 5. Optimization	6	T,U	Chapter 6. Curve Fitting & Interpolation	6	T,U	Chapter 7. Numerical Differentiation and Integration	6	T,U	Chapter 8. Ordinary Differential Equations	6	T,U	Chapter 9. Partial Differential Equations	6	T,U
Topic	Weight	Level																													
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Chapter 7. Numerical Differentiation and Integration	6	T,U																													
Chapter 8. Ordinary Differential Equations	6	T,U																													
Chapter 9. Partial Differential Equations	6	T,U																													
Examination forms	Multiple-choice questions, short-answer questions																														
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.																														
Reading list	1. Steven C. Chapra, Raymond P. Canale, Numerical methods for engineers 6th, 2008																														

2. Learning Outcomes Matrix

The relationship between Course Learning Outcomes (CLO) (1-6) and Program/Student Learning Outcomes (SLO) (1-6) is shown in the following table:

	SLO					
CLO	1	2	3	4	5	6
1	x	x				
2	x					
3	x					
4		x				
5	x					
6		x				

1.

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Chapter 1. Introduction			lecture, exercises	
2	Chapter 2. Errors & Taylor Series	1	Quiz, Lab, Exam	lecture, exercises, lab	
3	Chapter 3. Roots of Non-linear Equations	1	Quiz, Lab, Exam	lecture, exercises, lab	
4	Chapter 4. Linear Algebraic Equations	2	Quiz, Lab, Exam	lecture, exercises, lab	
5	Chapter 5. Optimization	3	Quiz, Lab, Exam	lecture, exercises, lab	
6	Midterm				
	Chapter 6. Curve Fitting & Interpolation	4	Quiz, Lab, Exam	lecture, exercises, lab	
7	Chapter 7. Numerical Differentiation and Integration	5	Quiz, Lab, Exam	lecture, exercises, lab	
8	Chapter 8. Ordinary Differential Equations	6	Quiz, Exam	lecture, exercises, lab	
9	Chapter 9. Partial Differential Equations	6	Quiz, Exam	lecture, exercises, lab	
10	Final exam				

3. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5	CLO6
Quiz (10%)	20%	20%	20%	20%	20%	20%
Labs (20%)	30%	30%	30%	30%	30%	30%
Midterm examination (30%)	50%	50%	50%			
Final examination (40%)				50%	50%	50%

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

1. When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.↵

Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:	HW/Assignment:		
Date:	Evaluator:		
	Max.	Score	Comments
Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content	10		
Introduction demonstrates thorough knowledge of relevant background and prior work	15		
Analysis and discussion demonstrate good subject mastery	30		
Summary and conclusions appropriate and complete	5		
Organization (10%)			
Distinct introduction, body, conclusions	5		
Content clearly and logically organized, good transitions	5		
Presentation (20%)			
Correct spelling, grammar, and syntax	10		
Clear and easy to read	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1

Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.

Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

Date revised: February 15, 2022

Ho Chi Minh City, 15/02/2022

Dean of School of Computer Science and Engineering

Assoc.Prof. Nguyen Van Sinh



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Computer Science and Engineering

COURSE SYLLABUS

Course Name: Computer Networks

Course Code: IT091

1. General information

Course designation	This subject covers the fundamental knowledge of computer networks
Semester(s) in which the course is taught	3,5
Person responsible for the course	Assoc. Prof. Vo Thi Luu Phuong.
Language	English
Relation to curriculum	Compulsory (CS, NE, CE)
Teaching methods	Lecture, lesson, project, seminar.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 195 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 45 (lecture) + 30 (laboratory) Private study including examination preparation, specified in hours: 120
Credit points	Number of credits: 4 credits /7.09 ECTS Lecture: 3 Laboratory: 1
Required and recommended prerequisites for joining the course	None
Course objectives	This course covers the fundamental knowledge of computer networks such as OSI, TCP/IP models, network architectures, LAN, WAN, the typical network protocols. The students will also study to design, implement and monitor a small / medium scale network.
Course learning outcomes	CLO 1. Analyze the components, architecture, and protocols in computer networks; CLO 2. Apply the theory in designing a small/medium computer networks; CLO 3. Show the ability to work in teams;

		Competency level	Course learning outcome (CLO)	
		Knowledge	CLO1	
		Skill	CLO2, CLO3	
		Attitude	CLO2	
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize)			
		Topic	Weight	Level
		Introduction of computer networks	2	T, U
		Network applications: HTTP, FTP, DNS, SMTP	2	T, U
		Transport layer: congestion control, TCP, UDP	2	T, U
		IP addressing, CIDR, VLSM	2	T, U
		Network layer: routing algorithms, routing protocols	2	T, U
		Datalink layer and physical layer	2	T, U
		Wireless and mobile networks	2	T
		Some advanced topics in contemporary networks	1	U
Examination forms	Multiple-choice questions, short-answer questions			
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.			
Reading list	1. J. F. Kurose and K. W. Ross, Computer Networking: A Top Down Approach 7th, 2014			

2. Learning Outcomes Matrix

The relationship between Course Learning Outcomes (CLO) (1-3) and Program Intended Learning Outcomes (ILO) (1-6) is shown in the following table:

CLO	ILO					
	1	2	3	4	5	6
1						
2						
3						

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1-2	Introduction of computer networks	1	Midterm	lecture	Chapter 1, [1]
3-4	Network applications: HTTP, FTP, DNS, SMTP	1	Midterm, Lab	lecture, lab	Chapter 2, [1]

5-6	Transport layer: congestion control, TCP, UDP	1	Midterm, Lab	lecture, lab	Chapter 3, [1]
	Midterm				
7-8	IP addressing, CIDR, VLSM	2	Final, Lab	lecture, lab	Chapter 4, [1]
9-10	Network layer: routing algorithms, routing protocols	1,2	Final, Lab	lecture, lab	Chapter 5, [1]
11-12	Datalink layer and physical layer	1,2	Final, Lab	lecture, lab	Chapter 6, [1]
13-14	Wireless and mobile networks	1	Final	lecture	Chapter 7, [1]
15	Some advanced topics in contemporary networks	3	Group project	group work	Literature
10	Final exam				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
Exercises, quizzes, attendants (10%)	30%		30%
Group project (5%)		30%	40%
Labs (25%)		30%	30%
Midterm examination (30%)	40%		
Final examination (30%)	30%	40%	

1. When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.↵

5. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:	HW/Assignment:		
Date:	Evaluator:		
	Max.	Score	Comments
Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content	10		
Introduction demonstrates thorough knowledge of relevant background and prior work	15		
Analysis and discussion demonstrate good subject mastery	30		
Summary and conclusions appropriate and complete	5		
Organization (10%)			
Distinct introduction, body, conclusions	5		
Content clearly and logically organized, good transitions	5		

Presentation (20%)			
Correct spelling, grammar, and syntax	10		
Clear and easy to read	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.

Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

Date revised: February 15, 2022

Ho Chi Minh City, 15/02/2022

Dean of School of Computer Science and Engineering

A handwritten signature in blue ink, appearing to read 'N. Sinh', with a long horizontal stroke extending to the right.

Assoc.Prof. Nguyen Van Sinh



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Computer Science and Engineering

COURSE SYLLABUS

Course Name: Information System Management

Course Code: IT094

1. General information

Course designation	This course covers the concepts of information systems and their applications to business processes
Semester(s) in which the course is taught	6
Person responsible for the course	Dr. Tran Thanh Tung
Language	English
Relation to curriculum	Elective course (CS, DS) Specialization (required) (NE)
Teaching methods	Lecture, lesson, project, seminar.
Workload (incl. contact hours, self-study hours)	Total workload: 195 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 45 (lecture) + 30 (laboratory) Private study including examination preparation, specified in hours: 120
Credit points	Number of credits : 4 credits/7.09 ECTS Lecture: 3 Laboratory: 1
Required and recommended prerequisites for joining the course	Principles of Database Management
Course objectives	This course will aim to provide students with: The concepts of information systems and their applications to business processes. Use of computer-based information systems in functional areas of business. Understanding of computer and information technology, resources, management and end-user decision making, and system development.

Course learning outcomes	CLO 1. understand basic information system concepts as applied to business operations and management. CLO 2. identify the major components of a computer system, including hardware, software, operating systems and operating environments as they apply to information systems. CLO 3. develop basic MIS applications such as spreadsheet, database, and web development. <table><tr><th>Competency level</th><th>Course learning outcome (CLO)</th></tr><tr><td>Knowledge</td><td>1, 2</td></tr><tr><td>Skill</td><td>3</td></tr><tr><td>Attitude</td><td></td></tr></table>	Competency level	Course learning outcome (CLO)	Knowledge	1, 2	Skill	3	Attitude																													
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Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Information Systems in Global Business;</td><td>1</td><td>I</td></tr><tr><td>Global E-Business and Collaboration;</td><td>1</td><td>I</td></tr><tr><td>Information Systems, Organizations and Strategy</td><td>2</td><td>T</td></tr><tr><td>Ethical and Social Issues in Information Systems;</td><td>1</td><td>T</td></tr><tr><td>Telecommunications, the Internet, and Wireless Technology;</td><td>1</td><td>T</td></tr><tr><td>Foundations of Business Intelligence: Databases and Information Management</td><td>1</td><td>T,U</td></tr><tr><td>E-Commerce: Digital Markets, Digital Goods;</td><td>2</td><td>T,U</td></tr><tr><td>Achieving Operational Excellence and Customer Intimacy: Enterprise Applications;</td><td>2</td><td>T,U</td></tr><tr><td>Building Information Systems;</td><td>2</td><td>T,U</td></tr><tr><td>Managing Knowledge;</td><td>1</td><td>T</td></tr><tr><td>Enhancing Decision Making.</td><td>1</td><td>T</td></tr></table>	Topic	Weight	Level	Information Systems in Global Business;	1	I	Global E-Business and Collaboration;	1	I	Information Systems, Organizations and Strategy	2	T	Ethical and Social Issues in Information Systems;	1	T	Telecommunications, the Internet, and Wireless Technology;	1	T	Foundations of Business Intelligence: Databases and Information Management	1	T,U	E-Commerce: Digital Markets, Digital Goods;	2	T,U	Achieving Operational Excellence and Customer Intimacy: Enterprise Applications;	2	T,U	Building Information Systems;	2	T,U	Managing Knowledge;	1	T	Enhancing Decision Making.	1	T
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Examination forms	Multiple-choice questions, short-answer questions																																				
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.																																				
Reading list	1. Kenneth C. Laudon, Jane P. Laudon, Management Information Systems: Managing the Digital Firm 14th, 2016 2. Kenneth C. Laudon and Jane Laudon, Essentials of Management Information Systems 11th, 2015																																				

2. Learning Outcomes Matrix

The relationship between Course Learning Outcomes (CLO) (1-4) and Program Intended Learning Outcomes (ILO) (1-6) is shown in the following table:

CLO	ILO					
	1	2	3	4	5	6
1		x		x		
2		x		x		
3		x				

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Information Systems in Global Business;	1	Midterm exam	In-class activities	
2	Global E-Business and Collaboration;	1	Midterm exam	In-class activities	
3	Information Systems, Organizations and Strategy	1,2	Midterm exam, Quiz	In-class activities, Lab	
4	Ethical and Social Issues in Information Systems;	1	Midterm exam		
5	Telecommunications, the Internet, and Wireless Technology;	2	Midterm exam	In-class activities, Lab	
6	Midterm				
7	Foundations of Business Intelligence: Databases and Information Management	2,3	Final exam	In-class activities, Lab	
8	E-Commerce: Digital Markets, Digital Goods;	1	Final exam	In-class activities, Lab	
9	Achieving Operational Excellence and Customer Intimacy: Enterprise Applications;	1	Final exam	In-class activities, Lab	
10	Building Information Systems;	2,3	Final exam	In-class activities, Lab	
11	Managing Knowledge;	1	Final exam		
12	Enhancing Decision Making.	1	Final exam		
13	Final exam				

4. Assessment plan

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

Assessment Type	CLO1	CLO2	CLO3
Midterm examination (30%)	40%	30%	20%
Projects/Presentations/ Report (20%)		40%	60%
Final examination (40%)	30%	20%	20%
Exercises/ Quiz (20%)	30%	10%	

Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:	HW/Assignment:		
Date:	Evaluator:		
	Max.	Score	Comments
Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content	10		
Introduction demonstrates thorough knowledge of relevant background and prior work	15		
Analysis and discussion demonstrate good subject mastery	30		
Summary and conclusions appropriate and complete	5		
Organization (10%)			
Distinct introduction, body, conclusions	5		
Content clearly and logically organized, good transitions	5		
Presentation (20%)			
Correct spelling, grammar, and syntax	10		
Clear and easy to read	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.

Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

Date revised: February 15, 2022

Ho Chi Minh City, 15/02/2022
Dean of School of Computer Science and Engineering

Assoc.Prof. Nguyen Van Sinh



**VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY**
School of Business

COURSE SYLLABUS

**Course Name: Entrepreneurship and Small Business
Management**

Course Code: BA154IU

1. General information

Course designation	<i>This course aims to provide a hands-on introduction to the scalable venture creation process for students with a strong interest in entrepreneurship. The course is designed for a variety of student interests. It directly addresses the concerns of students wanting to become entrepreneurs in the near or more distant future. It is also useful to anyone who expects to be interacting with entrepreneurs in their business careers. Finally, this course is useful for anybody with a curious mind and a willingness to combine serious analysis with creative thinking.</i>
Semester(s) in which the course is taught	1, 2,3
Person responsible for the course	Nguyen Vo Hien Chau, MBA.
Language	English
Relation to curriculum	Elective
Teaching methods	Lecture, project, discussion, presentation.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 hours Contact hours: 37.5 hours Private study including examination preparation, specified in hours: 90 hours
Credits/ECTS	3 credits/4.64 ECTS
Required and recommended prerequisites for	None

joining the course		
Course objectives	After studying this course, the students would be able to build on personal as well as external resources with a view to successfully launching and subsequently managing their enterprises. They would have not only a definite idea as to which support/developmental agency to look up to and for what purpose, but also the necessary know-how and wherewithal for accessing their help. They would have basic skills in operations, finance, marketing, and human resource management.	
Course learning outcomes	Upon the successful completion of this course students will be able to:	
	Competency level	Course learning outcome (CLO)
	Knowledge	CLO1. Describe the entrepreneurial profile and evaluate your potential as an entrepreneur CLO2. Explain the steps the entrepreneur must complete when starting a new business venture CLO3: Describe the elements of a solid business plan CLO4: Describe key business terms demonstrating overall business knowledge
	Skill	CLO5. Complete self-analysis of entrepreneurial competencies CLO6: Analyze various new business options CLO7: Complete a written business plan CLO8: Demonstrate the keys to making an effective business plan presentation
	Attitude	CLO9. Build up entrepreneurship spirit from a curious mind and a willingness to combine serious analysis with creative thinking.

Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (2.5 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Foundation of Entrepreneurship</td><td>1</td><td>I, T</td></tr><tr><td>Creative and Innovation: Key to Entrepreneurial success</td><td>1</td><td>I, T, U</td></tr><tr><td>Conducting a Feasibility Analysis and Designing a business model</td><td>3</td><td>T, U</td></tr><tr><td>Crafting a business plan and building a solid strategic plan</td><td>1</td><td>T, U</td></tr><tr><td>Building a powerful bootstrap marketing plan</td><td>1</td><td>T, U</td></tr><tr><td>Pricing Strategy</td><td>1</td><td>T, U</td></tr><tr><td>Ecommerce and the entrepreneur</td><td>1</td><td>T, U</td></tr><tr><td>Creating a successful financial plan and managing cash flow</td><td>2</td><td>T, U</td></tr><tr><td>Source of financing: finance vs debt</td><td>1</td><td>I, T, U</td></tr><tr><td>Choosing the right location and layout</td><td>1</td><td>T, U</td></tr><tr><td>Buying an existing business</td><td>1</td><td>T</td></tr><tr><td>Franchising and entrepreneur</td><td>1</td><td>T</td></tr></table>	Topic	Weight	Level	Foundation of Entrepreneurship	1	I, T	Creative and Innovation: Key to Entrepreneurial success	1	I, T, U	Conducting a Feasibility Analysis and Designing a business model	3	T, U	Crafting a business plan and building a solid strategic plan	1	T, U	Building a powerful bootstrap marketing plan	1	T, U	Pricing Strategy	1	T, U	Ecommerce and the entrepreneur	1	T, U	Creating a successful financial plan and managing cash flow	2	T, U	Source of financing: finance vs debt	1	I, T, U	Choosing the right location and layout	1	T, U	Buying an existing business	1	T	Franchising and entrepreneur	1	T
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Franchising and entrepreneur	1	T																																						
Examination forms	Multiple-choice questions, Essay Questions, Business Plan.																																							
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.																																							
Reading list	<u>Textbook:</u> [1] Norman M. Scarborough. 2019. <i>Essentials of Entrepreneurship and Small Business Management</i>, 9th edition, Pearson. <u>Reference Books:</u> [2] Alexander Osterwalder & Yves Pigneur. 2010. <i>Business Model Generation</i>, Wiley. [3] Alexander Osterwalder & Yves Pigneur. 2010. <i>Value Proposition Design</i>, Wiley. [4] Robert A. Baron, Scott A. Shane, and A. Rebecca Reuber. 2008. <i>Entrepreneurship</i>, 1st edition, Thomson.																																							

	[5] Richard Dorf, Thomas Byers. 2006. <i>Technology Ventures, From Idea to Enterprise</i> , 2 nd edition, McGraw Hill.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) (1-4) and Intended Learning Outcomes (ILO) is shown in the following table:

	ILO					
CLO	1	2	3	4	5	6
1						
2						
3						
4						

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	The Foundations of Entrepreneurship	1	Homework 1: 1. Search through recent business publications (especially those focusing on small companies) and find an example of an entrepreneur, past or present, who exhibits the entrepreneurial spirit of striving for success in the face of failure. 2. Do you want to become an entrepreneur? Why? Prepare a brief report for your class (300 words).	Lecture, Discussion, HW	[1]
2	Creative and Innovation: Keys to Entrepreneurial success	1,4,9	Homework 2: Find an easily available product (for example, a pen). Think of all the creative ways the product can be used. You need to prepare at least 10 alternative uses including unconventional methods for that particular product.	Lecture, Discussion, HW	[1]
3-4-5	Conducting a Feasibility analysis and designing a business model	2,3,4,6,7,8	Homework 3: 1. Five Forces Model of Highlands Coffee. 2. Value Proposition Canvas of Grab Car/bike 3. Business Model Canvas of Grab Car/bike Feasibility Analysis Presentation: Each group will choose 01 new start up business (already started up by someone else) and conduct a feasibility analysis. Please note that the business you choose should be established less than 5 years. It's up to you to choose which industry and which company to analyze, but to	Lecture, Discussion, HW Group presentation	[1] [2]

Week	Topic	CLO	Assessments	Learning activities	Resources
			save time, you can choose the business in the same industry with your business idea. The presentation should have three main parts: 1.Introduction of the business (Its name, Founder, Product/Service, Established year, Business size, current situation) 2. A feasibility analysis includes: -Industry and Market feasibility -Product or Services feasibility -Financial Feasibility 3.Discussion: your group opinion about the success/failure, challenge, and opportunity of the business.		
6	Crafting a Business Plan and Building a solid strategic plan	2,3,4,6,7,8	<u>Class Discussion:</u> 1. Advantages and Disadvantages of SWOT analysis 2. Prepare a competitive profile matrix for Shopee. <u>Homework 4:</u> Choose 1 of your favorite company. Find at least 4 of its competitors. Put all of them in a Positioning map	Lecture, Discussion, HW	[1][2][3]
7	Building a powerful bootstrap marketing plan	7,8	<u>Homework 5:</u> Select 2 businesses (1 large and 1 small) and play the role of “Mystery shopper” 1.How would you rate their service, quality, and convenience of each of the businesses based on your mystery shopper experience? 2.Compare and contrast the staff at the two stores based on how helpful, friendly, professional, and courteous they were to you during your mystery shopper visits? 3. How would you describe each company’s competitive advantage based on your mystery shopper visits?	Lecture, Discussion, HW	[1][2][3]
8	Pricing strategy	7,8	<u>Homework 6:</u> Apple Inc. dominates the market for tablets with its line of iPads, which currently includes the classic iPad, the iPad Mini, and the iPad Air. Because the company constantly introduces new models and features, it also adjusts prices on these popular devices. Use the Web to research the history of the iPad and write a brief summary of Apple’s pricing strategy on its tablet. Which products compete with the iPad?	Lecture, Discussion, HW	[1]

Week	Topic	CLO	Assessments	Learning activities	Resources
9,10	Midterm				
11	E-commerce and the entrepreneur	6,7	HW7: Select one online company with which you are familiar and visit their Web sites. What percentage of them have privacy policies posted on their sites? View the Web site and provide comments based on what you have studied in this chapter. Does the Web site follow the techniques of designing a killer Web site? You may provide some suggestions to the business owner for improvement.	Lecture, Discussion, HW	[1]
12	Creating a successful financial plan	6,7,9	Homework 8: 1. Find a publicly held company of interest to you that provides its financial statements on the Web. You can conduct a Web search using the company's name, or you can find lists of companies at the Securities and Exchange Commission's EDGAR database or visit AnnualReports.com to download the annual report of a company that interests you. 2. Analyze the company's financial statements by calculating the first 3 ratios covered in this chapter and compare these ratios to industry averages found in RMA's <i>Annual Statement Studies</i>, <i>Bizminer</i>, or one of the other financial analysis resources found in your library. 3. Do you spot any problem areas in the company's financials? 4. What are the financial strengths of the company?	Lecture, Discussion, HW	[1]
12,13	Managing cash flow	7	Make a cash flow management for your monthly expense.	Lecture, Exercise	[1]
13	Sources of Financing: Equity vs Debt	6,9	Homework 9: Interview or find an article on the internet several local business owners about how they financed their businesses. (you can easily find it in Shark Tank TV Show or other sources) 1. Where did the initial capital come from for the small business owners you interviewed/or found? 2. Ask the small business owners or find in the article how much money they needed to launch their businesses.	Lecture, Discussion, HW	[1]

Week	Topic	CLO	Assessments	Learning activities	Resources
			3. Ask the small business owners how they raised the additional capital they needed to start their businesses. 4. Ask the small business owners about any advice they might offer others seeking capital? (if applicable)		
14	Choosing the right location and layout	7,9	Homework 10: What factors should a seafood processing plant, a beauty shop, and an exclusive jewelry store consider in choosing a location? List factors for each type of business	Lecture, Discussion, HW	[1]
15	Buying an existing business	6,9		Lecture, Discussion	[1]
15	Franchising and the Entrepreneur	6,9		Lecture, Discussion	[1]
15	Business Plan Review		Written Plan: Length and Style: 6,000 words (+-10%), excluding footnotes, figures and references. The format for assignments is to be 1.5 spaced with 2.5 cm margins and font size of 12 cpi. Please show the word count, along with all other details on the cover sheet. The business plan will be assessed for analytical content and presentation. The business plan must be submitted before presented. Peer reviews to evaluate each member's contribution to the group work and define your final grade. All work must be original and must not have been submitted for any other subject or course here or elsewhere. Copying or plagiarizing works of other authors, including your fellow students or cutting and pasting from the internet and other sources is an offence and will be seriously penalized. Final Presentation: Duration: 10 minutes presentation + 5 minutes Q&A Please present as if you were in a business idea competition or finding funds for your business. BE PROFESSIONAL!	Review, Q&A	
16,17	Business Plan Presentation				

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3	CLO4	CLO5	CLO6	CLO7	CLO8	CLO9
In-Class presentation (10%)		Feasibility Analysis 80% Pass				Feasibility Analysis 80% Pass	Feasibility Analysis 80% Pass		
Homework (15%)	HW1.1 80%Pass		HW3 60%Pass	HW3-9 60% Pass	HW1.2 80%Pass	HW4-8 80% Pass			HW2
Midterm exam (20%)	Q1-4 70%Pass	Q5-13 50% Pass	Q4-22 50% Pass	Q23-31 50%Pass		Q32-40 50% Pass			
Business Plan (55%)		Written Plan 90%Pass	Written Plan 90%Pass	Written Plan 90%Pass			Written Plan, Final Presentation 90% Pass	Final Presentation 90% Pass	Written Plan, Presentation 90% Pass

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

5. Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Plan			
Student:		HW/Assignment:	
Date:		Evaluator:	
	Max.	Score	Comments
Technical content (90%)			
Executive Summary	5		
Product/Service Feasibility	15		
Business Strategy and Competitor Analysis	30		
Marketing Strategy	15		
Financial Plan	15		
Implementation Plan	10		
Presentation (10%)			
Clear, attractive, and persuasive presentation	5		
Professional attitude	5		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW	
Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.

1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone	Milestone		Benchmark
	4	3	2	1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

6. Date revised: August 2nd, 2022

Ho Chi Minh City, 02/08/2022
School of Business
(Signed)

Dr. Ha Minh Tri



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Computer Science and Engineering

COURSE SYLLABUS

Course Name: C/C++ Programming

Course Code: IT116

1. General information

Course designation	Learning the basics of programming
Semester(s) in which the course is taught	2
Person responsible for the course	MSc. Le Thanh Son
Language	English
Relation to curriculum	Compulsory (CS, NE, CE)
Teaching methods	Lecture
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 195 Contact hours: 45 (lecture) + 30 (laboratory) Private study including examination preparation, specified in hours: 120
Credit points	Number of credits: 4 /6.18 ECTS Lecture: 3 Laboratory: 1
Required and recommended prerequisites for joining the course	None
Course objectives	This course concentrates on learning the basics of programming languages which are the foundations for further studies in IT. The course enables students to get familiar with C programming language. The course covers all basic C data structures, control flows, simple data structures as well as other advanced topics which include pointers, bit operators, file processing, dynamic data types.
Course learning outcomes	CLO 1. Understand programming languages and applications, how applications work CLO 2. Understand basic data structure and control flow of C programming language

	CLO 3. Able to write applications using C <table><tr><th>Competency level</th><th>Course learning outcome (CLO)</th></tr><tr><td>Knowledge</td><td>1</td></tr><tr><td>Skill</td><td>2, 3</td></tr><tr><td>Attitude</td><td></td></tr></table>	Competency level	Course learning outcome (CLO)	Knowledge	1	Skill	2, 3	Attitude																																									
Competency level	Course learning outcome (CLO)																																																
Knowledge	1																																																
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Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (Teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Introduction to Computer and Programming Language</td><td>1</td><td>I</td></tr><tr><td>Introduction to C Programming Language</td><td>1</td><td>I, T</td></tr><tr><td>C Basic Data Types</td><td>1</td><td>T, U</td></tr><tr><td>Control Flow: Branching statements</td><td>1</td><td>T, U</td></tr><tr><td>Control Flow: Iteration</td><td>1</td><td>T, U</td></tr><tr><td>Functions</td><td>1</td><td>T, U</td></tr><tr><td>Array</td><td>1</td><td>T, U</td></tr><tr><td>Pointers</td><td>1</td><td>T, U</td></tr><tr><td>String</td><td>1</td><td>T, U</td></tr><tr><td>File Processing</td><td>1</td><td>T, U</td></tr><tr><td>Dynamic Memory Allocation</td><td>1</td><td>T, U</td></tr><tr><td>Struct, Union</td><td>1</td><td>T, U</td></tr><tr><td>Bitwise Operation</td><td>1</td><td>T, U</td></tr><tr><td>Linked list, Stack, Queue</td><td>1</td><td>T, U</td></tr><tr><td>Binary tree</td><td>1</td><td>T, U</td></tr></table>	Topic	Weight	Level	Introduction to Computer and Programming Language	1	I	Introduction to C Programming Language	1	I, T	C Basic Data Types	1	T, U	Control Flow: Branching statements	1	T, U	Control Flow: Iteration	1	T, U	Functions	1	T, U	Array	1	T, U	Pointers	1	T, U	String	1	T, U	File Processing	1	T, U	Dynamic Memory Allocation	1	T, U	Struct, Union	1	T, U	Bitwise Operation	1	T, U	Linked list, Stack, Queue	1	T, U	Binary tree	1	T, U
Topic	Weight	Level																																															
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Dynamic Memory Allocation	1	T, U																																															
Struct, Union	1	T, U																																															
Bitwise Operation	1	T, U																																															
Linked list, Stack, Queue	1	T, U																																															
Binary tree	1	T, U																																															
Examination forms	Short-answer questions, Programming exercises																																																
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.																																																
Reading list	1. Paul Deitel, C How to Program 8th, 2016																																																

2. Learning Outcomes Matrix

The relationship between Course Learning Outcomes (CLO) (1-4) and Program/Student Learning Outcomes (SLO) (1-6) is shown in the following table:

CLO\SLOT	1	2	3	4	5	6
1	x					
2		xxx				
3		xxx				

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
1	Introduction to Computer and Programming Language	1	Quiz	Lecture	1
2	Introduction to C Programming Language	1	Quiz	Lecture	1
3	C Basic Data Types	1	Quiz	Lecture	1
4	Control Flow: Branching statements	2, 3	Quiz, Lab, Midterm	Lecture, Discussion, In-class Exercise	1
5	Control Flow: Iteration	2, 3	Quiz, Lab, Midterm	Lecture, Discussion, In-class Exercise	1
6	Functions	2, 3	Quiz, Lab, Midterm	Lecture, Discussion, In-class Exercise	1
7	Array	2, 3	Quiz, Lab, Midterm	Lecture, Discussion, In-class Exercise	1
8	Pointers	2, 3	Quiz, Lab, Midterm	Lecture, Discussion, In-class Exercise	1
Midterm					
9	String	2, 3	Quiz, Lab, Final	Lecture, Discussion, In-class Exercise	1
10	File Processing	2, 3	Quiz, Lab, Final	Lecture, Discussion, In-class Exercise	1
11	Dynamic Memory Allocation	2, 3	Quiz, Lab, Final	Lecture, Discussion, In-class Exercise	1
12	Struct, Union	2, 3	Quiz, Lab, Final	Lecture, Discussion, In-class Exercise	1
13	Bitwise Operation	2, 3	Quiz, Lab, Final	Lecture, Discussion, In-class Exercise	1

14	Linked list, Stack, Queue	2, 3	Quiz, Lab, Final	Lecture, Discussion, In-class Exercise	1
15	Binary tree	2, 3	Quiz, Lab, Final	Lecture, Discussion, In-class Exercise	1
Final					

4. Assessment plan

Assessment Type	CLO1	CLO2	CLO3
Quiz / Assignment (10%)	50%	10%	10%
Labs (20%)	10%	30%	30%
Midterm examination (30%)	30%	30%	30%
Final examination (40%)	10%	30%	30%

Note: %Pass: Target that % of students having scores greater than 50 out of 100.

Rubrics (optional)

5.1. Grading checklist

Grading checklist for Written Reports			
Student:	HW/Assignment:		
Date:	Evaluator:		
	Max.	Score	Comments
Technical content (60%)			
Abstract clearly identifies purpose and summarizes principal content	10		
Introduction demonstrates thorough knowledge of relevant background and prior work	15		
Analysis and discussion demonstrate good subject mastery	30		
Summary and conclusions appropriate and complete	5		
Organization (10%)			
Distinct introduction, body, conclusions	5		
Content clearly and logically organized, good transitions	5		
Presentation (20%)			
Correct spelling, grammar, and syntax	10		
Clear and easy to read	10		
Quality of Layout and Graphics (10%)	10		
TOTAL SCORE	100		

5.2. Holistic rubric

Holistic rubric for evaluating the entire document, e.g., exercises/quizzes/HW

Score	Description
5	Demonstrates complete understanding of the problem. All requirements of task are included in response
4	Demonstrates considerable understanding of the problem. All requirements of task are included.
3	Demonstrates partial understanding of the problem. Most requirements of task are included.
2	Demonstrates little understanding of the problem. Many requirements of task are missing.
1	Demonstrates no understanding of the problem.
0	No response/task not attempted

Note: this rubric is also used to evaluate questions in an exam.

5.3. Analytic rubric

Critical thinking value rubric for evaluating questions in exams:

	Capstone 4	Milestone 3 2		Benchmark 1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Source: Association of American Colleges and Universities

Oral communication value rubric for evaluating presentation tasks:

	Capstone	Milestone		Benchmark
	4	3	2	1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/ authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/ authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

Source: Association of American Colleges and Universities

Date revised: February 15, 2022

Ho Chi Minh City, 15/02/2022

Dean of School of Computer Science and Engineering



Assoc.Prof. Nguyen Van Sinh



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS

Course Name: Summer Internship

Course Code: **CE314IU**

1. General information

Course name	- (in English): Internship - (in Vietnamese): Thực tập
Course designation	CE314IU – Summer Internship This course is an internship and is designed to supplement traditional classroom-based learning with experiential learning. The internship provides students with the opportunity to practically apply knowledge gained in their courses of Civil Engineering.
Course type	☐ General knowledge <i>Fundamental</i> ☐ Specialized knowledge ☒ Internship/Project/Thesis ☐ Others: ☐ ☐
Semester(s) in which the module is taught	3
Person responsible for the module	Dr. Nguyen, Hoai Nghia
Language	English
Relation to curriculum	Compulsory
Teaching methods	Internship
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 202.5 Contact hours (lecture, exercise, laboratory session, etc.): 112.5

	Private study including examination preparation, specified in hours ¹ : 90																								
Credit points	03 credits (Theory: 00 + Practice: 03) 7.36 ECTS																								
Number of periods	Theory: 00 Practice: 45																								
Required and recommended prerequisites for joining the module	Steel Structure –CE305IU																								
Module objectives/intended learning outcomes	Overall objectives Students who complete the course will be able to perform the following tasks: (1) Applying the civil engineering knowledge to handle problems in reality. (2) Practicing the ethics and professional skills.																								
Content	<i>The description of the contents should clearly indicate the weighting of the content and the level.</i> Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize) <table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Internship guidance</td><td>1</td><td>I</td></tr><tr><td>Internship (at companies/ sites)</td><td>320</td><td>U</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>	Topic	Weight	Level	Internship guidance	1	I	Internship (at companies/ sites)	320	U															
Topic	Weight	Level																							
Internship guidance	1	I																							
Internship (at companies/ sites)	320	U																							
Examination forms	Defense																								

¹ When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Study and examination requirements	Attendance: Student will be present all working days at the internship places (offices and/or sites). Students will report weekly via email to advisors. Examination: Students submit final reports and defense to advisors. Students must have more than 50/100 points overall to pass this module.
Reading list	Text book: [1] S. W. Nunnally, (2014). <i>Construction Methods and Management</i>, Pearson, 8th edition. [2] R. L. Peurifoy, C. J. Schexnayder, R. L. Schmitt, and A. Shapira. (2018). <i>Construction Planning, Equipment, and Methods</i>, McGraw-Hill Education 9th edition. [3] Hurst, M.K., "<i>Prestressed Concrete Design</i>", 2nd edition. [4] Mosley, W.H., Hulse, R. and Bungey, J.H., "<i>Reinforced Concrete Design to EuroCode 2</i>", 6th edition, Macmillan, London, 2007 [5] Eurocode 2: Design of Concrete Structures – Part 1-1: General rules and rules for buildings [1] Trahair, NS.; Bradford MA.; Nethercot DA. and Gardner, L. "The Behavior Design of Steel Structures to EC 3", 4th Edition, Taylor and Francis, 2007. [6] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-8: Design of Steel Structures – Design of Joints, British Standards Institution, London, UK.

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (1-2) and Program Intended Learning Outcomes (a-k) is shown in the following table:

- (1) CLO1: Applying the civil engineering knowledge to handle problems in reality.
- (2) CLO2: Practicing the ethics and professional skills.

No.	Program Intended Learning Outcome (ILO)										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
CLO1		x								x	
CLO2				x	x		x				x

Program Learning Outcome:

- (a) Understanding the physical world and using knowledge of mathematics and natural sciences to represent it in pursuing and establishing research by the use of quantitative and quantitative methods.
- (b) Understanding the fundamentals of the civil engineering field (e.g. construction geology, material science, construction physics, surveying, structural theory, technical design,

construction informatics, soil mechanics, fluid mechanics, and computational techniques, analyzing data for design, build, and appraisal construction)

- (c) Ability to analyze and prepare investment projects and understand their economic, environmental, and social impacts
- (d) Awareness of professional and ethical responsibilities of a civil engineer
- (e) Ability to function as a member of a multidisciplinary team (including multi-national and mixed-gender teams) as well as having good knowledge of management and organization to be able to take on leadership roles
- (f) Recognition of the need for and ability to engage in life-long learning in order to work efficiently in situations in which new technologies emerge regularly as well as take part in developing new technologies by engaging in research works having the ability to interpret and use empirical datasets, integrate technical literature and databases to solve specific civil engineering problems or fill knowledge gaps.
- (g) Ability to communicate matters related to civil engineering to colleagues in the same profession or the general public, effectively using oral, written, and other forms of communication.
- (h) A broad education necessary to understand the impacts of civil engineering solutions in a global and social context
- (i) A broad understanding of contemporary issues in civil engineering in the national, regional, and global level
- (j) Ability to use techniques, skills, and modern engineering tools necessary for engineering practice, including identifying tasks of civil engineering, analyzing, abstracting, and formulating, along with being able to develop concepts, plans, and methods for proof and forecast (e.g., documented evidence for stability, energy efficiency, noise protection, flood protection, water supply)
- (k) Ability to use English in both technical and daily life situations

3. Planned learning activities and teaching methods

Week	Topic	CLO	Assessments	Learning activities	Resources
0	Internship guidance			Lecture	Lecture note
1-8	Companies/ sites apprenticeship	1,2	Attendance/ report		
	DEFENSE			Internship defense	

4. Assessment plan

Assessment Type	CLO1	CLO2

Internship Student evaluation (50%)	Knowledge and personal abilities 50%Pass	Attitude and manner of working 50%Pass
Defense (50%)	Knowledge and personal abilities 50% pass	Performing os report and presentation 50% pass

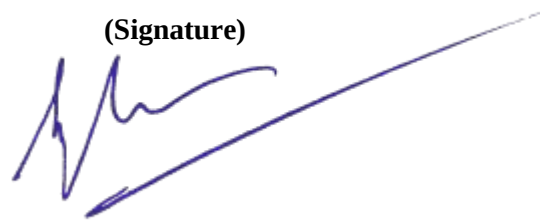
Note: %Pass: % students have scores greater than 50 out of 100.

5. Date revised: May 24, 2025

Ho Chi Minh City, May 24, 2025

**Dean of School of Civil Engineering and
Management**

(Signature)



Dr. Nguyễn Hoài Nghĩa



VIETNAM NATIONAL UNIVERSITY HCMC
INTERNATIONAL UNIVERSITY
School of Civil Engineering and Management

COURSE SYLLABUS
Course Name: THESIS
Course Code: CE420IU

1. General information

Course name	- (in English): Thesis - (in Vietnamese): Đồ án tốt nghiệp
Course designation	Students sympathize with knowledge learned in the curriculum of civil engineering major in order to conduct their graduation thesis, representing the design and management of a practical structure via A1-size drawings or a report. Besides, students must research civil engineering problems.
Course type	☐ General knowledge Fundamental ☐ Specialized knowledge ☒ Internship/Project/Thesis ☐ Others: ☐ ☐
Semester(s) in which the course is taught	8
Person responsible for the course	<i>IU lecturers and visiting lectures</i>
Language	English
Relation to curriculum	Compulsory

Teaching methods	Lecture, advice, seminar, presentation
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 675 Contact hours (please specify whether lecture, discussions, seminar, etc.): 375 Private study including examination preparation, specified in hours1: 300
Credit points	10 credits (Theory: 00 + Practice: 10) 24.55 ECTS
Number of periods	Theory: 00 Practice: 10
Required and recommended prerequisites for joining the course	1. The student must maintain a minimum cumulative GPA of 50 or higher. 2. The student must have a minimum of accumulative credits of 128 credits. CEM faculties and/or Industrial experts will be assigned to supervise the student in performing his/ her thesis. Students will work one-on-one with their thesis advisor (CEM faculties and/or Industrial experts) and the thesis coordinator to identify times that they will meet and create a plan for completing the graduation thesis.
Parallel course	None
Course objectives	The aim of this course is to - Complete a capstone project. Student needs to make a thesis proposal and produce the first draft of the thesis. Writing a graduate thesis requires independent research, scientific writing, critical thinking, independent thinking, and effective communication. - Develop the concepts of structural design and construction, or manage a practical civil structure to enhance traditional classroom-based learning compared with experiential learning - Conduct research on civil engineering problems

Course learning outcomes	Upon the successful completion of this course, students will be able to:	
	Categories	Course learning outcome (CLO)/ Competency
	Knowledge	CLO1: Develop the concepts of structural design, construction, or manage a practical civil structure to enhance traditional classroom-based learning compared with experiential learning CLO2: Conduct research on civil engineering problems
	Skills	CLO3: Improve vital skills for students working at companies CLO4: Improve writing and presentation skills CLO5: Enhance the use of English in both technical and day-life situations
	Attitude	CLO6: Work independently and professionally
Content	<i>It is dependent on on-site construction works indicated by Supervisor and Advisor</i>	
Examination forms	Discussion, Assignment, and Presentation	
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignment and Presentation: Students must have GPA of more than 50/100 points overall to pass this course.	

Reading list and Media employed	Textbooks: (depend on Advisors) [1] C P Kaushik, S S Bhavikatti, Anubha Kaushik, "Basic Civil and Environmental Engineering", New Age International (P) Ltd., Publishers, 2010. [2] Pham Nhan Hoa, "Lecture Note,: STRUCTURAL ANALYSIS AND DESIGN WITH CIVIL ENGINEERING SOFTWARE", Sep 2019 [3] R.C. Hibbeler, "Structural Analysis", 9th Edition, Pearson Prentice Hall, US [4] W. H. Mosley, J. H. Bungey and R. Hulse, "Reinforced concrete design to Eurocode 2", PALGRAVE MACMILLAN, 7th Edition, 2012. [4.1] Eurocode 2: Design of Concrete Structures - Part 1-1: General rules and rules for buildings [5] Trahair, NS.; Bradford MA.; Nethercot DA. and Gardner, L. "The Behavior Design of Steel Structures to EC 3", 4th Edition, Taylor and Francis, 2007. [5.1] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-1: Design of Steel Structures - GENERAL RULES and RULES OF BUILDINGS, British Standards Institution, London, UK. [5.2] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-5: General rules - PLATED STRUCTURAL ELEMENTS, British Standards Institution, London, UK. [5.3] Eurocode 3 (BS EN 1993-1-1:2005) Part 1-8: Design of Steel Structures - DESIGNS OF JOINS, British Standards Institution, London, UK. [6] BRAJA M. DAS, KHALED SOBHAN, "Principles of Geotechnical Engineering", 9th Edition, Cengage Learning, 2018 [7] BRAJA M. DAS, "Principles of Foundation Engineering, SI", 7th Edition, Cengage Learning, 2011 Reference books: [1a] S. S. Bhavikatti, "Basic_Civil_Engineering", New Age International (P) Ltd., Publishers, 2010. [5a] Gardner, L. and Nethercot, D.A., "Designer's Guide to Eurocode 3: Design of Steel Structures", 3rd Edition, Thomas Telford, 2009

2. Learning Outcomes Matrix (optional)

The relationship between Course Learning Outcomes (CLO) and Program Intended Learning Outcomes (ILO) is shown in the following table:

	<i>ILO</i>										
<i>CLO</i>	a	b	c	d	e	f	g	h	i	j	k
1	x	x	x						x		
2	x	x	x						x	x	
3				x	x	x				x	
4							x	x			
5							x				
6											x

3. Planned learning and assessment activities

Week	Topic	CLO	Assessments activities	Learning activities	Resources

1	- Advisors provide the rules of graduation thesis to students - Students search for a real project for their thesis - Students review the codes involving their thesis	1,2,5	Discussion	Reading materials before class; Discussion;	
2-15	Do the thesis	1,2,3,4,5	Discussion, Assignment,	Reading materials before class; Discussion;	
16	Submit thesis including 1 report, 6-10 drawings				

4. Assessment plan

- The type of assessment is grading based on exam questions. The range of scores is from 0 to 100.
- The final GPA of students is integrated from 3 components, including progress assessment, mid-term exam, and final exam. The contribution of each component (in percentage) is shown in the table below.

No	Assessment Type (% contribute to GPA)	CLO1	CLO2	CLO3	CLO4	CLO5	CLO 6
1	Progress Assessment (PA, 15%)						
1.1	Class attendance (5% of PA)						
1.2	Discussion (5% of PA)						
1.3	Assignment (5% of PA)	Assignment 50%Pass	Assignment 50%Pass				Assignment 50%Pass
2	Presentation (Fin, 85%)	Assignment 50%Pass	Assignment 50%Pass	Assignment 50%Pass	Presentation 50%Pass	Presentation 50%Pass	

Note: %Pass: Target that % of students having scores greater than 50% out of question score

5. Rubrics (optional)

- No

6. Date revised: May 27, 2025

***Ho Chi Minh City, May 27, 2025
School of Civil Engineering and
Management***

(Signature)

A handwritten signature in blue ink, consisting of stylized, overlapping loops and a long, sweeping horizontal stroke extending to the right.

PhD. Nguyen Hoai Nghia

Phụ lục 3

**BẢNG MÔ TẢ SỐ TÍN CHỈ THỰC TẬP CỦA CHƯƠNG TRÌNH ĐÀO TẠO
ĐƯỢC THỂ HIỆN CỤ THỂ THEO MÔN HỌC ĐỂ ĐẢM BẢO
8 TÍN CHỈ THỰC TẬP THEO QUY ĐỊNH TẠI THÔNG TƯ 17/2021/TT-BGDĐT**
*(Kèm theo Quyết định số /QĐ-ĐHQT ngày tháng năm 2025
của Hiệu trưởng Trường Đại học Quốc tế)*

STT	Mã môn học	Tên môn học	Số tín chỉ	Ghi chú
1	CE100IU	Introduction to Civil Engineering Khái niệm ngành Kỹ thuật Xây dựng	1	
2	CE312IU	Steel Structure Project Đồ án thép	1	
3	CE313IU	Reinforced Concrete Project Đồ án bê tông cốt thép	1	
4	CE402IU	Foundation Project Đồ án nền móng	1	
5	CE403IU	Construction Project Đồ án kỹ thuật thi công	1	
6	CE314IU	Internship Thực tập tốt nghiệp	3	
7	Tổng cộng		8	

Phụ lục 4

**MỨC ĐỘ ĐÁP ỨNG KHUNG NĂNG LỰC SỐ CỦA CHƯƠNG TRÌNH ĐÀO TẠO
NGÀNH KỸ THUẬT XÂY DỰNG**

*(Kèm theo Quyết định số /QĐ-ĐHQT ngày tháng năm 2025
của Hiệu trưởng Trường Đại học Quốc tế)*

** Đáp ứng Thông tư 02/2025/TT-BGDĐT ngày 24/01/2025 của Bộ Giáo dục và Đào tạo
Quy định về Khung năng lực số cho người học.*

I. Mức độ đáp ứng khung năng lực số của chương trình đào tạo

1. Miền năng lực 1: Khai thác dữ liệu và thông tin

** Đánh giá năng lực thành phần theo 8 bậc của Khung năng lực số (từ bậc 1 đến bậc 8)*

STT	Mã MH	Tên MH (Tiếng Anh)	Năng lực thành phần (NLTP)		
			NLTP 1.1	NLTP 1.2	NLTP 1.3
1	CE216IU	Probability and Statistics	Bậc 4	Bậc 5	Bậc 4
2	CE401IU	Construction Management	Bậc 5	Bậc 5	Bậc 6
3	CM310IU	Building Information Management	Bậc 5	Bậc 5	Bậc 6

2. Miền năng lực 2: Giao tiếp và hợp tác trong môi trường số

** Đánh giá năng lực thành phần theo 8 bậc của Khung năng lực số (từ bậc 1 đến bậc 8)*

ST T	Mã MH	Tên MH (Tiếng Anh)	Năng lực thành phần					
			NLTP 2.1	NLTP 2.2	NLTP 2.3	NLTP 2.4	NLTP 2.5	NLTP 2.6
1	PE022I U	Engineering Ethics and Critical Thinking		Bậc 4	Bậc 4		Bậc 4	

3. Miền năng lực 3: Sáng tạo nội dung số

* Đánh giá năng lực thành phần theo 8 bậc của Khung năng lực số (từ bậc 1 đến bậc 8)

STT	Mã MH	Tên MH (Tiếng Anh)	Năng lực thành phần			
			NLTP 3.1	NLTP 3.2	NLTP 3.3	NLTP 3.4
1	CE102IU	Introduction to Computing for Engineering	Bậc 4	Bậc 5	Bậc 4	Bậc 4
2	CE213IU	Computational Methods for Civil Engineering	Bậc 5	Bậc 5	Bậc 4	Bậc 5
3	CM310IU	Building Information Management	Bậc 5	Bậc 5	Bậc 4	Bậc 4
4	CE413IU	GIS applications in CE	Bậc 4	Bậc 5	Bậc 4	Bậc 4

4. Miền năng lực 4: An toàn

* Đánh giá năng lực thành phần theo 8 bậc của Khung năng lực số (từ bậc 1 đến bậc 8)

STT	Mã MH	Tên MH (Tiếng Anh)	Năng lực thành phần			
			NLTP 4.1	NLTP 4.2	NLTP 4.3	NLTP 4.4
1	PE022IU	Engineering Ethics and Critical Thinking	Bậc 4	Bậc 4	Bậc 4	Bậc 4

5. Miền năng lực 5: Giải quyết vấn đề

* Đánh giá năng lực thành phần theo 8 bậc của Khung năng lực số (từ bậc 1 đến bậc 8)

STT	Mã MH	Tên MH (Tiếng Anh)	Năng lực thành phần			
			NLTP 5.1	NLTP 5.2	NLTP 5.3	NLTP 5.4
1	CE101IU	Introduction to Computing for Engineering	Bậc 4	Bậc 4	Bậc 5	Bậc 4
2	CE213IU	Computational methods for Civil	Bậc 5	Bậc 5	Bậc 5	Bậc 5

		Engineering				
3	CE103IU	Computer-Aided Design and Drafting	Bậc 4	Bậc 4	Bậc 5	Bậc 4
4	CE310IU	Building information management	Bậc 5	Bậc 5	Bậc 4	Bậc 4
5	CE413IU	GIS applications in CE	Bậc 5	Bậc 5	Bậc 4	Bậc 4

6. Miền năng lực 6: Ứng dụng trí tuệ nhân tạo

** Đánh giá năng lực thành phần theo 8 bậc của Khung năng lực số (từ bậc 1 đến bậc 8)*

STT	Mã MH	Tên MH (Tiếng Anh)	Năng lực thành phần		
			NLTP 6.1	NLTP 6.2	NLTP 6.3
1	CE217IU	Artificial Intelligence in CE and CM	Bậc 5	Bậc 5	Bậc 5
2	CE412IU	Advanced AI in CE and CM	Bậc 6	Bậc 5	Bậc 6

II. Phương pháp đánh giá chuẩn đầu ra khung năng lực số

Miền năng lực	Năng lực thành phần (NLTP)	Môn học (Mã môn- Tên môn)	Hình thức đánh giá
1. Khai thác dữ liệu và thông tin	NLTP 1.1	CE216IU CE401IU CM310IU	Thảo luận trên lớp, bài tập nhóm, Thuyết trình nhóm, Bài thi giữa kỳ, Bài thi cuối kỳ.
	NLTP 1.2		
	NLTP 1.3		
2. Giao tiếp và hợp tác trong môi trường số	NLTP 2.1	PE022IU	Case study, Thuyết trình nhóm
	NLTP 2.2		
	NLTP 2.3		

	NLTP 2.4		
	NLTP 2.5		
	NLTP 2.6		
3. Sáng tạo nội dung số	NLTP 3.1	CE102IU CE213IU CM310IU CE413IU	Thảo luận trên lớp, bài tập nhóm, Thuyết trình nhóm, Bài thi giữa kỳ, Bài thi cuối kỳ.
	NLTP 3.2		
	NLTP 3.3		
	NLTP 3.4		
4. An toàn	NLTP 4.1	PE022IU	Quiz, Case study, Thuyết trình nhóm
	NLTP 4.2		
	NLTP 4.3		
	NLTP 4.4		
5. Giải quyết vấn đề	NLTP 5.1	CE101IU CE213IU CE103IU CE310IU CE413IU	Thảo luận trên lớp, bài tập nhóm, Thuyết trình nhóm, Bài thi giữa kỳ, Bài thi cuối kỳ.
	NLTP 5.2		
	NLTP 5.3		
	NLTP 5.4		
6. Ứng dụng trí tuệ nhân tạo	NLTP 6.1	CE217IU CE412IU	Quiz, Case study, Thuyết trình nhóm
	NLTP 6.2		
	NLTP 6.3		