VIETNAM NATIONAL UNIVERSITY – HO CHI MINH CITY

INTERNATIONAL UNIVERSITY

SCHOOL OF CIVIL ENGINEERING AND MANAGEMENT

MODULE HANDBOOK

July 07, 2024

LIST OF MODULE HANDBOOKS

I. GENERAL KNOWLEDGE

I.1. POLITICAL EDUCATION

1. Philosophy Marx - Lenin (PE015IU)

Module designation	The course equips students with basic knowledge of Marxist-Leninist philosophy.
Semester(s) in which the module is taught	Summer Semester (1st year)
Person responsible for the module	Lecturers at School of Political and Administration Sciences, VNU-HCM
Language	*Vietnamese*
Relation to curriculum	*Compulsory*
Teaching methods	*Lecture, group discussion, presentation*
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/4.64ECTS*
Required and recommended prerequisites	*None*
Module objectives	- The course equips students with the basic contents of the worldview and the Marxist-Leninist philosophical methodology. - Help students to apply knowledge about worldview, Marxist-Leninist philosophical methodology creatively in cognitive and practical activities, in order to solve problems of social life of country and time.
Tentative learning outcomes	**I. Knowledge** 1. Philosophy and its role in social life 1.1. Conceptualize philosophy and some basic concepts 1.2. Recognize the opposition between materialism and idealism in solving the fundamental problem of philosophy 1.3. Understanding dialectical materialism - the highest developed form of it 1.4. Understand the birth, objects, functions and roles of Marxist-Leninist philosophy 2. Dialectical materialism 2.1. Understanding matter from the point of view of dialectical materialism 2.2. Understanding consciousness from the point of view of dialectical materialism 2.3. Resolving the relationship between matter and consciousness from the point of view of dialectical materialism 2.4. Understand dialectics and materialistic dialectics 2.5. Understand the two basic principles of materialist dialectic and derive the

1

<table>
<tr><td></td><td>methodological significance of each
2.6. Understand the pairs of basic categories of the material dialectic and derive the methodological meaning of each pair of categories
2.7. Understand the fundamental rules of the materialist dialectic and derive the methodological meaning of each one
2.8. Understand practice, perception, the role of practice in perception and truth
3. Historical materialism
3.1. Understand the role of production and its methods in the existence and development of society
3.2. Understand the dialectical relationship between forces of production and relations of production
3.3. Understand the dialectical relationship between infrastructure and market economy; the natural development of socio-economic forms
3.4. Understand class, class struggle; ethnicity and the relationship among class, nation and humanity
3.5. Understanding the state and social networks
3.6. Understand the dialectical relationship between social existence and social consciousness
3.7. Understand the nature of human being; the phenomenon of alienation and liberation of man from the relationship between the individual and society, and from the role of the masses.</td></tr>
<tr><td></td><td>II. Skills
Demonstrate the ability to generalize, think, debate, critique, and groupwork
1. Have the skill of generalizing to pick out keywords for each content and think systematically
2. Have skills in presenting, explaining, criticizing, debating and eloquent about theories being studied and researched based on practice
3. Have skills in social communication, cooperation and teamwork, sharing knowledge and experience, ability to run a group
III. Attitudes
Express consciousness and awareness during and after learning
1. Have a sense of responsibility to protect the science, revolution and humanity of Marxism-Leninism
2. Have a sense of personal responsibility towards the community
3. Have awareness of the need for lifelong learning and research and applying practically.</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
Weight: period (1 period = 50 minutes)
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, T</td></tr>
<tr><td>Philosophy and its role in social life</td><td>15</td><td>T, U</td></tr>
<tr><td>Dialectical materialism</td><td>15</td><td>T, U</td></tr>
<tr><td>Historical materialism</td><td>14</td><td>T, U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Class discussion; Group presentations and reports; Mid-term exam: essay (opened-book); Final exam: essay (closed-book)</td></tr>
</table>

Study and examination regulations	1. Regulations for group presentations - Forming a group: 5 students/group. The deadline for group topic registration on the forum is session 2 or directly submit it to the lecturer at the exam. - Week 4 (4th session) begin to present in order. Note that the presenting groups need to fully show up and bring along all relevant documents. - Submission form: submit files and minutes of group work via email to the lecturer 2. Regulations on time, attendance and discipline in the course: attend class on time and at least 80% of the sessions (only to be absent for a maximum of 20%). Exam ban is applied to those who miss more than the regulated number of sessions. Students must have all test scores, lively discussions, constructive and serious statements in class.
Materials	1. Ministry of Education and Training (2019), *Giáo trình Triết học Mác - Lênin,* National Political Publishing House, Hanoi. 2. Ministry of Education and Training (2012), *Giáo trình Những Nguyên lý cơ bản của chủ nghĩa Mác - Lênin,* National Political Publishing House, Hanoi. 3. Governing Body (2008), *Giáo trình Triết học Mác-Lênin,* National Political Publishing House, Hanoi.

2. Ho Chi Minh's Thoughts (PE019IU)

Module designation	The course equips students with basic knowledge about subjects, research methods and meaning of Ho Chi Minh's ideologies; origin of Ho Chi Minh's ideologies; national independence and socialism; Communist Party of Viet Nam and the Vietnamese State; great national unity and international solidarity; culture, morality and human.
Semester(s) in which the module is taught	Semester 1 (3rd year)
Person responsible for the module	Lecturers at School of Political and Administration Sciences, VNU-HCM
Language	*Vietnamese*
Relation to curriculum	*Compulsory*
Teaching methods	*Lecture, group discussion, presentation*
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[2]: 60*
Credit points	***02 credits/3.09 ECTS***
Required and recommended prerequisites	1. Marxist-Leninist philosophy 2. Marxist-Leninist political economy 3. Scientific socialism
Module objectives	**Knowledge:** Equip students with basic knowledge about the concept, origin, process of formation and development of Ho Chi Minh's thoughts; the basic contents of Ho Chi Minh's thoughts; the application of the Communist Party of Vietnam in the national-democratic and socialist revolution in the current national renewal process. **Skills:** Form the skills of independent thinking, analyzing, evaluating and applying Ho Chi Minh's thought creatively to solve problems in life, study and work. **Attitudes:** Help students improve their political bravery, patriotism, loyalty to the goals and ideals of national independence associated with socialism; aware of the role and value of Ho Chi Minh's thoughts for the Vietnamese Party and nation; aware their responsibility in studying and training to contribute to the construction and defense of the Fatherland.
Tentative learning outcomes	**I. Knowledge** ***1. Concept, subject, research methodology and meaning of Ho Chi Minh ideology module*** 1.1. Understand the concept of Ho Chi Minh's thoughts 1.2. Understand the research object 1.3. Grasp some basic requirements on learning and research methods of Ho Chi Minh's ideology

	1.4. Understand the meaning of learning ideological course ***2. The foundation, formation and development of Ho Chi Minh ideology*** 2.1. Understand the practical basis, theoretical premise and subjective factors forming Ho Chi Minh's thoughts 2.2. Understand the process of formation and development of Ho Chi Minh's thoughts 2.3. Grasp the value of Ho Chi Minh's thoughts for the Vietnamese revolution and the progressive development of mankind ***3. Ho Chi Minh ideology on national independence and socialism*** 3.1. Aware of the scientific, revolutionary and creative nature of Ho Chi Minh's thoughts on national independence and liberation revolution 3.2. Grasp Ho Chi Minh's view on the necessity of socialism, building socialism and the transition period to socialism in Vietnam 3.3. Understand Ho Chi Minh's view on the relationship between national independence and socialism 3.4. Apply Ho Chi Minh's thoughts on national independence associated with socialism in the current revolution
	4. Ho Chi Minh ideology on the Communist Party of Vietnam of the people, by the people and for the people 4.1. Understand the basic contents of Ho Chi Minh's thoughts on the Communist Party of Vietnam 4.2. Understand the basic contents of Ho Chi Minh's thoughts on the state of the people, by the people, for the people 4.3. Apply Ho Chi Minh's thoughts to the construction of the Party and the State ***5. Ho Chi Minh ideology on national great unity and international solidarity*** 5.1. Understand the basic views of Ho Chi Minh's thoughts on great national unity 5.2. Understand the basic views of Ho Chi Minh's thoughts on international solidarity 5.3. Apply Ho Chi Minh's thoughts on great national unity and international solidarity in the current period ***6. Ho Chi Minh ideology on culture, morality and human*** 6.1. Grasp basic knowledge of Ho Chi Minh's thoughts on culture 6.2. Grasp basic knowledge of Ho Chi Minh's thoughts on new morality (revolutionary morality) 6.3. Grasp the basic knowledge of Ho Chi Minh's thoughts on culture 6.4. Apply Ho Chi Minh's thoughts on culture, morality and people in building the current Vietnamese culture, morality and human **II. Skills** Demonstrate the ability to generalize, think, debate, critique, and groupwork 1. Have skills in thinking, analyzing and evaluating Ho Chi Minh's thoughts. 2. Have skills in presenting, explaining, criticizing, debating and eloquent about theoretical knowledge being studied and researched based on practice. 3. Have skills in creatively applying Ho Chi Minh's thoughts to solving practical problems in life, study and work. **III. Attitudes** 1. Recognize the role and value of Ho Chi Minh's thoughts for the Party and nation of Vietnam 2. Have political bravery, patriotism, loyalty to the goals and ideals of national independence associated with socialism 3. Recognize responsibility in studying, researching and applying knowledge in life

<table>
<tr><td></td><td>to contribute to national construction and defense</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
Weight: period (1 period = 50 minutes)
Teaching levels: I (Introduce); T (Teach); U (Utilize)
<table>
<tr><th>Topic</th><th>Weight</th><th>Level</th></tr>
<tr><td>Giới thiệu về môn học</td><td>1</td><td>I, T</td></tr>
<tr><td>Concept, subject, research methodology and meaning of Ho Chi Minh ideology module</td><td>2</td><td>T</td></tr>
<tr><td>The foundation, formation and development of Ho Chi Minh ideology</td><td>3</td><td>T</td></tr>
<tr><td>Ho Chi Minh ideology on national independence and socialism</td><td>3</td><td>T, U</td></tr>
<tr><td>Ho Chi Minh ideology on the Communist Party of Vietnam of the people, by the people and for the people</td><td>3</td><td>T, U</td></tr>
<tr><td>Ho Chi Minh ideology on national great unity and international solidarity</td><td>3</td><td>T, U</td></tr>
<tr><td>Ho Chi Minh ideology on culture, morality and human</td><td>3</td><td>I, T</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Class discussion; Group presentations and reports; Mid-term exam: Multiple choice (closed-book) or essay (opened-book); Final exam: Essay (opened-book)</td></tr>
<tr><td>Study and examination regulations</td><td>- Regulations on assessment: according to the Regulations on the teaching and learning of Political Theory subjects of the School of Political and Administration Sciences.
- Regulations on group presentation: Forming a group: 5 students/group.
+ The deadline for group topic registration on the forum is session 2.
+ Week 4 (4th session) begin to present in order. Note that the presenting groups need to fully show up and bring along all relevant documents.
+ Submission form: submit files and minutes of group work via email to the lecturer.</td></tr>
<tr><td>Materials</td><td>1. Ministry of Education and Training (2019). Giảo trình Tư tưởng Hồ Chí Minh, National Political Publishing House, Hanoi.
2. School of Political and Administration Sciences VNU-HCM. Tài liệu hướng dẫn học tập Tư tưởng Hồ Chí Minh.
3. Ho Chi Minh (2011). Full volume, National Political Publishing House, Hanoi.
4. Biography of Ho Chi Minh (2016). National Political Publishing House, Hanoi.</td></tr>
</table>

3. Marxist - Leninist Political Economy (PE016IU)

Module designation	The program consists of 6 chapters, in which Chapter 1 discusses the Objects, research methods and functions of Marxist-Leninist political economy; the remain chapters present the core content of Marxist-Leninist Political Economy according to the module's objectives. Specifically, the content includes commodities, markets and the role of stakeholders; producing surplus value; competition and monopoly; socialist-oriented market economy and economic interest relations in Vietnam; and industrialization, modernization, and international economic integration in Vietnam.
Semester(s) in which the module is taught	Summer Semester (1st year)
Lecturer	Lecturers at School of Political and Administration Sciences, VNU-HCM
Language	*Vietnamese*
Relation to curriculum	*Compulsory*
Teaching methods	*Lecture, group discussion, presentation*
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[3]: 60*
Credit points	***02 credits/3.09 ECTS***
Required and recommended prerequisites	Marxist-Leninist philosophy
Module objectives	Firstly, to equip students with fundamental knowledge of Marxist-Leninist political economy in the context of economic development of the country and the world today; to ensure the basic, systematic, scientific, and up-to-date knowledge associated with practice, creativity, skills, thinking, and traits of students, as well as to enhance the interdisciplinary and non-overlapping interoperability, also reduce the amount of academic or outdated material for college and university non-theoretical students. Secondly, on that basis, to form the mindset, skills of analysis, evaluation, and identification of the nature of economic benefit relations in the country's socio-economic development, contributing to helping students build appropriate social responsibility in the job position and life after graduation. Thirdly, to contribute to building the stance and ideology of Marxism-Leninism towards students.
Tentative learning outcomes	**II. Knowledge** ***1. Objects, research methods and functions of Marxist-Leninist political economy*** 1.1. Understanding the formation and development of Marxist-Leninist political economy 1.2. Identify the research object of Marxist-Leninist political economy

	1.3. Understand the research method of Marxist-Leninist political economy 1.4. Understand the functions of Marxist-Leninist political economy course ***2. Commodities, markets, and the role of stakeholders*** 2.1. Understand the definition and the conditions for the production of goods 2.2. Understanding the commodity, its two attributes, and the relationship between them 2.3. Understand the relationship between the duality of commodity-producing labor and the two attributes of commodities 2.4. Understand the quality and quantity of the good's value and the affecting factors 2.5. Understand the origin, nature and function of money 2.6. Understanding the market, the role of the market, the market mechanism and the market economy 2.7. Understand some key patterns of the market economy 2.8. Understand the role of stakeholders ***3. Surplus value in a market economy*** 3.1. Understand the concept, the general formula and contradiction of capital 3.2. Understand what the commodity labor is and why need to study it 3.3. Understand what surplus value is 3.4. Understanding the nature of capital accumulation 3.5. Understand the concepts: production cost, profit, profit margin, average profit, commercial profit, factors affecting profit rate 3.6. Understand what income is 3.7. Understanding capitalist rents, their types and land prices ***4. Competition and monopoly in the market economy*** 4.1. Understand the relationship between competition and monopoly in a market economy 4.2. Understand the causes of monopoly formation in the market economy 4.3. Understanding the basic economic features of monopoly in capitalism from Lenin's viewpoint 4.4. Understand the causes of formation and development of state monopoly capitalism 4.5. Understand the nature and the main manifestations of state monopoly in capitalism 4.6. Understand the historical role of capitalism ***5. Socialist-oriented market economy and economic interest relations in Vietnam*** 5.1. Understand the concept of a socialist-oriented market economy in Vietnam 5.2. Understand the objective necessity of developing a socialist-oriented market economy in Vietnam 5.3. Understanding the characteristics of the socialist-oriented market economy in Vietnam 5.4. Understand what the socialist-oriented market economy institution is and the need to improve it 5.5. Grasp the basic contents of improving the socialist-oriented market economy institution in Vietnam 5.6. Understand the concept and the relationship of economic benefits 5.7. Understand the role of the state in ensuring the harmonization of relations of interest ***6. Vietnam's industrialization, modernization and international economic integration*** 6.1. Understand what the industrial revolution is and be able to generalize the historical revolutions 6.2. Understand the role of the industrial revolution for development 6.3. Understand the concept and typical models of industrialization in the world 6.4. Understand the objective necessity of industrialization and modernization in

<table>
<tr><td></td><td>Vietnam
6.5. Understand the contents of industrialization and modernization in Vietnam
6.6. Understand industrialization and modernization in Vietnam in the context of the 4.0 industrial revolution.
6.7. Understand the concept and the reason why international economic integration an objective necessity
6.8. Understand the contents and positive and negative impacts of international economic integration
6.9. Grasp the direction of improving the efficiency of international economic integration in Vietnam's development</td></tr>
<tr><td></td><td>II. Skills
Demonstrate the ability to generalize, think, debate, critique, and groupwork
1. Have the skill of generalizing to pick out keywords for each content and think systematically
2. Have skills in presenting, explaining, criticizing, debating and eloquent about theories being studied and researched based on practice
3. Have skills in social communication, cooperation and teamwork, sharing knowledge and experience, ability to run a group
III. Attitudes
Express consciousness and awareness during and after learning
1. Have a sense of responsibility to protect the science, revolution and humanity of Marxism-Leninism
2. Have a sense of personal responsibility towards the community
3. Have awareness of the need for lifelong learning and research and applying practically.</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
Weight: period (1 period = 50 minutes)
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>Objects, research methods and functions of Marxist-Leninist political economy</td><td>2</td><td>I, T</td></tr>
<tr><td>Commodities, markets and the role of stakeholders</td><td>6</td><td>T</td></tr>
<tr><td>Surplus value in a market economy</td><td>6</td><td>T, U</td></tr>
<tr><td>Socialist-oriented market economy and economic interest relations in Vietnam</td><td>5</td><td>T, U</td></tr>
<tr><td>Vietnam's industrialization, modernization and international economic integration</td><td>5</td><td>T, U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Class discussion; Group presentations and reports; Mid-term exam: essay (opened-book); Final exam: essay (closed-book)</td></tr>
<tr><td>Study and examination regulations</td><td>1. Regulations for group presentations
- Forming a group: 5 students/group. The deadline for group topic registration on the forum is session 2 or directly submit it to the lecturer at the exam.
- Week 4 (4th session) begin to present in order. Note that the presenting groups need to fully show up and bring along all relevant documents.
- Submission form: submit files and minutes of group work via email to the lecturer
2. Regulations on time, attendance, and discipline in the course: attend class on time</td></tr>
</table>

	and at least 80% of the sessions (only to be absent for a maximum of 20%). Exam ban is applied to those who miss more than the regulated number of sessions. Students must have all test scores, lively discussions, constructive and serious statements in class.
Materials	1. Mandatory document: Marxist-Leninist political economy textbook for non-specialized undergraduates. 2. Referential materials: a) Robert, J.R. & Robert, F. H. (2003), *History of economic theory and method (in Vietnamese)*, Statistical Publishing House. b) Politic Economy Institute, Ho Chi Minh National Academy of Politics (2018), *Giáo trình Kinh tế chính trị Mác - Lê nin*, Political Theory House. c) K. Marx and F.Engels, Full Volume (vol. 20, 23, 25), National Political Publishing House, 1994. d) V.I. Lenin, Full Volume, Progress Press, Moscow, 1976. e) Davig Begg, Stanley Fisher, Rudiger Dornbusch, *Kinh tế học*, Hanoi Education Publishing House, 1992.
	f) Communist Party of Vietnam (2016), Document of the 12th National People's Congress, National Political Publishing House, Hanoi. g) Communist Party of Vietnam (2016), Report summarizing some theoretical and practical problems through thirty years of renovation (1986 - 2016), National Political Publishing House, Hanoi. h) Communist Party of Vietnam (2017), Resolution No. 11-NQ/TW dated June 3, 2017 on: "Improving the socialist-oriented market economy institution" i) Directive No. 16/CT-TTg (2017) "on strengthening access to the 4.0 industrial revolution". j) Jeremy Rifkin (2014), *The third industrial revolution (in Vietnamese)*, Labor and Social Publisher Co. Ltd. k) Manfred B. Steger (2011), *Globalization - A Very Short Introduction*, Knowledge Publishing House. l) Klaus Schwab (2015), *The fourth industrial revolution*, National Political Publishing House, 2018.

4. Scientific Socialism (PE017IU)

Module designation	The course equips students with basic knowledge of scientific socialism.
Semester(s) in which the module is taught	Semester 1 (2nd year)
Person responsible for the module	Lecturers at School of Political and Administration Sciences, VNU-HCM
Language	*Vietnamese*
Relation to curriculum	*Compulsory*
Teaching methods	*Lecture, group discussion, presentation*
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[4]: 60*
Credit points	*02 credits/3.09 ECTS*
Required and recommended prerequisites	l. Marxist-Leninist political economy 2. Marxist-Leninist philosophy
Module objectives	- The subject equips students with the basic contents of scientific socialism (one of the three constituent parts of Marxism-Leninism). - Help students to apply knowledge about scientific socialism creatively in cognitive and practical activities, in order to solve problems of social life of country and time.
Tentative learning outcomes	**III. Knowledge** ***1. Introduction to Scientific Socialism*** 1.1. Generalize the birth of Scientific Socialism, the historical background and the role of Karl Marx and Friedrich Engels 1.2. Recognize the basic development stages of Scientific Socialism shown in the works 1.3. Understand the object, method and significance of the study of Scientific Socialism ***2. The historical mission of the working class*** 2.1. Understand the concept of the working class and its characteristics 2.2. Understand the content and characteristics of the historical mission of the working class 2.3. Explain the conditions that determine the historical mission of the working class

	2.4. Analyze the similarities and differences of the working class and the implementation of the mission of the them in the world today 2.5. Understand the basic characteristics of the Vietnamese working class and the content of the historical mission of them today 2.6. Present the direction and some key solutions to build the working class in Vietnam today ***3. Socialism and the transition to socialism*** 3.1. Understanding Socialism is the first stage of the socialist-economic form of communism 3.2. Describe the basic features of socialism 3.3. Explain the objective necessity of the transition to socialism and the basic features of it 3.4. Understand the characteristics of the transition period and socialism in Vietnam, present the directions to build socialism in Vietnam today ***4. Democracy and the socialist state*** 4.1. Explain the concept of democracy and the birth and development of democracy in the history of human society 4.2. Understand the birth process and nature of socialist democracy 4.3. Understand the birth, nature and function of the socialist state as well as the relationship between democracy and the state 4.4. Understand the birth, development and nature of socialist democracy in Vietnam 4.5. Present the basic characteristics and solutions to build a legal socialist state in Vietnam today ***5. Social structure - classes and alliances of classes and classes in the transition to socialism*** 5.1. Present the concept of social structure - generalization and the change of class social structure during the transition to socialism 5.2. Explain the inevitability of class alliances during the transition to socialism 5.3. Understand the social-class structure in Vietnam during the transitional period and present basic solutions to build and develop class alliances and social classes in Vietnam ***6. Ethnic and religious issues in the transition to socialism*** 6.1. Understand the basic concepts and characteristics of the nation and the Marxist-Leninist point of view on the national issue 6.2. Present the basic characteristics of the nation in Vietnam and the viewpoints on ethnic policies of the Party and State of Vietnam. 6.3. Understanding the nature, origin, features of religion and basic principles of solving religious problems in the transition to socialism

<table>
<tr><td></td><td>6.4. Explain the characteristics of religion in Vietnam and the policies of the Party and State of Vietnam towards religious beliefs today

6.5. Understand the characteristics of ethnic and religious relations in Vietnam and present basic orientations to solve the relationship between ethnicity and religion in Vietnam today

7. Family problems in the transition to socialism

7.1. Outline the position, function and role of the family in society

7.2. Identify the bases for building a family during the transition to socialism

7.3. Explain the change of the Vietnamese family and present the basic directions for building and developing the Vietnamese family during the transition to socialism</td></tr>
<tr><td></td><td>II. Skills
Demonstrate the ability to generalize, think, debate, critique, and groupwork
1. Have the skill of generalizing to pick out keywords for each content and think systematically
2. Have skills in presenting, explaining, criticizing, debating and eloquent about theories being studied and researched based on practice
3. Have skills in social communication, cooperation and teamwork, sharing knowledge and experience, ability to run a group
III. Attitudes
Express consciousness and awareness during and after learning
1. Have a sense of responsibility to protect the scientific and revolutionary nature of Marxist-Leninist theories on socialism and the transition to socialism in Vietnam
2. Have a sense of personal responsibility towards the community
3. Have awareness of the need for lifelong learning and research and applying practically</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
Weight: period (1 period = 50 minutes)
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, T</td></tr>
<tr><td>Introduction to Scientific Socialism</td><td>4</td><td>I, T</td></tr>
<tr><td>The historical mission of the working class</td><td>4</td><td>T</td></tr>
<tr><td>Socialism and the transition to socialism</td><td>4</td><td>I, T</td></tr>
<tr><td>Democracy and the socialist state</td><td>4</td><td>T, U</td></tr>
<tr><td>Social structure - classes and alliances of classes and classes in the transition to socialism</td><td>4</td><td>I, T</td></tr>
<tr><td>Ethnic and religious issues in the transition to socialism</td><td>4</td><td>T, U</td></tr>
<tr><td>Family problems in the transition to socialism</td><td>5</td><td>T, U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Class discussion; Group presentations and reports; Practices; Mid-term exam; Final exam</td></tr>
</table>

Study and examination regulations	1. Regulations for group presentations - Forming a group: 5 students/group. The deadline for group topic registration on the forum is session 2 or directly submit it to the lecturer at the exam. - Week 4 (4th session) begin to present in order. Note that the presenting groups need to fully show up and bring along all relevant documents. - Submission form: submit files and minutes of group work via email to the lecturer 2. Regulations on time, attendance, and discipline in the course: attend class on time and at least 80% of the sessions (only to be absent for a maximum of 20%). An exam ban is applied to those who miss more than the regulated number of sessions. Students must have all test scores, lively discussions, constructive and serious statements in class.
Materials	4. Ministry of Education and Training. (2019). *Giáo trình Chủ nghĩa xã hội khoa học,* National Political Publishing House, Hanoi. 5.Ministry of Education and Training. (2012). *Giáo trình Những Nguyên lý cơ bản của chủ nghĩa Mác - Lênin,* National Political Publishing House, Hanoi. 6.Governing Body. (2008). *Giáo trình Chủ nghĩa xã hội khoa học,* National Political Publishing House, Hanoi.

5. History of Vietnamese Communist Party (PE018IU)

Module designation	The course equips students with basic knowledge about the History of the Communist Party of Vietnam
Semester(s) in which the module is taught	Semester 1 (3rd year)
Person responsible for the module	Lecturers at School of Political and Administration Sciences, VNU-HCM
Language	*Vietnamese*
Relation to curriculum	*Compulsory*
Teaching methods	*Lecture, group discussion, presentation*
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[5]: 60*
Credit points	***02 credits/3.09 ECTS***
Required and recommended prerequisites	1. Marxist-Leninist philosophy 2. Marxist-Leninist political economy 3. Scientific socialism

[5] When calculating contact time, each contact hour is counted as a full hour. Because of 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.

Module objectives	**1. Knowledge:** providing systematic and basic knowledge about the birth of the Communist Party of Vietnam (1920-1930), the Party's leadership over the Vietnamese revolution during the struggle for power (1930-1945), the two resistance wars against French and US colonialism (1945-1975), and national construction and defense during the period of the country's transition to socialism and carrying out the renovation work (1975-2018). **2. Ideology:** Through historical events and experiences to build a sense of respect for objective truths, raise pride and confidence in the Party's leadership. **3. Skills:** Equip with scientific thinking methods on history, skills in choosing research materials and studying subjects; and the ability to apply historical awareness to practical work and critical thinking toward false claims about the history of the Party.

Tentative learning outcomes	**IV. Knowledge** ***1. Objects, functions, tasks, contents and methods of research and study History of the Communist Party of Vietnam*** Understand the objects, purposes of study and research and some basic requirements on learning and research methods ***2. The Communist Party of Vietnam was born and led the struggle for power (1930-1945)*** 2.1. Understanding the historical context that influenced the birth of the Communist Party of Vietnam 2.2. Understand the process of preparing the conditions for the establishment of the Party of Nguyen Ai Quoc 2.3. Understand the contents of the Party's founding conference and the Party's first political platform 2.4. Understand the historical significance of the establishment of the Communist Party of Vietnam 2.5. Understanding the revolutionary movements of 1930-1935 and the policies of restoring the movement in 1932-1935 2.6. Understanding the democracy movement in 1936-1939 2.7. Understanding the national liberation movement in 1939-1945 2.8. Understanding the nature, meaning and experience of the August Revolution in 1945 ***3. The Party led two resistance wars, completed the national liberation and reunification (1945-1975)*** 3.1. Understand the policy of building and defending the revolutionary government in 1945-1946 3.2. Understand the line of national resistance against the French colonialists and the process of organizing its implementation from 1946 to1950 3.3. Understand the policy of promoting the resistance against the French colonialists and the implementation process from 1946 to 1950 3.4. Understand the historical significance and experience of the Party in leading the resistance war against French colonialism and US intervention 3.5. Understanding the Party's process of leading the two regions' revolutions in the 1954-1965 period 3.6. Mastering the Party's revolutionary leadership in the 1965-1975 period 3.7. Understand the meaning and experience of the Party's leadership in the resistance war against the US in 1954-1975

4. The Party led the country in the transition to socialism and carried out the Doi moi (1975-2018)

4.1. Understand the policy of building socialism and defending the Fatherland 1975-1981

4.2. Understanding the contents of the 5th National Congress of the Party and the breakthroughs to continue economic renovation 1982-1986

4.3. Understanding the Party's point of view of comprehensive renovation, bringing the country out of the 1986-1996 socio-economic crisis

4.4. Understand the achievements and experiences of the innovation process

4.5. Understand the great victories of the Vietnamese revolution under the leadership of the Party

4.6. Understanding the great lessons of the Party's leadership from 1930 to 2018

II. Skills

Demonstrate the ability to generalize, think, debate, critique, and groupwork

1. Exercise independent thinking capacity in researching the Party's revolutionary lines, strategies and tactics
2. Have critical thinking, analytical, synthesis and evaluation skills related to the subject; and from there, apply the learned knowledge to actively and actively perceive political, economic, cultural and social issues according to the guidelines, policies and laws of the Party and State.
3. Have writing skills, individual working skills, teamwork skills, and presenting research results

III. Attitudes

Express consciousness and awareness during and after learning

1. Believe in the Party's leadership for the Vietnamese revolution
2. Determine to strive for the implementation of the Party's revolutionary line
3. Have a serious attitude in learning, scientific research, awareness of life and society, self-training to become a person of solid political quality, bravery, ethics, and good level of expertise; form affection and belief in the revolutionary path that our nation has chosen

Content

The description of the contents should clearly indicate the weighting of the content and the level.

Weight: period (1 period = 50 minutes)

Teaching levels: I (Introduce); T (Teach); U (Utilize)

Topic	**Weight**	**Level**
Introduction	1	I, T
Objects, functions, tasks, contents and methods of research and study History of the Communist Party of Vietnam	4	I, T
The Communist Party of Vietnam was born and led the struggle for power (1930-1945)	5	T
The Party led two resistance wars, completed the national liberation and reunification (1945-1975)	5	I, T
The Party led the country in the transition to socialism and carried out the Doi moi (1975-2018)	5	T, U

Examination forms	Class discussion; Group presentations and reports; Mid-term exam; Final exam
Study and examination regulations	1. Regulations for group presentations - Forming a group: 5 students/group. The deadline for group topic registration on the forum is session 2 or directly submit it to the lecturer at the exam. - Week 4 (4th session) begin to present in order. Note that the presenting groups need to fully show up and bring along all relevant documents. - Submission form: submit files and minutes of group work via email to the lecturer 2. Regulations on time, attendance and discipline in the course: attend class on time and at least 80% of the sessions (only to be absent for a maximum of 20%). Exam ban is applied to those who miss more than the regulated number of sessions. Students must have all test scores, lively discussions, constructive and serious statements in class.
Materials	1. Ministry of Education and Training. (2019). *Chương trình môn học Lịch sử Đảng Cộng sản Việt Nam*. 2. Governing Body directed the compilation of national textbooks of Marxist-Leninist sciences, Ho Chi Minh's Thoughts. (2018). *Giáo trình Lịch sử Đảng Cộng sản Việt Nam (revised and supplemented edition).* National Political Publishing House, Hanoi.

6. Engineering Ethics and Professional Skills (PE020IU)

Module designation	**PE020IU – Engineering Ethics and Professional Skills** 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. This course also provides students with the professional skills: sharing ideas and concepts, team working, and presentation skills.
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[6]: 90
Credit points	**3 credits/4.64 ECTS**
Required and recommended prerequisites for joining the module	None
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, and fair use of copyrighted materials and research data. (2) Using different problem-solving techniques to solve ethical dilemmas. (3) Analyzing social, environmental, legal aspects, safety and sustainability issues of engineering activities.
Content	*The description of the contents should clearly indicate the weighting of the content and the level.* Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize)

<table>
<tr><td></td><td>
<table>
<tr><th>Topic</th><th>Weight</th><th>Level</th></tr>
<tr><td>Introduction to engineering professionalism and ethics</td><td>1</td><td>I</td></tr>
<tr><td>Engineers in Society</td><td>1</td><td>T, U</td></tr>
<tr><td>Moral choices and codes of ethics</td><td>1</td><td>T, U</td></tr>
<tr><td>Philosophical ethics</td><td>2</td><td>I, T, U</td></tr>
<tr><td>Ethical problem-solving techniques</td><td>1</td><td>T, U</td></tr>
<tr><td>Engineers at the Workplaces - Leadership</td><td>2</td><td>T, U</td></tr>
<tr><td>Truth in actions and words
Academic and Research Ethics</td><td>1</td><td>T</td></tr>
<tr><td>Commitment to Safety</td><td>1</td><td>T, U</td></tr>
<tr><td>Internet ethics, Privacy Issues and Intellectual Property Rights</td><td>1</td><td>T, U</td></tr>
<tr><td>Environmental ethics
Sustainable engineering</td><td>1</td><td>T</td></tr>
<tr><td>Review</td><td>1</td><td>T</td></tr>
</table>
</td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>Textbook:
[1] M. W. Martin and R. Schinzinger (2010). Introduction to engineering ethics McGraw-Hill Education 2nd edition
[2] C. B. Fleddermann. (2011). Engineering Ethics, Pearson 4th edition</td></tr>
</table>

7. General Law (PE021IU)

<table>
<tr><td>Department</td><td>Office of Academic Affairs</td></tr>
<tr><td>Course classification</td><td>Foundation course</td></tr>
<tr><td>Course designation</td><td>Face to face</td></tr>
<tr><td>Semester(s) in which the course is taught</td><td>All semesters in each academic year</td></tr>
<tr><td>Person responsible for the course</td><td>Dr. Vo Tuong Huan
LLM. Bui Doan Danh Thao</td></tr>
<tr><td>Language</td><td>English</td></tr>
<tr><td>Relation to curriculum</td><td>Compulsory</td></tr>
<tr><td>Teaching methods</td><td>Student-centred approach</td></tr>
<tr><td>Workload (incl. contact hours, self-study hours)</td><td>(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</td></tr>
<tr><td>Credit points</td><td>3</td></tr>
<tr><td>Required and recommended prerequisites for joining the course</td><td>N/A</td></tr>
<tr><td>Course objectives</td><td>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.</td></tr>
<tr><td>Course learning outcomes</td><td>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>Knowlee</td><td>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.</td></tr>
</table></td></tr>
</table>

	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**.
	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**.
Content	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	

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 *before* attendance in classes. **Required Course Texts and Materials** Legal Texts: 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 Books: • PGS.TS. Phan Trung Hien, *Giáo trình Pháp Luật Đại cương*, NXB Chính Trị Quốc Gia Sự Thật 2022. • Mai Hong Quy (Chief Editor) (2nd 2017), *Introduction to Vietnamese Law*, Hong Duc Publishing House. Additional materials provided in Blackboard 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** Recommended Internet sites 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)

I.2. ENGLISH PROFICIENCY

8. Writing AE1 (Academic Writing) (EN007IU)

<table>
<tr><td>Course designation</td><td>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.</td></tr>
<tr><td>Semester(s) in which the course is taught</td><td>1, 2, 3</td></tr>
<tr><td>Person responsible for the course</td><td>Lecturers of Department of English</td></tr>
<tr><td>Language</td><td>English</td></tr>
<tr><td>Relation to curriculum</td><td>Compulsory</td></tr>
<tr><td>Teaching methods</td><td>Lecture, lesson, project</td></tr>
<tr><td>Workload (incl. contact hours, self-study hours)</td><td>(Estimated) Total workload: 85
Contact hours (lecture, exercise): 25
Private study including examination preparation, specified in hours[7]: 60</td></tr>
<tr><td>Credit points</td><td>2 credits/3.09 ECTS</td></tr>
<tr><td>Required and recommended prerequisites for joining the course</td><td>Students must fulfil ONE of the following requirements to attend this course:
hold TOEFL iBT certificate with score ≥ 61
hold IELTS certificate with score ≥ 5.5
have completed IE2 course</td></tr>
<tr><td>Course objectives</td><td>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.</td></tr>
<tr><td>Course learning outcomes</td><td>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 and follow different steps in the writing process to produce a complete essay
CLO2. Employ different methods to improve their writing such as peer feedback and teacher comments</td></tr>
<tr><td>Skill</td><td>CLO3. Read critically, analyze and annotate an academic text
CLO4. Use different functions of writing to successfully communicate their purposes to the audience (describe a process, discuss the causes and effects, compare and contrast, make arguments, paraphrase and summarize)</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td>
<table>
<tr><td>Attitude</td><td>CLO5. Reason around ethical issues in writing academic essays and avoid committing plagiarism</td></tr>
</table>
</td></tr>
<tr><td>Content</td><td>
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>The process of Academic Writing</td><td>1</td><td>I, T, U</td></tr>
<tr><td>Using Outside Sources</td><td>3</td><td>T, U</td></tr>
<tr><td>From Paragraph to Essay</td><td>4</td><td>T, U</td></tr>
<tr><td>Process Essays</td><td>4</td><td>T, U</td></tr>
<tr><td>Cause/Effect Essays</td><td>4</td><td>T, U</td></tr>
<tr><td>Comparison/ Contrast Essays</td><td>4</td><td>T, U</td></tr>
<tr><td>Argumentative Essays</td><td>6</td><td>T, U</td></tr>
<tr><td>Summarizing</td><td>2</td><td>U</td></tr>
<tr><td>Review & Correction</td><td>2</td><td>U</td></tr>
</table>
</td></tr>
<tr><td>Examination forms</td><td>Essay writing</td></tr>
<tr><td>Study and examination requirements</td><td>
Attendance
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.

Missed Tests
Students are not allowed to miss any of the tests (both Mid-term and Final). There are very fewexceptions. Only with extremely reasonable excuses (eg. certified paper from doctors), students may re-take the examination.

Class Behaviors
Students are required to treat their studying in college as a full-time job and spend an adequateamount 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.

Plagiarism
Students are warned not to copy from other books or from their peers for all
</td></tr>
</table>

	assessment tasks. Committing plagiarism will result in 0 point for the task. Students who plagiarize twice will be prohibited from sitting the final examination. *Writing Center (Room 509)* Students are encouraged to visit the Writing Center to schedule an appointment for additional help with essay writing.
Reading list	[1] Oshima, A., & Hogue, A. (2017). *Longman Academic Writing Series, Level 4: Essays* (5th ed.).New Jersey, NJ: Pearson Longman. [2] Oshima, A., & Hogue, A. (2006). *Longman Academic Writing Series, Level 4: Essays* (4th ed.).New Jersey, NJ: Pearson Longman.

9. Listening AE1 (Listening & Note-Taking) (EN008IU)

Course designation	*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.*
Semester(s) in which the course is taught	1, 2, 3
Person responsible for the course	Lecturers of Department of English
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 85 Contact hours (lecture, exercise): 25 Private study including examination preparation, specified in hours[8]: 60
Credit points	**2 credits/3.09 ECTS**
Required and recommended prerequisites for joining the course	Students must fulfil ONE of the following requirements to attend this course: • hold TOEFL iBT certificate with score ≥ 61 • hold IELTS certificate with score ≥ 5.5 • complete IE2 course
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.

<table>
<tr><td>Course learning outcomes</td><td>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. Remember different strategies and techniques in listening to academic lectures and taking notes.
CLO2. Improve their specialized knowledge of academic lectures</td></tr>
<tr><td>Skill</td><td>CLO3. Respond to academic lectures with appropriate strategies
CLO4. Communicate effectively with their classmates and professors.</td></tr>
<tr><td>Attitude</td><td>CLO5. Respond to academic lectures with confidence</td></tr>
</table></td></tr>
<tr><td>Content</td><td>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>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></td></tr>
<tr><td>Examination forms</td><td>Paper and pen tests: Correct the mistakes, Fill in the blanks, Write short answers, Write a summary paragraph.</td></tr>
</table>

Study and examination requirements	*Attendance* 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. *Missed tests* 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.) *Class behavior* Students are supposed to: prepare thoroughly for each class in accordance with the syllabus and complete allassignments 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
Reading list	[1] Frazie, L., & Leeming, S. (2013). *Lecture ready 3.* Oxford: Oxford University Press.References: [2] Frazie, L., & Leeming, S. (2013). *Lecture ready 1, 2.* Oxford: Oxford University Press.

10. Writing AE2 (Research Paper Writing) (EN011IU)

Course designation	*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.*
Semester(s) in which the course is taught	1, 2, 3
Person responsible for the course	Lecturers of Department of English
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, project
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 85 Contact hours (lecture, exercise): 25 Private study including examination preparation, specified in hours[9]: 60
Credit points	**2 credits/3.09 ECTS**
Required and recommended prerequisites for joining the course	Students must complete Writing AE1 course
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.

<table>
<tr><td>Course learning outcomes</td><td>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 structure of a research paper and employ appropriate academic language in writing a research paper</td></tr>
<tr><td>Skill</td><td>CLO2. Read critically, analyze, and annotate academic articles and journals
CLO3. Employ the research writing skills obtained to work on their own paper in their major study.</td></tr>
<tr><td>Attitude</td><td>CLO4. Reason around ethical issues in writing research paper and avoid committing plagiarism</td></tr>
</table></td></tr>
<tr><td>Content</td><td>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>Unit 1: The Academic Writing Process Introduction</td><td>4</td><td>I, T, U</td></tr>
<tr><td>Unit 2: Researching and Writing</td><td>2</td><td>T, U</td></tr>
<tr><td>Unit 3: Fundamentals & Feedback</td><td>2</td><td>T, U</td></tr>
<tr><td>Unit 4: Definitions, Vocabulary & Clarity</td><td>2</td><td>T, U</td></tr>
<tr><td>Unit 5: Generalizations, Facts and Honesty</td><td>4</td><td>T, U</td></tr>
<tr><td>Unit 6: Seeing Ideas and Sharing Texts</td><td>2</td><td>T, U</td></tr>
<tr><td>Unit 7: Description, Methods & Reality</td><td>2</td><td>T, U</td></tr>
<tr><td>Unit 8: Results, Discussion & Relevance</td><td>2</td><td>T, U</td></tr>
<tr><td>Unit 9: The Whole Academic Text</td><td>2</td><td>T, U</td></tr>
<tr><td>Unit 10: Creating the Whole Text</td><td>4</td><td>T, U</td></tr>
<tr><td>Course Review</td><td>2</td><td>U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Essay writing</td></tr>
</table>

Study and examination requirements	*Attendance* 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. *Assignment (Literature review)* Purpose: Students will use the knowledge of paraphrasing, summarising, developing arguments, andAPA 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 papersmust be original for this class. Criterion-referenced grading is used in this course. *Missed Tests* Students are not allowed to miss any of the tests (both Mid-term and Final). There are very fewexceptions. Only with extremely reasonable excuses (eg. certified paper from doctors), students may re-take the examination. *Class Behaviors* 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 homeassignments 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. *Plagiarism* 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

<table>
<tr><td></td><td>provided properly. Penalties dueto improper citations or references include:
<table>
<tr><th>Degree of magnitude</th><th>Description</th></tr>
<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>
</table>
Notes: Part of the test is marked as it is if no plagiarism is detected. Students who plagiarize over 40%twice will be prohibited from sitting the final examination.

Writing Center (Room 509)
Students are encouraged to visit the Writing Center or to schedule an appointment for additional help.</td></tr>
<tr><td>Reading list</td><td>[1] Hamp-Lyons, L., & Heasley, B. (2006). Study Writing. Cambridge, UK: Cambridge University Press

[2] Articles and Essays taken from The Allyn and Bacon Guide to Writing by Ramage et al (2009),Pearson Longman.

[3] Cormack, J. & Slaught, J. (2009). English for academic study: Extended writing and research skills.Cambridge: Cambridge University Press. Garnet Education

[4] Folse, K. S. & Pugh, T. (2010). Great writing 5: Greater essays. Boston: Heinle, Cengage Learning.

[5] Keezer, S. (Ed.) (2003). Write your research report: A real-time guide. New Jersey: PearsonLearning Group.

[6] Kumar, R. (2019). Research methodology: A step-by-step guide for beginners. Sage Publications</td></tr>
</table>

11. Speaking AE2 (Effective Presentations) (EN012IU)

<table>
<tr><td>Course designation</td><td>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).</td></tr>
<tr><td>Semester(s) in which the course is taught</td><td>1, 2, 3</td></tr>
<tr><td>Person responsible for the course</td><td>Lecturers of Department of English</td></tr>
<tr><td>Language</td><td>English</td></tr>
<tr><td>Relation to curriculum</td><td>Compulsory</td></tr>
<tr><td>Teaching methods</td><td>Lecture, lesson, mini presentations</td></tr>
<tr><td>Workload (incl. contact hours, self-study hours)</td><td>(Estimated) Total workload: 85
Contact hours (lecture, exercise): 25
Private study including examination preparation, specified in hours[10]: 60</td></tr>
<tr><td>Credit points</td><td>2 credits/3.09 ECTS</td></tr>
<tr><td>Required and recommended prerequisites for joining the course</td><td>Students must complete AE1 courses</td></tr>
<tr><td>Course objectives</td><td>Speaking AE2 aims at introducing an training students 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.</td></tr>
<tr><td>Course learning outcomes</td><td>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 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</td></tr>
<tr><td>Skill</td><td>CLO2. Prepare and deliver effective, formal, structured presentations that are appropriate to the specific environment and audience.</td></tr>
<tr><td>Attitude</td><td>CLO3. Deliver both informative and persuasive speech with confidence</td></tr>
</table></td></tr>
</table>

<table>
<tr><td>Content</td><td>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>Orientation & Introduction
Needs analysis</td><td>2</td><td>I, T, U</td></tr>
<tr><td>Building up confidence</td><td>2</td><td>T, U</td></tr>
<tr><td>The first few minutes</td><td>2</td><td>T, U</td></tr>
<tr><td>Organizing what you want to say</td><td>2</td><td>T, U</td></tr>
<tr><td>Summarizing and concluding</td><td>2</td><td>T, U</td></tr>
<tr><td>Using equipment</td><td>2</td><td>T, U</td></tr>
<tr><td>Delivery techniques: Putting it all together</td><td>2</td><td>T, U</td></tr>
<tr><td>Group presentations for the instructor’s evaluation and advice</td><td>2</td><td>U</td></tr>
<tr><td>Introduction to persuasive speeches</td><td>2</td><td>T, U</td></tr>
<tr><td>Methods of persuasion</td><td>2</td><td>T, U</td></tr>
<tr><td>Maintaining interest</td><td>2</td><td>T, U</td></tr>
<tr><td>Dealing with problems and questions</td><td>2</td><td>T, U</td></tr>
<tr><td>Body language</td><td>2</td><td>T, U</td></tr>
<tr><td>Individual presentations for the instructor’s evaluation and advice</td><td>4</td><td>U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Oral Presentations</td></tr>
</table>

Study and examination requirements	*Attendance* 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. *Missed Tests* Students are not allowed to miss any of the tests (both Mid-term and Final). There are very fewexceptions. Only with extremely reasonable excuses (e.g. certified paper from doctors), students may re-take the examination. *Class Behaviors* 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 completehome 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. *Plagiarism* 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.
Reading list	[1] Lowe, S, & Pile, L. (2010). *Presenting.* Singapore*:* Cengage Learning [2] Comfort, J. (1997). *Effective presentations.* Oxford: Oxford University Press [3] Lucas, S. (2014). *The art of public speaking* (12th edition). New York: McGraw-HillEducation. [4] Harrington, D., & Lebeau, C. (2009). *Speaking of speech*. Macmillan

I.3. BASIC MATHEMATICS AND SCIENCE

12. Calculus 1 (MA001IU)

Course designation	This course equip 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: 170 Contact hours (lecture, exercise, laboratory session, etc.): 50 (lectures) Private study including examination preparation, specified in hours[11]: 120
Credit points	**4 credits/6.18 ECTS**
Required and recommended prerequisites for joining the course	None
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

<table>
<tr><td>Course learning outcomes</td><td>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. 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>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>CLO5. Confident when dealing with derivatives and integrals. Comfortable with using derivatives and integrals in practical situations. (Program outcome: j, k)</td></tr>
</table></td></tr>
</table>

<table>
<tr><td>Content</td><td>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><th>Topic</th><th>Weight</th><th>Level</th></tr>
<tr><td>Functions and Graphs, Inverse Functions, Exponentia Logarithmic Functions</td><td>1</td><td>I, T</td></tr>
<tr><td>Parametric Curves, Limit. One-sided Limits, Laws of Limit</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>
<tr><td>Higher-Order Derivatives, Rules of Differentiation. Rates of Change in the Natural and Social Sciences</td><td>1</td><td>T, U</td></tr>
<tr><td>Implicit Differentiation, Differentiation of Inverse Functions,</td><td>1</td><td>T, U</td></tr>
<tr><td>Logarithmic Differentiation, Linear Approximations. Differentials.</td><td>1</td><td>T, U</td></tr>
<tr><td>Related Rates, Maxima and Minima. Critical Point, The Mean Value Theorem.</td><td>1</td><td>T, U</td></tr>
<tr><td>The First and Second Derivative Test, Concavity. Shapes of Curves, Curve Sketching</td><td>1</td><td>T, U</td></tr>
<tr><td>Indeterminate Forms and l’Hôpital’s Rules, Maxima and Minima Problems, Newton’s Method</td><td>1</td><td>T, U</td></tr>
<tr><td>Anti-derivatives and Indefinite Integrals, The Definite Integral</td><td>1</td><td>I, T</td></tr>
<tr><td>Properties of the Definite Integral.
The Fundamental Theorem of Calculus, Integration by Substitution</td><td>1</td><td>I, T, U</td></tr>
<tr><td>Integration by Parts, Partial Fractions, Numerical Integration,</td><td>1</td><td>T, U</td></tr>
<tr><td>Improper Integrals, Areas between Curves
Areas Enclosed by Parametric Curves</td><td>1</td><td>T, U</td></tr>
<tr><td>Volumes, Arc Length, Applications to Engineering, Economics and Science</td><td>1</td><td>T, U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Written examination</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>J. Stewart, Calculus, Thomson Learning, 7th edition, 2012.</td></tr>
</table>

13. Calculus 2 (MA003IU)

Course designation	This course is a continuation of Calculus 1. Its aim to equip student with basis 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	*Assoc. Prof.Mai Duc Thanh, Assoc. Prof. Tran Vu Khanh, Dr. Nguyen Minh Quan, Dr. Nguyen Anh Tu, Dr. Ta Quoc Bao.*
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lectures, assignments
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 170 Contact hours (lecture, exercise, laboratory session, etc.): 50 (lectures) Private study including examination preparation, specified in hours[12]: 120
Credit points	**4 credits/6.18 ECTS**
Required and recommended prerequisites for joining the course	Calculus 1
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 modelling and problem solving, ability to think logically, and adapt these skills creatively to new situations

<table>
<tr><td>Course learning outcomes</td><td>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. Have basic knowledge of series, functions of several variables, mupliple integrals (Program outcomes: a)

CLO2. Have basic knowledge of vector calculus (Program outcomes: a)</td></tr>
<tr><td>Skill</td><td>CLO3. Can compute partial derivatives, multiple integral (Program outcomes: a, j)
CLO4. Can show the convergence of a sequence and a series and u, se power series to simplify computation. Can show the optimal problem using partial derivaties, 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>CLO5. Confident when dealing with partial derivaties, multiple integrals. Comfortable with using partial derivatives and multiple integrals in practical situations. (Program outcome: j, k)</td></tr>
</table></td></tr>
</table>

<table>
<tr><td>Content</td><td>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><th>Topic</th><th>Weight</th><th>Level</th></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>
<tr><td>Power series</td><td>1</td><td>T, U</td></tr>
<tr><td>Representations of Functions as Power series</td><td>1</td><td>T, U</td></tr>
<tr><td>Taylor and Maclaurin series</td><td>1</td><td>T, U</td></tr>
<tr><td>Vector Functions and Space Curves, Limit and continuity of vector functions</td><td>1</td><td>I, T</td></tr>
<tr><td>Derivatives and Integrals of vector functions, Length of space curves</td><td>1</td><td>T, U</td></tr>
<tr><td>Functions of Several Variables, Limits and Continuity</td><td>1</td><td>I,T</td></tr>
<tr><td>Partial Derivatives, Tangent Plane and Linear Approximations</td><td>1</td><td>T, U</td></tr>
<tr><td>Chain Rules, Directional Derivatives and Gradient</td><td>1</td><td>T, U</td></tr>
<tr><td>Maximum and Minimum Values of Functions of two variables</td><td>1</td><td>T, U</td></tr>
<tr><td>Lagrange Multipliers and Applications</td><td>1</td><td>T, U</td></tr>
<tr><td>Double Integrals in Rectangles, Iterated Integrals</td><td>1</td><td>I, T</td></tr>
<tr><td>Double, Triple Integrals in General regions and Applications</td><td>2</td><td>T,U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Written examination</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>J. Stewart, Calculus, Thomson Learning, 7th edition, 2012.</td></tr>
</table>

14. Physics 1 (General Mechanics) (PH013IU)

<table>
<tr><td>Course designation</td><td>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.</td></tr>
<tr><td>Semester(s) in which the course is taught</td><td>1, 2</td></tr>
<tr><td>Person responsible for the course</td><td>Assos. Prof.. Phan Bảo Ngọc
Dr. Phan Hiền Vũ</td></tr>
<tr><td>Language</td><td>English</td></tr>
<tr><td>Relation to curriculum</td><td>Compulsory</td></tr>
<tr><td>Teaching methods</td><td>Lecture, lesson, assignment.</td></tr>
<tr><td>Workload (incl. contact hours, self-study hours)</td><td>(Estimated) Total workload: 85
Contact hours (lecture, exercise, laboratory session, etc.): 25 (lecture)
Private study including examination preparation, specified in hours[16]: 60</td></tr>
<tr><td>Credit points</td><td>2 credits/3.09 ECTS</td></tr>
<tr><td>Required and recommended prerequisites for joining the course</td><td>None</td></tr>
<tr><td>Course objectives</td><td>This course will provide students with:
1. The basic knowledge of general Mechanics 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.</td></tr>
<tr><td>Course learning outcomes</td><td>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. An ability to understand of basic knowledge of law of conservations and dynamics of rigid body.
CLO2. An ability to analysis and design a problem in science and engineering</td></tr>
<tr><td>Skill</td><td>CLO3. An ability in applying knowledge of physics</td></tr>
<tr><td>Attitude</td><td>CLO4. An ability to communicate effectively in writing manner</td></tr>
</table></td></tr>
</table>

<table>
<tr><td>Content</td><td>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>Chapter 1: Bases of Kinematics</td><td>2</td><td>I, T,U</td></tr>
<tr><td>Chapter 2: The Law of Motion</td><td>2</td><td>I, T,U</td></tr>
<tr><td>Chapter 3: Work and Mechanical Energy</td><td>3</td><td>I, T,U</td></tr>
<tr><td>Chapter 4: Linear Momentum and Collisions</td><td>2</td><td>I, T,U</td></tr>
<tr><td>Chapter 5: Rotation of a Rigid Object About a Fixed Axis</td><td>2</td><td>I, T,U</td></tr>
<tr><td>Chapter 6: Equilibrium and Elasticity</td><td>2</td><td>I</td></tr>
<tr><td>Chapter 7: Universal Gravitation</td><td>2</td><td>I</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Short-answer questions</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>[1] Lecture Notes
[2] Halliday D., Resnick R. and Walker, J. (2011) Principles of Physics, 9th 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.</td></tr>
</table>

15. Statistic for business (BA080IU)

Course designation	Face to Face
Semester(s) in which the course is taught	1,2
Person responsible for the course	PhD. Nguyen Ba Trung
Language	English
Relation to curriculum	Compulsory
Teaching methods	Student-centered approach
Workload (incl. contact hours, selfstudy hours)	TBA
Credit points	3 Credits
Course objectives	The aim of this course is to examine various concepts in probability and statistics. This course also discusses various statistical techniques and the use of them in practical situations. Key topics of this course include descriptive statistics, discrete and continuous random variables, sampling and sampling distributions, confidence intervals, hypothesis testing, analysis of variance, simple linear and multiple regressions

<table>
<tr><td>Course learning outcomes</td><td>Upon the successful completion of this course students will be able to:<table>
<tr><td>Competency level</td><td>Course learning outcome (CLO)</td></tr>
<tr><td>Knowledge</td><td>● CLO1: Describe the key statistical concepts, tools, and techniques used in business.
● CLO2: Describe different research methodologies in business</td></tr>
<tr><td>Skill</td><td>● CLO3: Know how to work within a team</td></tr>
<tr><td>Attitude</td><td>● CLO4. State the ethical requirements of business statistics</td></tr>
</table></td></tr>
<tr><td>Content</td><td>This course is an introduction to basic statistical concepts and methods that are widely used in economics, finance, accountancy, marketing, and business more generally. Emphasis is placed on applying statistical methods to draw inferences from sample data in order to inform decision-making. The course covers two main branches of statistics: descriptive statistics and inferential statistics. Descriptive statistics includes collecting data, summarising and interpreting them through numerical and graphical techniques. Inferential statistics includes selecting and applying the correct statistical technique in order to make estimates or test claims about a population based on a sample. Topics covered also include time series analysis. In this course, students will learn to solve statistical problems in an Excel spreadsheet environment. Students are also required to work in small groups; this will develop the skills required to work effectively and inclusively in groups, as in a real work environment.</td></tr>
<tr><td>Examination forms</td><td>Essay exams</td></tr>
<tr><td>Study and examination requirements</td><td>- 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 instructor after class
- Use their own laptop in class only for learning purpose
- Read the textbook in advance
- Access the course Blackboard for up-to-date information and material of the course, for online supports from</td></tr>
</table>

Reading list	Textbook: Doane and Seward (2016), Applied Statistics in Business and Economics, 5th,New York: McGraw Hill. Reference Books: Amir D. Aczel, Jayavel Sounderpandian, (2009), Complete Business Statistics, 7th Edition, McGraw – Hill/Irwin. Anderson, Sweeney, William (2001), Statistics for Business and Economics, 8th edition, Thompson. Additional materials provided in Blackboard: 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 additional benefit of class interaction and demonstration..

16. Principles of Marketing (BA003IU)

Course designation	*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.*
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: 37.5 (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.

<table>
<tr><td>Course learning outcomes</td><td colspan="2">Upon the successful completion of this course students will be able to:</td></tr>
<tr><td></td><td>Competency level</td><td>Course learning outcome (CLO)</td></tr>
<tr><td></td><td>Knowledge</td><td>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</td></tr>
<tr><td></td><td>Skill</td><td>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</td></tr>
<tr><td></td><td>Attitude</td><td></td></tr>
</table>

<table>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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: Creating and Capturing Customer Value</td><td>1</td><td>I, T</td></tr>
<tr><td>Chapter 2: Company and Marketing Strategy- Partnering to Build Customer Engagement, Value, and Relationships</td><td>1</td><td>I, T</td></tr>
<tr><td>Chapter 3: Analysing the marketing environment</td><td>1</td><td>I, T, U</td></tr>
<tr><td>Chapter 5: Understanding consumer buyer behaviour</td><td>2</td><td>I, T, U</td></tr>
<tr><td>Chapter 6: Business Markets and Business Buying Behavior</td><td>1</td><td>I, T</td></tr>
<tr><td>Chapter 7: Customer-Driven Marketing Strategy: Creating Value for Target Customers</td><td>2</td><td>I, T, U</td></tr>
<tr><td>Chapter 8: Product, Services, and Brands: Building Customer Value</td><td>1</td><td>I, T, U</td></tr>
<tr><td>Chapter 10: Pricing: Understanding and Capturing Customer Value</td><td>1</td><td>I, T</td></tr>
<tr><td>Chapter 12: Marketing Channels: Delivering Customer Value</td><td>1</td><td>I, T</td></tr>
<tr><td>Chapter 14: Communicating Customer Value: Integrated Marketing Communications Strategy</td><td>1</td><td>I, T, U</td></tr>
<tr><td>Chapter 15: Advertising and Public Relations</td><td>1</td><td>I, T, U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Essay questions, case studies</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>[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</td></tr>
</table>

17. Leadership (BA098IU)

Course designation	Leadership is designed for students to provide with the necessary basic information for developing leadership skills and styles and develop an understanding of the components that make leadership successful and prepares students for leadership roles in the community and in their professions.
Semester(s) in which the course is taught	1 & 2 & 3
Language	English
Relation to curriculum	Elective course
Teaching methods	Lectures, group assignments & presentation, examinations.
Workload (incl. contact hours, selfstudy hours)	(Estimated) Total workload: 128 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

Required and recommended prerequisites for joining the course	None
Course objectives	• This introductory course presents leadership using a personal leadership perspective and framework. It provides students with the necessary basic information for developing leadership skills and styles. • Further, this course assumes that everyone has leadership potential, students taking this course will have the opportunity to examine their own views on leadership, explore the differences between personal and positional leadership, study characteristics of leaders and learn about the importance of personal development. It will put students in positions of leadership at some capacity, upon graduation. • Thus, this course is crucial to help students understand issues

	from both the leader and follower perspectives. Students will have the opportunity to engage in activities which will help students to develop students' leadership styles. • This course will combine the theoretical concepts from class with applications, so students can understand why and how things work in the leadership context.
Course learning outcomes	**Upon the successful completion of this course students will be able to:**

Competency level	**Course learning outcome (CLO)**
Knowledge	CLO1. To understand what leadership is and what leaders do. CLO2. To become aware of the importance of power and influence in shaping effective leadership, discover some leadership styles and to be able to apply reflection in developing effective leadership knowledge, skills and abilities.
Skill	CLO3. To recognize and understand different approaches to and models of leadership. CLO4. The ability to identify and debate critical issues / problems, as well as to evaluate financial information, make decisions and reflect critically on the justification for decisions
Attitude	CLO5. To identify hazards to effective leadership including but not limited to ethical, personal, and organizational issues.

Content	**The description of the contents should clearly indicate the weighting of the content and the level.** **Weight: lecture session (3 hours)** **Learning level: I (Introduced); R (Reinforced); M (Mastered)**

Topic	**Weight**	**Level**
Chapter 1: Who Is a Leader and What Skills Do Leaders Need?	1	I, R

	Chapter 2: Leadership Traits and Ethics	1	I, R
	Chapter 3: Leadership Behavior and Motivation	1	I, R
	Chapter 4: Contingency Leadership Theories	1	I, R
	Chapter 5: Influencing: Power, Politics, Networking, and Negotiation	1	I, R
	Chapter 6: Communication, Coaching, and Conflict Skills	1	I, R
	Chapter 7: Leader–Member Exchange and Followership	2	I, R
	Chapter 8: Team Leadership and Self-Managed Teams	1	I, R
	Chapter 9: Charismatic and Transformational Leadership	1	I, R
	Chapter 10: Leadership of Culture, Ethics, and Diversity	2	I, R
	Chapter 11: Strategic Leadership and Change Management	1	I, R
	Chapter 12: Crisis Leadership and the Learning Organization	1	I, R

Examination forms	Group Assignment & Presentation + attendance : 30% Mid-term examination: 30% Final examination: 40% Total 100%
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: Lussier, R. N., & Achua, C. F. (2016). Leadership: Theory, Application, & Skill Development (6th edition). *Cengage Learning*.

	[2] Slides and other materials are provided in the Blackboard

18. Construction Economics (CM309IU)

Module designation	**CM204IU – Construction Economics** In this course, students will study the general knowledge of micro- and macro-economics including the market mechanism, supply and demand theories, market structures of construction industry, macroeconomic objectives, government policy instruments, and inflation. Effects of micro- and macro-economics to construction industry also mentioned in this course. Students acquire the client and contractor relationships, different types of costs of construction firms, and the failure of market.
Semester(s) in which the module is taught	3
Person responsible for the module	Dr. Nguyen, Hoai Nghia, Dr. Nguyen, Van Tiep, MSc. Nguyen, Pham Duy Phương
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 (please specify whether lecture, exercise, laboratory session, etc.): 45 Private study including examination preparation, specified in hours[1]: 90
Credit points	3

Required and recommended prerequisites for joining the module	None
Module objectives/intended learning outcomes	**Overall objectives** are to equip IU students with knowledge of micro- and macro-economics and the construction market mechanism. The related economic problems of construction firms including relationships among clients and contractors, costs, demand and supply, and environmental issues. Students who complete the course will be able to perform the following tasks: (1) Having knowledge of micro- and macro-economics and the market mechanism (2) Having knowledge of using different economic issues related to construction firms (3) Applying the economic knowledge in construction management
Content	*The description of the contents should clearly indicate the weighting of the content and the level.* Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize)

Topic	Weight	Level
An introduction to the Basic Concepts	1	I
Economic systems for resource allocation	1	T
The market mechanism	1	T
The theory of demand	1	T, U
The theory of supply	1	T, U
Clients and contractors	1	T
Costs of the construction firm	2	T, U
Types of market structure in the construction industry	1	T
Market failures and government remedies	1	T
Environmental economics	1	T
Managing the macroeconomy	2	T
The economy and 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	Textbook: [1] Myers, D. (2004). *Construction economics – A new approach*. New York: Spon Press. References: [1] Slavin, S. L. (2005). *Economics*, 7th eds. New York: McGraw-Hill Irwin.

II. CORE MAJOR REQUIREMENT

19. Engineering Mechanics and mechanics of materials (CE105IU)

Course name	- *ENGINEERING MECHANICS AND MECHANICS OF MATERIALS* - *CƠ KỸ THUẬT VÀ SỨC BỀN VẬT LIỆU*
Course designation	**CE105IU – Engineering Mechanics and Mechanics Of Materials** 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.
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. Nguyen, Ba Quang Vinh
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 (please specify whether lecture, exercise, laboratory session, etc.): 45 Private study including examination preparation, specified in hours[1]: 90
Credit points	3 credits/ 4.64 ETCS
Number of periods	Theory: 45 Practice: 0
Required and recommended prerequisites for joining the course	None
Course objectives	**Overall objectives**

[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.

<table>
<tr><td></td><td>The course provides students with knowledge of solving equilibrium problems involving trusses, frames and machines; the laws of dry friction and apply it to solve equilibrium problems involving static friction; properties of areas and be able to calculate centroids and inertia moments of an area; and applying the concept of internal forces in members, and be able to draw shear and bending-moment diagrams for beams.</td></tr>
<tr><td>Course learning outcomes</td><td>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: An understanding of equilibrium equations to analyze engineering problems.</td></tr>
<tr><td>Skill</td><td>CLO2: An ability to determine the internal forces and draw diagrams for beams and trusses.
CLO3: An ability to calculate centroids and moments of inertia of various cross sections.</td></tr>
<tr><td>Attitude</td><td></td></tr>
</table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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>Forces</td><td>1</td><td>T</td></tr>
<tr><td>Equilibrium</td><td>1</td><td>T, U</td></tr>
<tr><td>Structural analysis</td><td>2</td><td>T, U</td></tr>
<tr><td>Stress and strain</td><td>1</td><td>T, U</td></tr>
<tr><td>Geometric properties</td><td>2</td><td>T, U</td></tr>
<tr><td>Internal forces and diagrams</td><td>6</td><td>T, U</td></tr>
<tr><td>Review</td><td>1</td><td>T</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>Textbook:
[1] R. C. Hibbeler, Static and Mechanics of Materials, 4th Ed., Pearson, 2014.
References:
[1] J. L. Meriam and L.G Kraige, Engineering Mechanics – Statics and Dynamics, 5th edition, Wiley, 2002.</td></tr>
</table>

20. Construction Materials (CE210IU)

Course name	CE210IU – Construction Materials CE210IU – Vật liệu xây dựng
Course designation	*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.*
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	Assoc. Prof. Tran Van Mien
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, homework, discussion
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[2]: 90
Credit points	**3 credits (Theory: 03 + Practice: 00)** **4.64 ECTS**

[2] 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.

<table>
<tr><td>Number of periods</td><td>Theory: 45
Practice: 00</td></tr>
<tr><td>Required and recommended prerequisites for joining the course</td><td>- Prerequisites:
- Corequisites:
- Previous course: Mechanics of Materials 1</td></tr>
<tr><td>Parallel course</td><td></td></tr>
<tr><td>Course objectives</td><td>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, 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.</td></tr>
<tr><td>Course learning outcomes</td><td>Upon the successful completion of this course students will be able to:
<table>
<tr><th>Categories</th><th>Course learning outcome (CLO)/ Competency</th></tr>
<tr><td>Knowledge</td><td>CLO1. Understand basic definitions, and physical, chemical, and mechanical properties of various construction materials for civil engineering. Students are explained, find themselves, or discuss the definition of each topic or property to clarify
CLO2. 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. Understanding the meaning of each property and how to apply in fact with sustainability.</td></tr>
<tr><td>Skills</td><td>CLO3. Evaluate the suitable quality of construction materials with sustainable criteria and determine properties of materials by equipment
CLO4. 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.
CLO5. Able to use social network technology to find material and its properties, and its application in civil engineering.</td></tr>
<tr><td>Attitude</td><td>CLO6. 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 bad effects on the environment.</td></tr>
</table></td></tr>
<tr><td></td><td></td></tr>
</table>

<table>
<tr><td>Content</td><td>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>Introduction to construction materials</td><td>0.5</td><td>I, T</td></tr>
<tr><td>Basic properties of construction materials</td><td>2</td><td>I, T, U</td></tr>
<tr><td>Natural rocks</td><td>0.5</td><td>I, T, U</td></tr>
<tr><td>Ceramics</td><td>2</td><td>I, T, U</td></tr>
<tr><td>Portland cement</td><td>2</td><td>I, T, U</td></tr>
<tr><td>Properties of fresh and harden concrete</td><td>2</td><td>I, T, U</td></tr>
<tr><td>Mix proportion of normal concrete</td><td>1</td><td>I, T, U</td></tr>
<tr><td>Specials concretes</td><td>1</td><td>I, T, U</td></tr>
<tr><td>Steel</td><td>1</td><td>I, T, U</td></tr>
<tr><td>Asphalt concrete</td><td>1</td><td>I, T, U</td></tr>
<tr><td>Other materials</td><td>2</td><td>I, T, U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Written examination: Mid-term and Final examinations</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list and Media employed</td><td><u>Textbooks:</u>
[1] Michael S. Mamlouk and John P. Zaniewski, Materials for Civil and Construction Engineers, Prentice Hall, 2005.
[2]. Steven H. Kosmatka, Beatrix Kerkhoff, and William C. Panarese, Design and Control of Concrete Mixtures, 14th Ed., Portland Cement Association, 2008.
<u>Additional references:</u>
[3] Neil Jackson and Ravindra K. Dhir, Civil engineering materials, 4th Ed, Palgrave Macmillan, 1996.
[4] Phùng Văn Lự và các tác giả, Giáo trình vật liệu xây dựng, NXB Giáo dục, 2000.
[5] Phạm Duy Hữu, Ngô Xuân Quảng và Mai Đình Lộc, Giáo trình Vật liệu xây dựng, NXB Giao Thông Vận Tải</td></tr>
</table>

21. Soil mechanics and foundation (CE106IU)

Course name	- *SOIL MECHANICS AND FOUNDATION* - *CƠ HỌC ĐẤT VÀ NỀN MÓNG*
Course designation	**CE106IU – SOIL MECHANICS AND FOUNDATION** The course provides to students some properties of soil, soil mechanics, lateral earth pressure acting on structures, slope stability, bearing capacity of soil and settlement of structures above soil mechanics those are commonly used in civil engineering construction. The course also provides the fundamental concepts of foundation analysis and design to construction management engineering students.
Course type	☐ *General knowledge* ☑ *Fundamental* ☐ *Specialized knowledge* ☐ *Internship/Project/Thesis* ☐ *Others:……*
Semester(s) in which the module is taught	3
Person responsible for the course	Dr. Nguyen, Ba Quang Vinh
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 (please specify whether lecture, exercise, laboratory session, etc.): 45 Private study including examination preparation, specified in hours[3]: 90
Credit points	3 credits/4.64 ECTS
Number of periods	Theory: 45 Practice: 0
Required and recommended prerequisites for joining the course	CE105IU (Engineering Mechanics and Mechanics of Materials)
Course objectives	**Overall objectives** Upon successful completion of the course, the students are expected to understand basic definitions, physical and mechanics properties of various soils

[3] 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.

<table>
<tr><td></td><td>in different states such as dry, wet and saturated states; to determine the properties of soils and the effect of ground water on properties of soil are also guided in the course; to calculate the stresses acting on soil at any point beneath the ground caused by upper soil layers and structures constructed on the ground are mentioned. The students also understand the fundamental concepts of foundation analysis and design.</td></tr>
<tr><td>Course learning outcomes</td><td>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 basic definitions and determine physical and mechanical properties of various soils in different states.
CLO3: Understand the fundamental concepts of foundation analysis and design.</td></tr>
<tr><td>Skill</td><td>CLO2: Determine stresses at any point beneath ground caused by above soil layer and constructed structures, including ultimate shear strength of soil and earth pressure acting on walls and foundation.</td></tr>
<tr><td>Attitude</td><td></td></tr>
</table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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>Soil formation
Physical properties</td><td>1</td><td>T, U</td></tr>
<tr><td>Plasticity and structure of soil</td><td>1</td><td>T, U</td></tr>
<tr><td>Classification of soil
Soil compaction</td><td>1</td><td>T, U</td></tr>
<tr><td>Permeability</td><td>1</td><td>T, U</td></tr>
<tr><td>Stress in a Mass soil</td><td>1</td><td>T, U</td></tr>
<tr><td>Compressibility of soil</td><td>1</td><td>T, U</td></tr>
<tr><td>Shear strength of soil</td><td>1</td><td>T, U</td></tr>
<tr><td>Slope stability</td><td>1</td><td>T, U</td></tr>
<tr><td>Shallow Foundations</td><td>3</td><td>T, U</td></tr>
<tr><td>Pile Foundations</td><td>3</td><td>T, U</td></tr>
<tr><td>Reviews</td><td>1</td><td>T, U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
</table>

	Assignments/Examination: Students must have more than 50/100 points overall to pass this module.
Reading list	Textbook: [1] Braja M. Das, *Principles of Geotechnical Engineering*, 7th Edition, CL - Engineering, 2005. [2] Braja M. Das, *Principles of Foundation Engineering*, 7th, edition, Cengage Learning, 2011. Class Handout. References: [1] Joseph E. Bowles, *Foundation Analysis and Design*, 5th Edition, McGraw-Hill, Inc., , 2001. [2] Braja M. Das, *Introduction to Geotechnical Engineering*, 1st Edition, CL - Engineering, 2008. [3] Châu Ngọc Ẩn, *Cơ học đất*, 5th Edition, Ho Chi Minh City Vietnam National University, 2012.

22. Reinforced Concrete 1 (CE304IU)

Course name	- *(in English) Reinforced concrete 1* - *(in Vietnamese) Bê tông cốt thép 1*
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.
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	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[4]: 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

[4] 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.

<table>
<tr><td>Module objectives/intended learning outcomes</td><td>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.</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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>
<tr><td>Design for shear</td><td>1</td><td>T, U</td></tr>
<tr><td>Bond of reinforcement</td><td>1</td><td>T, U</td></tr>
<tr><td>Slabs</td><td>2</td><td>T, U</td></tr>
<tr><td>Columns</td><td>2</td><td>T, U</td></tr>
<tr><td>Footings</td><td>3</td><td>T, U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>Text book:

[1] Mosley, W.H., Hulse, R. and Bungey, J.H., "Reinforced Concrete Design to EuroCode 2", 6th edition, Macmillan, London, 2007

[2] Eurocode 2: Design of Concrete Structures – Part 1-1: General rules and rules for buildings</td></tr>
</table>

23. Steel Structures (CE305IU)

Course name	- *Steel Structures* - *Kết cấu thép*
Course designation	*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.*
Course type	☐ *General knowledge* ☐ *Fundamental* ☑ *Specialized knowledge* ☐ *Internship/Project/Thesis* ☐ *Others:……..*
Semester(s) in which the course is taught	5^{TH}
Person responsible for the course	*Phạm Nhân Hòa (Msc)*
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 recommended prerequisites for joining the course	Mechanics of Materials 1 and Structural Analysis 1

<table>
<tr><td>Parallel course</td><td>None</td></tr>
<tr><td>Course objectives</td><td>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.</td></tr>
<tr><td>Course learning outcomes</td><td>Upon the successful completion of this course students will be able to:
<table>
<tr><th>Categories</th><th>Course learning outcome (CLO)/ Competency</th></tr>
<tr><td>Knowledge</td><td>CLO1: Analyzing, interpreting, and designing steel structures based on National Codes.
CLO2: Analyzing, interpreting, and designing joints of steel structures based on National Codes.</td></tr>
<tr><td>Skills</td><td></td></tr>
<tr><td>Attitude</td><td>CLO3: Work independently and professionally</td></tr>
</table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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, material properties, limit state design, loading, and section classifications.</td><td>1</td><td>I,T,U</td></tr>
<tr><td>Tension members</td><td>1</td><td>I,T,U</td></tr>
<tr><td>Compression members: Its Behaviors, local and overall buckling, column slenderness and effective length concept.</td><td>1</td><td>I,T,U</td></tr>
<tr><td>Local buckling of thin-plate elements</td><td>1</td><td>I,T,U</td></tr>
<tr><td>In-plane bending of beams</td><td>1</td><td>I,T,U</td></tr>
<tr><td>Lateral buckling of beams</td><td>1</td><td>I,T,U</td></tr>
<tr><td>Beam-columns</td><td>1</td><td>I,T,U</td></tr>
<tr><td>Introduction to moment connections of bolted end plate connections, beam and column splices.</td><td>1</td><td>I,T,U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
</table>

Reading list and Media employed	**Textbooks:** [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. **Additional references:** [5] Gardner, L. and Nethercot, D.A., "Designer's Guide to Eurocode 3: Design of Steel Structures", 3rd Edition, Thomas Telford, 2009.

24. Surveying (CE307IU)

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 **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	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[5]: 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

[5] 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.

<table>
<tr><td>Course objectives</td><td>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.</td></tr>
<tr><td>Course learning outcomes</td><td>Upon 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. discuss the different types of surveys; describe the different surveying tools and instruments used for different types of surveys</td></tr><tr><td>Skill</td><td>CLO3. perform calculations in surveying including distances, elevations, directions, coordinates, and areas;

CLO4. read, interpret, as well as prepare maps, plots, reports involved in surveying; and</td></tr><tr><td>Attitude</td><td>CLO5. work professionally whether independently or in a team.</td></tr></table></td></tr>
<tr><td>Content</td><td>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>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></td></tr>
<tr><td>Examination forms</td><td>Written examinations: Midterm and Final Exams
Type: Constructed response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
</table>

Reading list	Main Reference [1] Charles D. Ghilani – Paul R. Wolf. , *Elementary Surveying – An introduction to Geomatics*, 13*th*, edition, Prentice Hall, 2012. Other References [2] Lillesand, Kiefer, *Remote sensing and image interpretation*, John Wiley & Sons,1994. [3] Paul A. Longley, Michael F. Goodchild, David J. Mauire, David W. Rhind, *Geographic Information Systems and Science*, John Wiley & Sons, 2005.

25. Structural Analysis 1(CE209IU)

Course name	- *(in English) Structural Analysis 1* - *(in Vietnamese) Cơ học Kết cấu 1*
Course designation	*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.*
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.
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[6]: 90 hrs
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 course	- Prerequisites: (Course code – Course name): CE201IU- Mechanics Of Materials 1 - Corequisites: (Course code – Course name): None - Previous course (Course code – Course name): None

[6] 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.

<table>
<tr><td>Course objectives</td><td>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.</td></tr>
<tr><td>Course learning outcomes</td><td>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. 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.</td></tr>
<tr><td>Skill</td><td>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.</td></tr>
<tr><td>Attitude</td><td></td></tr>
</table></td></tr>
<tr><td>Content</td><td>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>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></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>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.</td></tr>
</table>

26. Introduction to Construction Management (CM205IU)

Course name	- *(in English): Introduction to Construction Management* - *(in Vietnamese): Quản lý xây dựng nhập môn*
Course designation	This course provides fundamental knowledge of construction management. This course is a compulsory course for students who pursue construction management major at the early stage of their program
Course type	☐ *General knowledge* ☐ ✖ *undamental* ☐ *Specialized knowledge* ☐ *Internship/Project/Thesis* ☐ *Others:……*
Semester(s) in which the course is taught	2,3
Person responsible for the course	PhD. Nguyen Van Tiep PhD Nguyen Hoai Nghia PhD Tran Thanh Ha
Language	English
Relation to curriculum	Compulsory
Teaching methods	Student-centered approach
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 85 hours Contact hours (lecture): 25 Private study including examination preparation, specified in hours[7]: 60
Credit points	02 credits (Theory: 02 + Practice: 00) 3.06 ECTS
Number of periods	Theory: 30 Practice: 00

[7] 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.

<table>
<tr><td>Required and recommended prerequisites for joining the course</td><td>N/A</td></tr>
<tr><td>Course objectives</td><td>Upon successful completion of this course, the students are expected to have knowledge of construction management functions including project scheduling techniques; construction cost estimation; construction contract administration; construction equipment management; construction quality and productivity; and construction safety.</td></tr>
<tr><td>Course learning outcomes</td><td>Upon the successful completion of this course students will be able to:
<table>
<tr><td>Competency level</td><td>Course learning outcome (CLO)</td></tr>
<tr><td>Knowledge</td><td>CLO1. To grasp the construction management functions.</td></tr>
<tr><td>Skill</td><td>CLO2. To understand construction management fields and related techniques including, planning and scheduling techniques, cost estimation and contract administration, procurement and tendering, equipment management, quality and productivity management, and safety</td></tr>
<tr><td>Attitude</td><td>CLO3. Identify fundamental legal requirements in construction and perform the role of a construction management engineer</td></tr>
</table></td></tr>
<tr><td>Content</td><td>This course is designed to provide students with general knowledge about construction management fundamentals. Students are introduced overview of construction industry, construction management functions, scheduling techniques, construction cost estimation, construction contract administration, construction equipment management, quality and productivity, and construction safety.</td></tr>
<tr><td>Examination forms</td><td>Essay exams</td></tr>
<tr><td>Study and examination requirements</td><td>- Attend more than 80% of contact hours to be accepted to the final examination
- Actively participate in class activities
- Fulfill tasks given by instructor after class
- Use their own laptop in class only for learning purpose
- Read the textbook in advance
- Access the course Blackboard for up-to-date information and material of the course, for online supports from</td></tr>
</table>

Reading list	Textbooks and References **1.** Kraig Knutson, Clifford J. Schexnayder, Christine Fiori, Richard E. Mayo, Construction Management Fundamentals, 2009, 2nd edition. **2.** Daniel W. Halpin, Bolivar A. Senior, Construction Management, 2012, 4th edition. References **1.** Fisk, E.R. and Reynolds, W.D. (2014). Construction Project Administration, 10th ed. New Jersey: Pearson ***2.*** Thomas, H.R. and Ellis, R.D. Jr. (2017). Construction Site Management and Labor Productivity Improvement, Virginia: ASCE Press.

27. Construction Management Project (CM203IU)

Course name	- *(in English):* **Construction Management Project** - *(in Vietnamese):* Đồ án quản lý xây dựng
Course designation	The course provides students with a detailed guild on how to carry out a research and prepare a construction management project.
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 Van Tiep Dr. Nguyen Hoai Nghia Dr. Tran Thanh Ha
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, report and defence
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 35 Contact hours (lecture, exercise, laboratory session, etc.): 10 Private study including examination preparation, specified in hours[8]: 25
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 module	CM205IU (Introduction to Construction Management)
Course objectives	A practice construction project is carried out, including all aspects of construction management. Students are supposed to apply knowledge in the courses of construction management to identify and solve an issue in

[8] 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.

<table>
<tr><td></td><td>construction management</td></tr>
<tr><td>Course learning outcomes</td><td>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: Have an abroad understanding of construction management</td></tr>
<tr><td>Skill</td><td>CLO2. Identify an issue in construction management.
CL03. Analyze and solve the issue.</td></tr>
<tr><td>Attitude</td><td>CL04: Be active in planning, executing and presenting the project</td></tr>
</table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
<table>
<tr><th>Week</th><th>Content</th><th>Teaching and learning activities</th><th>Teaching Level</th></tr>
<tr><td>1</td><td>Project requirements and criteria</td><td>Lecture</td><td>I</td></tr>
<tr><td>2, 3</td><td>Topic approval</td><td>Class discussion</td><td>I</td></tr>
<tr><td>4</td><td>Topic introduction</td><td>Class discussion</td><td>T</td></tr>
<tr><td>5, 6</td><td>Project history presentation</td><td>Class discussion</td><td>T</td></tr>
<tr><td>7, 8</td><td>Problem identification</td><td>Class discussion</td><td>T</td></tr>
<tr><td>9, 10</td><td>Project data collection</td><td>Class discussion</td><td>T,U</td></tr>
<tr><td>11, 12</td><td>Analysis and discussion</td><td>Class discussion</td><td>T,U</td></tr>
<tr><td>13, 14</td><td>Findings and conclusion</td><td>Class discussion</td><td>U</td></tr>
<tr><td>15</td><td>Oral exam</td><td>Exam</td><td>U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Oral Defense</td></tr>
</table>

Study and examination requirements

Exam Requirements

Assessment Component	Assessment form	Percentage %
A1. Approving project sessions, learning attitude, and report	A1.1 Attendance A1.2 Progress report A1.3 Final report	70%
A2. One comprehensive final oral examination	A2.1 Oral exam	30%

Class Participation: Student is expected that you will spend at least 4 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.

Academic Honesty and Plagiarism: Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade. For this class, all assignments are to be completed by the individual student unless otherwise specified. Students are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for preparation, research, drafting, and the proper referencing of sources in preparing all assessment items.

Reading list

Textbooks

1. Kraig Knutson, Clifford J. Schexnayder, Christine Fiori, Richard E. Mayo, Construction Management Fundamentals, 2009, 2nd edition.
2. Daniel W. Halpin, Bolivar A. Senior, Construction Management, 2012, 4th edition.

References

1. Fisk, E.R. and Reynolds, W.D. (2014). Construction Project Administration, 10th ed. New Jersey: Pearson
2. Thomas, H.R. and Ellis, R.D. Jr. (2017). Construction Site Management and Labor Productivity Improvement, Virginia: ASCE Press.

28. Quantitative Methods For Business (BA168IU)

Course designation	This subject will familiarize quantitative approaches and mathematical optimization techniques used to address managerial and business issues.
Person responsible for the course	Ms. Dang Thi Uyen Thao
Language	English
Relation to curriculum	Compulsory
Teaching methods	Quizzes, Assignments, Computer Assignments, Lectures, Tutorials, Examinations
Credit points	3
Required and recommended prerequisites for joining the course	Statistics for Business and Math for Business
Course objectives	This course aims to help students to Provide students with the methodological understanding of quantitative analysis used in business management. Create an awareness of quantitative analytical tools used in business management. Use quantitative analytical tools in business management. Engage students in critically evaluating the tools of quantitative analysis.

<table>
<tr><td>Course learning outcomes</td><td colspan="2">Upon the successful completion of this course students will be able to:</td></tr>
<tr><td></td><td>Competency level</td><td>Course learning outcome (CLO)</td></tr>
<tr><td></td><td>Knowledge
&
Skill</td><td>CLO1. Understand and relate quantitative approaches to problems solving and decision making in business management
CLO2. Explain various notions/concepts/principles in time series analysis; and then build and interpret appropriate forecasting models critically
CLO3. Work as a collaborative team member
CLO4. Recognize appropriate techniques to initiate, plan, execute and control projects and meet challenges and deadlines
CLO5. Use computer software for quantitative analysis</td></tr>
<tr><td></td><td>Attitude</td><td>CLO6. Recognize the benefits as well as the limits of quantitative analysis in business management</td></tr>
<tr><td>Content</td><td colspan="2">Quantitative Business Methods provides students with many quantitative techniques needed to analyze business situations and make decisions. The course covers decision analysis, forecasting, linear programming, project management, queuing theory, EFA, CFA and SEM.</td></tr>
<tr><td>Examination forms</td><td colspan="2">Open-ended questions</td></tr>
</table>

Study and examination requirements	In order 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: <table><tr><td>Quizzes, Computer assignments</td><td>30%</td></tr><tr><td>Midterm examination</td><td>30%</td></tr><tr><td>Final examination</td><td>40%</td></tr><tr><td>Total</td><td>100%</td></tr></table> COURSE POLICIES Attendance Regular and punctual attendance at lectures in this course. Exemptions may only be made on a health basis. 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.

General Conduct and Behavior

The students are expected to conduct themselves with consideration and respect for the needs of the 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. More information on student conduct is available at www.hcmiu.edu.vn

Keeping informed

The students should take note of all announcements made in lectures or on the course's Blackboard. 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 (definition proposed by the University of Newcastle). Students are also reminded that careful time management is an important part of 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.

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

[1]Textbook:
Render, Barry, Stair, Ralph M., Hanna, Michael E., 2011, "Quantitative Analysis for Management", Pearson College Div, 11th edition
David R. Anderson, Dennis J. Sweeney , Thomas A. Williams, Jeffrey D. Camm, James J. Cochran, 2012, "Quantitative Methods for Business", South-Western College Pub; 12 edition.

29. Human Resource Management (BA156IU)

Course designation	Face-to-Face/Online/Hybrid
Semester(s) in which the course is taught	All semesters in the academic years
Person responsible for the course	Pham Tan Nhat, PhD Alan Tho, PhD Nguyen Tan Minh, PhD
Language	English
Relation to curriculum	Compulsory
Teaching methods	Student-centered method
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 115 Contact hours (lecture, discussion, etc.): 45 Private study including examination preparation, specified in hours[9]: 70
Credit points	03
Required and recommended prerequisites for joining the course	Principles of Management

Course objectives	The course will equip students with a fundamental understanding of human resource management theories and practices in an organization. It will give students opportunities to discover the basic principles of people management; to understand how an organization can gain competitive advantages through managing its human resources effectively and efficiently. The course also provides students the platforms to practice and sharpen their skills in terms of planning, recruiting and selecting employees, evaluating performance, designing training program, and developing the compensation and benefits systems.

[9] 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	CLO1 (*Knowledge, PLO1*): Apply knowledge on the global trends in HRM and responsibilities of HRM in today's increasingly globalized world. CLO2 (*Knowledge, PLO1*): Apply the basic HRM activities, models, and processes based on the type of business and other factors. CLO3 (*Skills, PLO3*): Organize individuals or groups to work together to analyze HRM activities. CLO4 (*Skills, PLO6*): Use skills (e.g., problem-solving, communication) to identify and solve problems of HRM policies. CLO5 (*Attitudes, PLO4*): Explain professional ethics and proper understanding of integrity, as well as the working environment with an emphasis on professional and appropriate attitudes and decisions.

Content

The description of the contents should clearly indicate the weighting of the content and the level.

Weight: lecture session (3 hours)

Learning levels: I (Introduced); R (Reinforced); M (Mastered)

No.	Contents		
1	Managing Human Resources	1	I, R
2	Trends in Human Resource Management	1	I, R, M
3	Analyzing Work and Designing Jobs	1	I, R, M
4	Planning for and Recruiting Human Resources	1	I, R, M
5	Selecting Employees and Placing them in Jobs	1	I, R, M
6	Training Employees	1	I, R, M
7	Developing Employees for Future Success	1	I, R, M
8	Managing Employees' Performance	1	I, R, M
9	Separating and Retaining Employees	1	I, R, M
10	Establishing a Pay Structure	1	I, R, M
11	Recognizing Employee Contributions with Pay	1	I, R, M
12	Providing Employee Benefits	1	I, R, M
13	Collective bargaining and Labor Relation	1	I, R, M
14	Managing Human Resources Globally	1	I, R, M
15	Final course review	1	R, M

Examination forms	**Two assignments (midterm and final)**

Study and examination requirements	Study requirements: Attend more than 80% of contact hours Actively participate in class activities Fulfill tasks given by instructor after class Use their own laptop in class only for learning purposes - Access the IU Blackboard frequently Assignments/Examination requirements (tentative) *Midterm assignment*: The assignment includes the following sections First Page (Cover page) (IU logo, Subject, Student name and surname, ID student, Date…) Introduction Literature review Analysis Recommendations Conclusion References Appendices and supplementary materials Note: Students are asked to follow the citing and referencing guidelines of the International University. *Final assignment:* The assignment includes the following sections: 1. First Page (Cover page) (IU logo, Subject, Student name and surname, ID student, Date…) 2. Introduction 3. Literature review 4. Analysis 5. Recommendations 6. Conclusion 7. References 8. Appendices and supplementary materials Note: Students are asked to follow the citing and referencing guidelines of the International University.

Reading list	Main textbook: Raymond A. Noe, John R. Hollenbeck, Barry Gerhart and Patrick M. Wright (2018). Fundamentals of Human Resource Management, 7th Edition. McGraw-Hill Reference Susan L. Verhulst and David A. DeCenzo (2018). Fundamentals of Human Resource Management, 13th Edition. Wiley

30. Operation management for Construction (CM301IU)

Module designation	**CM301IU – OPERATION MANAGEMENT IN CONSTRUCTION** In this course, students will study about operation management of construction projects. The students are able to know how to plan site organization, make contract planning, and conduct work study. They also have knowledge in health and safety, waste, stock and materials, supply chain, and quality management in construction sites.
Semester(s) in which the module is taught	6
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: 135 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 45 Private study including examination preparation, specified in hours[1]: 90
Credit points	3
Required and recommended prerequisites for joining the module	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 operation management in construction including site organization; contract planning; work study conducting; health and safety managing; construction waste managing; construction materials and stocks managing; construction supply chain; construction quality managing. Students who complete the course will be able to perform the following tasks: (1) Be able to organize a construction site. (2) Be able to plan and manage related issues during construction phases, including contract, work study, health and safety, waste, material, quality.
Content	*The description of the contents should clearly indicate the weighting of the content and the level.* Weight: lecture session (3 hours) Teaching levels: I (Introduce); T (teach); U (Utilize)

	Topic	Weight	Level
	Site organization	2	T
	Contract planning	2	T
	Work study	1	T
	Health and safety	2	T, U
	Waste management	1	T, U
	Waste management	1	T
	Stock control and materials management	2	T, U
	Supply chain management	2	T
	Quality management	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. Chris March, Operations Management for Construction, 2009, 1st edition. 2. Jay Heizer, Barry Render, Operations Management, 2011, 10th edition.		

31. Project Feasibility Study and Appraisal (CM308IU)

Course name	CM308IU – Project Feasibility Study and Appraisal CM308IU – Lập và thẩm định dự án
Module designation	This course is designed to provide students knowledge about construction project feasibility study and appraisal. Characteristics of projects including attributes, perspectives, phases, problems of cost and utility, needs and objectives, technical design, financial and economic analysis… are introduced. Students are also provided tools and techniques including systems, SWOT, strategy, risk … analyses to evaluation the feasibility of construction projects.
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, Dr. Nguyen, Van Tiep, MSc. Nguyen, Pham Duy Phương
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[10]: 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:

[10] 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.

<table>
<tr><td>Module objectives/intended learning outcomes</td><td>Overall objectives are to equip IU students with knowledge of project assessment, as well as the related assessment tool and techniques.

Students who complete the course will be able to perform the following tasks:

(1) Having knowledge of development and necessary data and document of construction project feasibility study.
(2) Having knowledge of related tool and techniques of project assessment.
(3) Utilize the assessment tools and techniques including systems, SWOT, strategy, risk … analyses to evaluation the feasibility of construction</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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>An introduction to the Basic Concepts</td><td>1</td><td>I</td></tr><tr><td>Economic systems for resource allocation</td><td>1</td><td>T</td></tr><tr><td>The market mechanism</td><td>1</td><td>T</td></tr><tr><td>The theory of demand</td><td>1</td><td>T, U</td></tr><tr><td>The theory of supply</td><td>1</td><td>T, U</td></tr><tr><td>Clients and contractors</td><td>1</td><td>T</td></tr><tr><td>Costs of the construction firm</td><td>2</td><td>T, U</td></tr><tr><td>Types of market structure in the construction industry</td><td>1</td><td>T</td></tr><tr><td>Market failures and government remedies</td><td>1</td><td>T</td></tr><tr><td>Environmental economics</td><td>1</td><td>T</td></tr><tr><td>Managing the macroeconomy</td><td>2</td><td>T</td></tr><tr><td>The economy and construction</td><td>2</td><td>T</td></tr></table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
</table>

Reading list	Textbook: [1] Myers, D. (2004). *Construction economics – A new approach*. New York: Spon Press. References: [1] Slavin, S. L. (2005). *Economics*, 7th eds. New York: McGraw-Hill Irwin.

32. Construction project management (PMBOK extension) (CM311IU)

Course name	Construction project management (PMBOK extension) Quản lý dự án xây dựng (phần mở rộng PMBOK)
Module designation	This course is designed to provide students knowledge of project management with the extension in construction industry
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, Dr. Nguyen, Van Tiep, MSc. Nguyen, Pham Duy Phương
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[11]: 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	The aim of the course is to provide students with the insight of construction project management and the special fields which are applied to construction industry.
Content	*The description of the contents should clearly indicate the weighting of the content and the level.* Weight: lecture session (3 hours)

[11] 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.

<table>
<tr><td></td><td>Teaching levels: I (Introduce); T (teach); U (Utilize)
<table>
<tr><th>Topic</th><th>Weight</th><th>Level</th></tr>
<tr><td>Project management in the construction industry</td><td>1</td><td>I</td></tr>
<tr><td>Project integration management</td><td>1</td><td>T</td></tr>
<tr><td>Project scope management</td><td>1</td><td>T</td></tr>
<tr><td>Project schedule management</td><td>1</td><td>T, U</td></tr>
<tr><td>Project cost management</td><td>1</td><td>T, U</td></tr>
<tr><td>Project quality management</td><td>1</td><td>T</td></tr>
<tr><td>Project resource management</td><td>2</td><td>T, U</td></tr>
<tr><td>Project communications management</td><td>1</td><td>T</td></tr>
<tr><td>Project risk management</td><td>1</td><td>T</td></tr>
<tr><td>Project procurement management</td><td>1</td><td>T</td></tr>
<tr><td>Project stakeholder management</td><td>2</td><td>T</td></tr>
<tr><td>Project health, safety, security, and environmental (HSSE) management</td><td>2</td><td>T</td></tr>
<tr><td>Project financial management</td><td>2</td><td>T</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>Textbooks:
1. Project Management Institute. (2016). Construction Extension to the PMBOK, 2nd ed. Pennsylvania: Project Management Institute.

References:
1. Project Management Institute. (2003). Construction Extension to A guide to the PMBOK, 1st ed. Pennsylvania: Project Management Institute.
2. Fisk, E.R. and Reynolds, W.D. (2014). Construction Project Administration, 10th ed. New Jersey: Pearson</td></tr>
</table>

33. Computer-Aided Design and Drafting (CADD) (CE103IU)

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[12]: 30
Credit points	**03 credits (Theory: 03 + Practice: 00)** **4.64 ECTS**
Number of periods	**Theory: 45** **Practice: 00**

[12] 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.

<table>
<tr><td>Required and recommended prerequisites for joining the course</td><td>Non</td></tr>
<tr><td>Course objectives</td><td>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.</td></tr>
<tr><td>Course learning outcomes</td><td>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. 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.</td></tr>
<tr><td>Skill</td><td>CLO4. Present skills in teamwork, communication, presentation, and drawing skills</td></tr>
<tr><td>Attitude</td><td>CLO5. Perform working activities in independently, actively and seriously</td></tr>
</table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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 graphics communications</td><td>1</td><td>I</td></tr>
<tr><td>Orthographic Projection</td><td>2</td><td>T,U</td></tr>
<tr><td>Dimensioning</td><td>2</td><td>T,U</td></tr>
<tr><td>Sectioning</td><td>2</td><td>T,U</td></tr>
<tr><td>Blueprints and Construction Drawings</td><td>3.5</td><td>T,U</td></tr>
<tr><td>The meaning of symbols</td><td>0.5</td><td>T,U</td></tr>
<tr><td>Understanding Schedules</td><td>0.5</td><td>T,U</td></tr>
<tr><td>Interpreting Specifications</td><td>0.5</td><td>T,U</td></tr>
<tr><td>Introduction to sustainable/green buildings</td><td>1</td><td>I, T</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Written examination: Midterm and Final Exams</td></tr>
</table>

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	**Textbooks:** [1] Kirstie Plantenberg, *Engineering Graphic Essentials,* SDC Publications, Fourth Edition. [2] Sam A. A. Kubba, *Blueprint Reading: Construction Drawings for the Building Trades,* Mc Graw-Hill Higher Education, 2009 [3] Gary R Bertoline, *Introduction to Graphics Communication for Engineers,* Mc Graw-Hill Higher Education, Fourth Edition.

34. Practice CADD (CE104IU)

Course name	- *(in English):* **Practice CADD** - *(in Vietnamese):* Thực hành vẽ kỹ thuật
Course designation	*The course provides to students the common skills to draw objects in 2D plane from Auto CAD software*
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[13]: 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)

[13] 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.

<table>
<tr><td>Course objectives</td><td>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.</td></tr>
<tr><td>Course learning outcomes</td><td>Upon the successful completion of this course students will be able to:
<table>
<tr><th>Categories</th><th>Course learning outcome (CLO)/ Competency</th></tr>
<tr><td>Knowledge</td><td>CLO1. Be able to use Auto CAD software in 2D</td></tr>
<tr><td>Skills</td><td>CLO2. Draw any objects related to structures in civil engineering.
CLO3. Set printing objects with line thickness.</td></tr>
<tr><td>Attitude</td><td>CLO4. Be aware of drawing in the correct scale.</td></tr>
</table></td></tr>
<tr><td>Content</td><td>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><td>Topic</td><td>Weight</td><td>Level</td></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></td></tr>
<tr><td>Examination forms</td><td>Written examination: Drawing some objects on AutoCAD software</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list and Media employed</td><td><u>Textbooks:</u>
[1] Help from AutoCAD software.
<u>Additional references:</u>
[3] IStructE/Concrete Society, Standard-Method-of-Concrete-Detailing, 3rd Edition, 2006.</td></tr>
</table>

35. Business Research Methods (BA161IU)

Course designation	*This course provides important topics in the area of research method. It introduces the whole research process, from formulation of research questions to research design and end up with report writing.*
Semester(s) in which the course is taught	
Person responsible for the course	
Language	English
Relation to curriculum	*Compulsory*
Teaching methods	*Lecture, Tutorial, In-class exercises, Assignment, Research report*
Workload (incl. contact hours, self-study hours)	*(Estimated) Total workload:* *Contact hours (please specify whether lecture, exercise, laboratory session, etc.):* *Private study including examination preparation, specified in hours[14]:*
Credit points	3
Required and recommended prerequisites for joining the course	Statistics for Business
Course objectives	This course seeks to: - provide student with a good understanding of business research - equip student with practical tools and skills to conduct business research -help students differentiate different methods of research: qualitative vs quantitative -provide opportunities to do scientific research and presentation skills

[14] 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.

<table>
<tr><td>Course learning outcomes</td><td>Upon the successful completion of this course students will be able to:
<table>
<tr><td>Competency level</td><td>Course learning outcome (CLO)</td></tr>
<tr><td>Knowledge (R)</td><td>CLO1 to describe basic concepts in business research method</td></tr>
<tr><td>Skill (M)</td><td>CLO2 to identify research problems/gaps and produce research questions or proposals</td></tr>
<tr><td>Skill (M)</td><td>CLO3 to conduct scientific research and write scientific research reports</td></tr>
<tr><td>Attitude</td><td>CLO4 to learn within teams, identify ethical issues in research and recognize the need to adhere to ethical guidelines when conducting research</td></tr>
</table></td></tr>
<tr><td></td><td></td></tr>
</table>

<table>
<tr><td>Content</td><td>The course is designed to provide students with a strong foundation in business research based on seven key activities: (1) identifying research problems, (2) propose research objectives (3) review literature, (4) design method (5) implement data collection (6) analyze data (7) conclude and recommend
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 Business Research
The Research Process: An Overview</td><td>1</td><td>I</td></tr><tr><td>Research Question Formulation (Cont.)
Research Process & Proposal</td><td>1</td><td>T</td></tr><tr><td>Research Design (1):</td><td>1</td><td>T</td></tr><tr><td>Research design (2)</td><td>1</td><td>U</td></tr><tr><td>Research design (3)</td><td>1</td><td>U</td></tr><tr><td>Sampling methods for quantitative studies</td><td>1</td><td>T</td></tr><tr><td>Measurement Issues (1)</td><td>1</td><td>T</td></tr><tr><td>Measurement Issues (2)</td><td>1</td><td>U</td></tr><tr><td>Data Screening and Preparation</td><td>1</td><td>T</td></tr><tr><td>Hypothesis testing</td><td>1</td><td>T</td></tr><tr><td>Measures of association</td><td>1</td><td>T</td></tr><tr><td>Biases and Threats to reliability and validity</td><td>1</td><td>T</td></tr><tr><td>Student presentation and course review</td><td>3</td><td>U</td></tr></table></td></tr>
<tr><td>Examination forms</td><td>Written Report
Exam</td></tr>
</table>

Study and examination requirements	To pass this course, student must: - submit/ complete all reports on time - attain an overall pass mark of 50% in the course **GRADING POLICY** Grades can be based on the following:

Attendance and Class discussion	10%
Class exercises	10%
Individual or Group project (full version: from Title to Conclusion and references or a research proposal version: from Title to Methodology	45%
Final examination	35%
Total	100%

COURSE POLICIES

Attendance

Your regular and punctual attendance at lectures and related seminars (if any) is expected in this course. 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. Please inform your lecture if you are unable to attend the class, and arrange for a classmate to collect any handouts.

Workload

It is expected that you will spend at least 6 hours per week studying this course. This time should be made up of reading, working on individual assignments, group assignments and attending class lectures. In periods where you need to complete assignments or prepare for examinations, the workload may be greater.

General Conduct and Behaviour

You are expected to conduct yourself with considerable and respect for the needs of your fellow students and teaching staff. Conduct that unduly disrupts or interferes with a class, such as ringing, or talking on mobile phones, or chatting on the internet, is nor acceptable and students may be asked to leave the class.

Keeping informed

You should take note of all announcements made in lectures, tutorials or on the course website. From time to time, the University will send important announcements to your through website, course website and/ or Announcement Board (of School of Business and/ or Academic Affair) without providing you with a paper copy. You will be deemed to have received this information.
Academic honesty and plagiarism

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	The following text and references are essential for the course. Textbook: 1. Cooper, R.D. & Schindler, S.P. (2011). Business Research Methods. 12nd Ed. McGraw- Hill Irwin. NY. 2. Bhattacherjee (2012), Social Science Research: Principles, Methods, and Practices 3. Woodside (2010), Case Study Research: Theory, Methods, Practice * Used with kind permission from the University of New South Wales References: 1. Hancock and Algozzine (2006), Doing case study research: a practical guide for beginning researchers. 2. Dul and Hak (2008), Case study Methodology in Business Research. 3. Yin (2009), Case study research: design and methods.

36. Artificial Intelligence in Civil Engineering and Construction Management (CE217IU)

Course name	- *ARTIFICIAL INTELLIGENCE IN CIVIL ENGINEERING AND CONSTRUCTION MANAGEMENT* - *TRÍ TUỆ NHÂN TẠO TRONG KỸ THUẬT VÀ QUẢN LÝ XÂY DỰNG*
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	☐ *General knowledge* ☐ *Fundamental* ☑ *Specialized knowledge* ☐ *Internship/Project/Thesis* ☐ *Others:……*
Semester(s) in which the course is taught	
Person responsible for the course	Dr. Pham, Nguyen Linh Khanh; Dr. Nguyen, Ba Quang Vinh; Dr. Nguyen, Van Tiep
Language	English
Relation to curriculum	*Compulsory*
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

<table>
<tr><td>Required and recommended prerequisites for joining the course</td><td></td></tr>
<tr><td>Course objectives</td><td>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 also discussed.</td></tr>
<tr><td>Course learning outcomes</td><td>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 basic definitions of machine learning, and its implications in the industry</td></tr>
<tr><td>Skill</td><td>CLO2. Apply mathematics and ML algorithms to solve problems.
CLO3. Design and conduct experiments, analyze and interpret CE and CM data</td></tr>
<tr><td>Attitude</td><td></td></tr>
</table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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>Linear Algebra</td><td>1</td><td>T</td></tr>
<tr><td>Data analysis</td><td>2</td><td>T, U</td></tr>
<tr><td>Machine learning – Unsupervised learning algorithm</td><td>2</td><td>T</td></tr>
<tr><td>Machine learning – Supervised learning algorithm</td><td>2</td><td>T</td></tr>
<tr><td>Neural network</td><td>2</td><td>T</td></tr>
<tr><td>Machine learning issues</td><td>1</td><td>I</td></tr>
<tr><td>Case studies</td><td>1</td><td>I</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
</table>

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.

III. SPECIALIZATION REQUIREMENT

37. Risk Management (BA171IU)

Course name	- Risk Management - *Quản lý rủi ro*
Course designation	This course is a study of the risk management process, with an emphasis on insurance. The course provides the learners with necessary knowledge on key concepts and terms used specially in Insurance Industry and Risks Management. The learners will learn possible methods and techniques used to deal with various kind of risk. Policies including both Life-Insurance and Property and Casualty Insurance are analyzed. The learners will gain deeply understanding on Life Insurance, Health Insurance, Social Insurance, Property Insurance, Auto Insurance, etc. .
Course type	☐ *General knowledge* ☐ *Fundamental* ☑ *Specialized knowledge* ☐ *Internship/Project/Thesis* ☐ *Others:……..*
Semester(s) in which the course is taught	
Person responsible for the course	Dr. Ho Nhut Quang
Language	English
Relation to curriculum	*Compulsory*
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

<table>
<tr><td>Required and recommended prerequisites for joining the course</td><td></td></tr>
<tr><td>Course objectives</td><td>Through this course you will:
Learn a risk management process that can be applied to a variety of risks.
Develop an understanding of what risk is, how it can be measured and transferred, whyindividuals care about risk, and why corporations care about risk.
Understand techniques used in dealing with possible risk at work as well as in daily life.
Apply the risk management process to two major areas of concern for corporations:liability risk and financial risk
Understands characteristics of various types of insurance policies such as: Life Insurance, Health Insurance, Social Insurance, Property Insurance, Auto Insurance, etc.</td></tr>
<tr><td>Course learning outcomes</td><td>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 basic definitions of rík mângêmnt in the industry</td></tr>
<tr><td>Skill</td><td>CLO2. Apply methods and techniques used to deal with various kind of risk to solve problems.
CLO3. Design and conduct experiments, analyze and interpret CE and CM data</td></tr>
<tr><td>Attitude</td><td></td></tr>
</table></td></tr>
</table>

<table>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
Weight: lecture session (3 hours)
Teaching levels: I (Introduce); T (teach); U (Utilize)
<table>
<tr><th>Week</th><th>Topic</th><th>Learning materials and activities</th></tr>
<tr><td>1</td><td>Chapter 1 Risk in Our Society</td><td>Assignment 1</td></tr>
<tr><td>2</td><td>Chapter 2 Insurance and Risk</td><td>Assignment 2</td></tr>
<tr><td>3</td><td>Chapter 3 Introduction to Risk Management</td><td>Assignment 3</td></tr>
<tr><td>4</td><td>Chapter 4 Advanced Topics in Risk Management</td><td>Assignment 4</td></tr>
<tr><td>5</td><td>Chapter 5 Types of Insurers and Marketing System</td><td>Assignment 5</td></tr>
<tr><td>6</td><td>Chapter 6 Insurance Company and Operations</td><td>Assignment 6</td></tr>
<tr><td>7</td><td>Mid-term Exam</td><td></td></tr>
<tr><td>8</td><td>Chapter 7 Financial Operations of Insurers</td><td>Assignment 7</td></tr>
<tr><td>9</td><td>Chapter 8 Government Regulation of Insurance</td><td>Assignment 8</td></tr>
<tr><td>10</td><td>Chapter 9 Fundamental Legal Principles</td><td>Assignment 9</td></tr>
<tr><td>11</td><td>Chapter 10 Analysis of Insurance Contracts</td><td>Assignment 10</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>George E. Rejda, Principles of Risk Management and Insurance, 9th edition – 2007, McGraw Hill</td></tr>
</table>

38. Construction planning and scheduling (CM303IU)

Course name	CM303IU – Construction Planning And Scheduling CM303IU – Hoạch định tiến độ dự án
Module designation	This course is designed to provide students knowledge about time management for construction projects. The time management is one of the most crucial issues in construction management. Students are introduced functions of planning, different techniques of scheduling, i.e. bar charts, critical path method, PERT, … and their applications. The applications and practices of Microsoft Project software are also provided in the 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 Phương
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[15]: 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: CM202IU (Construction Measurement and Cost Estimating)

[15] 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.

<table>
<tr><td>Module objectives/intended learning outcomes</td><td>Overall objectives

Upon successful completion of this course, the students are expected to have knowledge of construction planning; planning methods; resource management; risk management.

Students who complete the course will be able to perform the following tasks:

(1) Understand planning process, activities, tools and techniques.
(2) Be able to develop a project schedule using different techniques, tools, and MS Project software.</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.

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>Concept of planning</td><td>1</td><td>I</td></tr><tr><td>Bar charts</td><td>1</td><td>I</td></tr><tr><td>Critical path method</td><td>2</td><td>I</td></tr><tr><td>Resource management</td><td>1</td><td>T</td></tr><tr><td>Overlapping network models</td><td>3</td><td>T, U</td></tr><tr><td>Critical chain scheduling method</td><td>1</td><td>T</td></tr><tr><td>Risk and scheduling</td><td>1</td><td>T</td></tr><tr><td>Program evaluation and review</td><td>1</td><td>T</td></tr><tr><td>Microsoft Project software applications and practices</td><td>4</td><td>T, U</td></tr></table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>Textbook:

[1] Thomas E Uher, Programming and Scheduling Techniques, 2003, 1st edition.</td></tr>
</table>

39. Construction planning and scheduling project (CM307IU)

Course name	**CM307IU – Construction Planning And Scheduling Project** CM307IU – Đồ án hoạch định tiến độ dự án
Module designation	A practice construction project is carried out, including time management. Students are supposed to apply knowledge in the courses of construction planning and scheduling to schedule a construction project.
Course type	☐ *General knowledge* ☐ *Fundamental* ☐ *Specialized knowledge* ☒ *Internship/Project/Thesis* ☐ *Others:……..*
Semester(s) in which the module is taught	6
Person responsible for the module	Dr. Nguyen, Hoai Nghia, Dr. Nguyen, Van Tiep, MSc. Nguyen, Pham Duy Phương
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture
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[16]: 30
Credit points	**1 credit (Theory: 00 + Practice: 01)** **2.45 ECTS**
Number of periods	**Theory: 00** **Practice: 30**
Required and recommended prerequisites for joining the module	- Prerequisites: - Corequisites: - Previous course: CM303IU (Construction Planning and Scheduling)
Module objectives/intended learning outcomes	**Overall objectives** The objectives of this course are as follows: • To develop a capacity of planning and scheduling a

[16] 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.

<table>
<tr><td></td><td>construction project.
• To enhance a careful, hard-working, serious, and scientific attitude in project scheduling.

Students who complete the course will be able to perform the following tasks:

(4) Develop a capacity of planning and scheduling
(5) Enhance a careful, hard-working, serious, and scientific attitude</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
Weight: lecture session (1 hours)
Teaching levels: I (Introduce); T (teach); U (Utilize)
<table><tr><th>Topic</th><th>Weight</th><th>Level</th></tr><tr><td>Project requirements and criteria</td><td>1</td><td>I</td></tr><tr><td>Quantity measurement</td><td>2</td><td>T</td></tr><tr><td>Construction rate identification</td><td>2</td><td>T</td></tr><tr><td>Unit price identification</td><td>4</td><td>T</td></tr><tr><td>Scheduling</td><td>3</td><td>T</td></tr><tr><td>Scheduling adjustment</td><td>2</td><td>T</td></tr><tr><td>Oral exam</td><td>1</td><td>T, U</td></tr></table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>N/A</td></tr>
</table>

40. Construction Measurement and Cost Estimating (CM202IU)

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[17]: 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.

[17] 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.

<table>
<tr><td></td><td>• Construction cost estimating.

Students who complete the course will be able to perform the following tasks:

(6) Understand roles of quantity surveyors and construction industry.
(7) Be able to measure and quantify construction quantity
(8) Be able to estimate construction</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>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</td></tr>
</table>

41. Construction Measurement and Cost Estimating project (CM304IU)

Course name	CM304IU – Construction Measurement and Cost Estimating Project CM304IU – Đồ án đo bóc khối lượng và ước tính chi phí
Module designation	In this course, a practice construction project is carried out, including volume measurement and cost estimating. Students are supposed to apply knowledge in the courses of construction measurement and cost estimating to measure volume and estimate cost of a construction project.
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,
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, 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[18]: 30
Credit points	**1 credit (Theory: 00 + Practice: 01)** **2.45 ECTS**
Number of periods	**Theory: 00** **Practice: 30**
Required and recommended prerequisites for joining the module	- Prerequisites: - Corequisites: - Previous course: CM202IU (Construction Measurement and Cost Estimating)
Module objectives/intended learning outcomes	**Overall objectives** are to develop a capacity of measuring and estimating cost of a construction project. To enhance a careful, hard-working, serious, and scientific attitude in measuring and

[18] 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.

<table>
<tr><td></td><td>estimating cost..

Students who complete the course will be able to perform the following tasks:

(1) Develop a capacity of measuring and estimating cost.
(2) Enhance a careful, hard-working, serious, and scientific attitude.</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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 requirements and criteria</td><td>1</td><td>I</td></tr><tr><td>Volume measurement</td><td>6</td><td>T</td></tr><tr><td>Construction rate identification</td><td>3</td><td>T</td></tr><tr><td>Cost estimating</td><td>4</td><td>T, U</td></tr><tr><td>Oral exam</td><td>1</td><td>T, U</td></tr></table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>Textbook:
• Duncan Cartlidge, Quantity Surveyor’s Pocket Book, 2009, 1st edition.
References
• Parviz F. Rad, Project Estimating and Cost Management, 2002.
• Sean D.C. Ostrowski, Measurement Using the New Rules of Measurement, 2013, 1st edition.</td></tr>
</table>

42. Construction Cost Management (CM305IU)

Course name	- *(in English): Construction Cost Management* - *(in Vietnamese): Quản lý chi phí xây dựng*
Course designation	**CM305IU – CONSTRUCTION COST MANAGEMENT** This course is designed to provide students knowledge about cost management for construction projects. The cost management is lasting from pre-contract, procurement, contract signing, post-contract periods to ensure the project budget based on the project scope and quality.
Course type	☐ *General knowledge* ☐ *Fundamental* *X 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 Phương
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 (please specify whether lecture, exercise, laboratory session, etc.): 45 Private study including examination preparation, specified in hours[19]: 90
Credit points	3 credits (Theory: 45 + Practice: 0) 4.64 ECTS *(optional)*
Required and recommended prerequisites for joining the module	CM202IU (Construction Measurement and Cost Estimating)
Course objectives	**Overall objectives** Upon successful completion of this course, the students should be able to demonstrate knowledge of cost planning and budget setting; understanding requirements and clauses of construction contracts; and understanding cost management during the contract

[19] 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.

<table>
<tr><td></td><td>execution.

Students who complete the course will be able to perform the following tasks:

(1) Be able to plan construction project cost and set project budget
(2) Understand requirements and clauses of construction contracts
(3) Understand cost management during the contract execution</td></tr>
<tr><td>Course learning outcomes</td><td>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>CLO2: Understand requirements and clauses of construction contracts
CLO3: Understand cost management during the contract execution</td></tr><tr><td>Skill</td><td>CLO1: Be able to plan construction project cost and set project budget</td></tr><tr><td>Attitude</td><td>N/A</td></tr></table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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>Practice procedures</td><td>1</td><td>I</td></tr><tr><td>Pre-contract cost management</td><td>4</td><td>I</td></tr><tr><td>Procurement systems</td><td>3</td><td>T, U</td></tr><tr><td>Construction contracts
Cost control</td><td>4</td><td>T, U</td></tr><tr><td>Post-contract cost management</td><td>2</td><td>T, U</td></tr><tr><td>Related Vietnamese laws and regulations</td><td>1</td><td>I</td></tr></table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
</table>

Reading list	Textbook: [1] Donald Towey, Cost Management of Construction Projects, 2013, 1st edition. [2] Parviz F. Rad, Project Estimating and Cost Management, 2002.

43. Construction Procurement and Tendering (CM302IU)

Course name	*- (in English): Construction Procurement and Tendering* *- (in Vietnamese): Đấu thầu và mua sắm*
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* *X 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 Phương
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[20]: 90
Credit points	3 credits (Theory: 45 + Practice: 0) 4.64 ECTS *(optional)*
Number of periods	Theory: 45 Practice: 0
Required and recommended prerequisites for joining the module	CM305IU (Construction Cost Management)
Course objectives	**Overall objectives**

[20] 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.

<table>
<tr><td></td><td>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</td></tr>
<tr><td>Course learning outcomes</td><td>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>CLO3: Understand tender preparation and invitation procedures</td></tr>
<tr><td>Skill</td><td>CLO2: Understand different procurement methods</td></tr>
<tr><td>Attitude</td><td>CLO1: Be able to brief the rights, duties and responsibilities of project team members</td></tr>
</table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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>Briefing the project team</td><td>1</td><td>I</td></tr>
<tr><td>Procurement methods</td><td>5</td><td>T, U</td></tr>
<tr><td>Preparing for tenders</td><td>4</td><td>T, U</td></tr>
<tr><td>Inviting tenders
Negotiating and contract awarding</td><td>4</td><td>T, U</td></tr>
<tr><td>Related Vietnamese laws and regulations</td><td>1</td><td>I</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>Textbook:
[1] Mark Hackett and Gary Statham, The Aqua Group Guide to Procurement, Tendering and Contract Administration, 2016, 2nd</td></tr>
</table>

	edition. [2] Martin Brook, Estimating and Tendering for Construction Work, 2008, 4th edition.

44. Building Information Management (CM310IU)

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[21]: 105
Credit points	**03 credits (Theory: 03 + Practice: 00)** **4.64 ECTS**

21 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.

<table>
<tr><td>Number of periods</td><td>Theory: 45
Practice: 00</td></tr>
<tr><td>Required and recommended prerequisites for joining the course</td><td>N/A</td></tr>
<tr><td>Course objectives</td><td>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.</td></tr>
<tr><td>Course learning outcomes</td><td>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. Have sufficient knowedege 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</td></tr>
<tr><td>Skills</td><td>CL03. conduct construction management research, analyze and interpret BIM data, and use engineering judgments to draw conclusions</td></tr>
<tr><td></td><td></td></tr>
</table></td></tr>
<tr><td>Content</td><td>The course will provide students with knowledge in terms of characteristics of Building Information Modeling and its application in construction industry.</td></tr>
<tr><td>Examination forms</td><td>Quiz
Presentation
Multiple choice questions
Case-based exams</td></tr>
</table>

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:

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 *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.

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. **References:** 2. Dzambazova, T, Krygiel, E., and Demchak, G. (2009). Introducing Revit Architecture 2010 – BIM for beginners. New Jersey: John Wiley & Sons.

45. Building Information Management Project (CM312IU)

Course name	- *(in English):* Building Information Management Project - *(in Vietnamese):* Đồ án hệ thống quản lý thông tin công trình
Course designation	Face to Face and Self-Study
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 Phạm Thanh Tùng Dr Nguyễn Văn Tiếp Dr Nguyễn Bá Quang Vinh Dr Trần Thanh Hà
Language	English
Relation to curriculum	Compulsory
Teaching methods	Independent research approach
Workload (incl. contact hours, self-study hours)	Total workload: 50 Contact hours (lecture and laboratory session): 15 Private study including examination preparation, specified in hours[22]: 35
Credit points	**01 credits (Theory: 00 + Practice: 01)** **2.45 ECTS**
Number of periods	**Theory: 00** **Practice: 30**

[22] 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.

<table>
<tr><td>Required and recommended prerequisites for joining the course</td><td>Building Information Management (CM310IU)</td></tr>
<tr><td>Course objectives</td><td>Students will study how to establish a BIM model and investigate its application for a construction project in practice.</td></tr>
<tr><td>Course learning outcomes</td><td>Upon the successful completion of this course students will be able to:
<table>
<tr><td>Competency level</td><td>Course learning outcome (CLO)</td></tr>
<tr><td>Knowledge</td><td>CLO1. synthesize the BIM knowledge learnt
CLO2. understand fundamental steps used for BIM modelling in practice</td></tr>
<tr><td>Skill</td><td>CLO3. use specialized software; and apply tools and techniques for establishing a three-dimensional BIM model for a real case</td></tr>
<tr><td>Attitude</td><td>CLO4. be proactive in carrying out independent research</td></tr>
</table></td></tr>
<tr><td>Content</td><td>The course will provide essential skills for students on how to carry out fundamental steps for Building Information Modelling for a real project. Based on the knowledge learnt and skills, students understand the applicability of BIM models in the construction industry.</td></tr>
<tr><td>Examination forms</td><td>Project Report</td></tr>
<tr><td>Study and examination requirements</td><td>Requirements for successfully passing the module:
achieve a composite mark of at least 50
80 % is compulsory for the class sessions
100% is compulsory for the laboratory sessions
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.</td></tr>
<tr><td>Reading list</td><td>Textbooks:
Allen, E. and Rand, P., 2016. Architectural detailing: function, constructibility, aesthetics. John Wiley & Sons.
Grondzik, W.T. and Kwok, A.G., 2019. Mechanical and electrical equipment for buildings. John wiley & sons.
References:
Holzer, D. (2015). The BIM Manager’s Handbook: Guidance for professionals in architecture, engineering, and construction. West Sussex: John Wiley & Sons.
Dzambazova, T, Krygiel, E., and Demchak, G. (2009). Introducing Revit Architecture 2010 – BIM for beginners. New Jersey: John Wiley & Sons.</td></tr>
</table>

46. Construction Jobsite Management (CM402IU)

Course name	- *(in English):* ***Construction Jobsite Management*** - *(in Vietnamese): Quản lý thi công công trường*
Course designation	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	7 or 8
Person responsible for the module	Dr. Nguyen, Hoai Nghia, Dr. Nguyen, Van Tiep, MSc. Nguyen, Pham Duy Phương, Dr. Tran Thanh Ha
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 (please specify whether lecture, exercise, laboratory session, etc.): 45 Private study including examination preparation, specified in hours[23]: 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	**Overall objectives** are to provide students with the insight of

[23] 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.

<table>
<tr><td>learning outcomes</td><td>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 knowledge of designing and controlling jobsite
(3) Having knowledge to manage labor, material, safety, waste, and environment on construction site</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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</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, U</td></tr>
<tr><td>Material management</td><td>1</td><td>T, U</td></tr>
<tr><td>Personnel and safety management</td><td>3</td><td>T, U</td></tr>
<tr><td>Waste and environmental management and sustainable construction practices</td><td>2</td><td>T, U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>Textbook:

[1] Minks, W.R. and Johnston, H. (2017). Construction Jobsite Management, 4th ed. Boston: Cengage Learning.

[2] Thomas, H.R. and Ellis, R.D. Jr. (2017). Construction Site Management and Labor Productivity Improvement. Virginia: ASCE Press.

References:</td></tr>
</table>

	[1] Howarth, T. and Greenwood, D. (2018). *Construction Quality Management – Principle and Practice, 2nd ed*. New York: Routledge. [2] Fisk, E.R. and Reynolds, W.D. (2014). *Construction Project Administration, 10th ed*. New Jersey: Pearson

47. Contract Management – FIDIC contracts (CM404IU)

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	☐ *General knowledge* ☐ *Fundamental* ☒ *Specialized knowledge* ☐ *Internship/Project/Thesis* ☐ *Others:……*
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 Phương
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[24]: 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

[24] 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.

<table>
<tr><td></td><td>following tasks:
(1) Having knowledge of contract management
(2) Having knowledge of FIDIC contracts and its applications</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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>
<tr><td>FIDIC contracts</td><td>5</td><td>T, U</td></tr>
<tr><td>Related Vietnamese laws and regulations</td><td>1</td><td>T</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>Textbook:
[1] Goldfayl, G. (2011). Construction contract administration, 2nd ed. Sydney: A UNSW press book.
[2] FIDIC contracts.
References:
[1] Murdoch, J. and Hughes W. (2000). Construction contracts – Law and management, 3rd ed. London: Spon Press</td></tr>
</table>

48. Value Engineering (CM403IU)

Course name	*- (in English): Value Engineering* *- (in Vietnamese): Kỹ thuật giá trị*
Course designation	In this course, students will study about value engineering (VE) method that is a process to identify opportunities to remove unnecessary costs while assuring that quality, reliability, performance, and other critical factors will meet or exceed the customer's expectations.
Course type	☐ *General knowledge* ☐ *Fundamental* *X Specialized knowledge* ☐ *Internship/Project/Thesis* ☐ *Others:……..*
Semester(s) in which the module is taught	8
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: 135 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 45 Private study including examination preparation, specified in hours[25]: 90
Credit points	3 credits (Theory: 45 + Practice: 0) 4.64 ECTS *(optional)*
Number of periods	Theory: 45 Practice: 0
Required and recommended prerequisites for joining the module	None
Course objectives	This course provides students with related knowledge of value engineering including project scope and budget; preparation of cost models; planning for value engineering services; function analysis; creativity and interpersonal skills; life cycle costing; risk assessment and analysis.

[25] 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.

<table>
<tr><td></td><td>Students who complete the course will be able to perform the following tasks:
(1) Understand the objectives of value engineering
(2) Understand project scope and budget
(3) Be able to apply value engineering technique</td></tr>
<tr><td>Course learning outcomes</td><td>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 objectives of value engineering
CLO2: Understand project scope and budget</td></tr>
<tr><td>Skill</td><td>CLO3: Be able to apply value engineering technique</td></tr>
<tr><td>Attitude</td><td></td></tr>
</table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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>Project scope and budget</td><td>2</td><td>T</td></tr>
<tr><td>Preparation of cost model</td><td>2</td><td>T</td></tr>
<tr><td>Planning for VE services</td><td>2</td><td>T, U</td></tr>
<tr><td>Planning for VE services</td><td>1</td><td>T, U</td></tr>
<tr><td>Creativity and interpersonal skills</td><td>1</td><td>T</td></tr>
<tr><td>Life cycle costing</td><td>2</td><td>T, U</td></tr>
<tr><td>Integrating VE into the construction industry</td><td>2</td><td>T</td></tr>
<tr><td>VE applications to risk assessment and analysis</td><td>2</td><td>T</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
</table>

Reading list	Textbook: •Alphonse Dell'Isola, Value Engineering: Practical Applications for Design, Construction, Maintenance & Operations, 1997, 1st edition. •John Kelly, Steven Male, Value Management in Design and Construction, 2005, 1st edition.

49. Construction Engineering (CE311IU)

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	☐ *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, 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[26]: 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: CE304IU - Reinforced concrete 1
Module objectives/intended learning outcomes	**Overall objectives** are to equip CE students with knowledge about construction engineering, including earthwork, foundation

[26] 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.

<table>
<tr><td></td><td>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, …</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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>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><tr><td>Steel construction</td><td>1</td><td>T</td></tr></table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>Text book:
[1] S. W. Nunnally, (2014). Construction Methods and Management, Pearson, 8th edition.
[2] R. L. Peurifoy, C. J. Schexnayder, R. L. Schmitt, and A.</td></tr>
</table>

	Shapira. (2018). *Construction Planning, Equipment, and Methods*, McGraw-Hill Education 9th edition.

III.1. CM ELECTIVE (13 of 17 Crds)

50. Project Communication Management (CM405IU)

Course name	- *(in English):* Project Communication Management - *(in Vietnamese): Quản lý thông tin dự án*
Course designation	**CM405IU – PROJECT COMMUNICATION MANAGEMENT** In this course, students will study the knowledge of project communication management and project document administration.
Course type	☐ *General knowledge* ☐ *Fundamental* X *Specialized knowledge* ☐ *Internship/Project/Thesis* ☐ *Others:……..*
Semester(s) in which the module is taught	7
Person responsible for the module	Dr. Nguyen, Hoai Nghia, Dr. Nguyen, Van Tiep, MSc. Nguyen, Pham Duy Phương
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[27]: 90
Credit points	3 credits (Theory: 45 + Practice: 0) 4.64 ECTS *(optional)*
Number of periods	Theory: 45 Practice: 0
Required and recommended prerequisites for joining the module	None

[27] 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.

<table>
<tr><td>Course objectives</td><td>Overall objectives

The aim of the course is to provide students with the insight of project communication management including the effective communication skills. The procedures to handle and record the project data and documents are also provided.

Students who complete the course will be able to perform the following tasks:

(1) A deep understanding of project communication management including the effective communication skills
(2) A deep understanding of procedures to handle and record the project data and documents</td></tr>
<tr><td>Course learning outcomes</td><td>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: A deep understanding of project communication management including the effective communication skills</td></tr><tr><td>Skill</td><td>CLO2: A deep understanding of procedures to handle and record the project data and documents</td></tr><tr><td>Attitude</td><td>N/A</td></tr></table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.

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>Decentralization and project management</td><td>1</td><td>I</td></tr><tr><td>Communicating to make space for participation</td><td>1</td><td>T</td></tr><tr><td>Project leadership and communication</td><td>2</td><td>T</td></tr><tr><td>Project Communications Management Planning</td><td>3</td><td>I</td></tr><tr><td>Project Communications Management Executing</td><td>2</td><td>T, U</td></tr><tr><td>Project Communications Management Monitoring and Control</td><td>2</td><td>T, U</td></tr></table></td></tr>
</table>

	Use of construction documents on the jobsite	2	I
	Documentation and record keeping at the jobsite	2	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] Lauren, B. (2018). Communicating project management. New York: Routledge. [2] Minks, W.R. and Johnston, H. (2017). Construction Jobsite Management, 4th ed. Boston: Cengage Learning. [3] Fisk, E.R. and Reynolds, W.D. (2014). Construction Project Administration, 10th ed. New Jersey: Pearson References: [1] Project Management Institute. (2016). Construction Extension to the PMBOK, 2nd ed. Pennsylvania: Project Management Institute [2] 2. Project Management Institute. (2003). Construction Extension to A guide to the PMBOK, 1st ed. Pennsylvania: Project Management Institute.		

51. Construction quality management (CM406IU)

Course name	- *(in English):* Construction Quality Management - *(in Vietnamese):* Quản lý chất lượng thi công
Course designation	**CM406IU – CONSTRUCTION QUALITY MANAGEMENT** In this course, students will study key theories of quality management and plans for quality assurance and control. Requirements of quality assurance and control during construction process are also mentioned.
Course type	☐ *General knowledge* ☐ *Fundamental* ☒ *Specialized knowledge* ☐ *Internship/Project/Thesis* ☐ *Others:……..*
Semester(s) in which the module is taught	7
Person responsible for the module	Dr. Nguyen, Hoai Nghia, Dr. Nguyen, Van Tiep, MSc. Nguyen, Pham Duy Phương, Dr. Tran Thanh Ha
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[28]: 90
Credit points	**03 credits (Theory: 03 + Practice: 00)** **4.64 ECTS**

[28] 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.

<table>
<tr><td></td><td></td></tr>
<tr><td>Number of periods</td><td>Theory: 45
Practice: 00</td></tr>
<tr><td>Required and recommended prerequisites for joining the module</td><td>None</td></tr>
<tr><td>Module objectives/intended learning outcomes</td><td>Overall objectives
The aim of the course is to equip students with knowledge of quality assurance and control (QAQC) planning and practices during construction period.
Students who complete the course will be able to perform the following tasks:
(1) A deep understanding of quality management theories
(2) An enhanced ability to develop QAQC plans and to apply plans in practice</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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>An overview of the key quality philosophy</td><td>2</td><td>I</td></tr>
<tr><td>Measuring project performance</td><td>2</td><td>I</td></tr>
<tr><td>Total Quality Management</td><td>2</td><td>T, U</td></tr>
<tr><td>Construction quality assurance and control program</td><td>2</td><td>T, U</td></tr>
<tr><td>Construction project quality management procedure</td><td>4</td><td>T, U</td></tr>
<tr><td>Quality management systems for health and safety in construction</td><td>2</td><td>T, U</td></tr>
<tr><td>Related Vietnamese laws and regulations</td><td>1</td><td>I</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
</table>

Reading list	Textbook: [1] Howarth, T. and Greenwood, D. (2018). Construction Quality Management – Principle and Practice, 2nd ed.. New York: Routledge. References: [1] Minks, W.R. and Johnston, H. (2017). Construction Jobsite Management, 4th ed. Boston: Cengage Learning. [2] Thomas, H.R. and Ellis, R.D. Jr. (2017). Construction Site Management and Labor Productivity Improvement, Virginia: ASCE Press. [3] Fisk, E.R. and Reynolds, W.D. (2014). Construction Project Administration, 10th ed. New Jersey: Pearson.

52. Project Integration Management (CM407IU)

Course name	- *(in English): Project Integration Management* - *(in Vietnamese): Quản lý tích hợp dự án*
Course designation	**CM407IU – PROJECT INTEGRATION MANAGEMENT** In this course, students will study the knowledge of project integration management throughout the project phases.
Course type	☐ *General knowledge* ☐ *Fundamental* X *Specialized knowledge* ☐ *Internship/Project/Thesis* ☐ *Others:……..*
Semester(s) in which the module is taught	7
Person responsible for the module	Dr. Nguyen, Hoai Nghia, Dr. Nguyen, Van Tiep, MSc. Nguyen, Pham Duy Phương
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): 45 Private study including examination preparation, specified in hours[29]: 90
Credit points	3 credits (Theory: 45 + Practice: 0) 4.64 ECTS *(optional)*
Number of periods	Theory: 45 Practice: 0

[29] 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.

<table>
<tr><td>Required and recommended prerequisites for joining the module</td><td>None</td></tr>
<tr><td>Course objectives</td><td>Overall objectives

The aim of the course is to provide students with the holistic viewpoint of project integration management. Students are also provided with step by step of project integration management throughout project phases.

Students who complete the course will be able to perform the following tasks:

(1) A deep understanding of holistic viewpoint of project integration management
(2) A deep understanding of procedures of project integration management throughout project phases.</td></tr>
<tr><td>Course learning outcomes</td><td>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: A deep understanding of holistic viewpoint of project integration management</td></tr><tr><td>Skill</td><td>CLO2: A deep understanding of procedures of project integration management throughout project phases.</td></tr><tr><td>Attitude</td><td>N/A</td></tr></table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.

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>Fundamentals</td><td>1</td><td>I</td></tr><tr><td>Project charter</td><td>2</td><td>I</td></tr><tr><td>Project management plans and documents</td><td>3</td><td>T</td></tr><tr><td>Project requirement</td><td>1</td><td>T</td></tr><tr><td>The scoping of projects</td><td>1</td><td>I</td></tr><tr><td>Project work breakdown structure</td><td>1</td><td>T, U</td></tr><tr><td>The directing and managing of the</td><td>1</td><td>T, U</td></tr></table></td></tr>
</table>

	work performed in projects		
	The monitoring and controlling of the work performed in projects	1	I
	The integrating and controlling of the changes occurring in projects	1	I
	The controlling and validating of the scope of projects	2	I
	The closing of a project/phase	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] Sokowski, D.W. (2015). Mastering project management integration and scope. New Jersey: Pearson. References: [1] Project Management Institute. (2016). Construction Extension to the PMBOK, 2nd ed. Pennsylvania: Project Management Institute. [2] Project Management Institute. (2003). Construction Extension to A guide to the PMBOK, 1st ed. Pennsylvania: Project Management Institute.		

53. Construction financial management (CM408IU)

Course name	**CM408IU – Construction Financial Management** **CM408IU** – Quản lý tài chính xây dựng
Module designation	In this course, students will study the general knowledge of financial management including financial ratio, debt and equity, equity, assets, returns. Students also acquire knowledge management related to costs, cash flow and the tools for making financial decision.
Course type	☐ *General knowledge* ☐ *Fundamental* ☒ *Specialized knowledge* ☐ *Internship/Project/Thesis* ☐ *Others:……*
Semester(s) in which the module is taught	7
Person responsible for the module	Dr. Nguyen, Hoai Nghia, Dr. Nguyen, Van Tiep, MSc. Nguyen, Pham Duy Phương
Language	English
Relation to curriculum	Elective
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[30]: 90
Credit points	**3 credits (Theory: 03 + Practice: 00)** **4.64 ECTS**

[30] 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.

<table>
<tr><td>Number of periods</td><td>Theory: 45
Practice: 00</td></tr>
<tr><td>Required and recommended prerequisites for joining the module</td><td>- Prerequisites:
- Corequisites:
- Previous course:</td></tr>
<tr><td>Module objectives/intended learning outcomes</td><td>Overall objectives
The aim of the course is to provide the general knowledge of financial management which applied to construction industry. The cost and profit management and technique applied to financial management are also provided.
Students who complete the course will be able to perform the following tasks:
(1) An understanding of general knowledge of financial and applications to the construction industry
(2) An understanding of cost and profit management and technique applied to financial management</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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 financial management</td><td>1</td><td>I</td></tr>
<tr><td>Analysis of financial statements</td><td>3</td><td>I</td></tr>
<tr><td>Managing costs</td><td>2</td><td>T</td></tr>
<tr><td>Managing general overhead costs</td><td>1</td><td>T</td></tr>
<tr><td>Set profit margins for bidding</td><td>1</td><td>T</td></tr>
<tr><td>Profit center analysis</td><td>1</td><td>T</td></tr>
<tr><td>Cash flows for construction projects</td><td>1</td><td>T</td></tr>
<tr><td>Cash flow for construction company</td><td>1</td><td>I</td></tr>
<tr><td>Tools for making financial decisions</td><td>4</td><td>T, U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
</table>

Reading list	Textbook: [1] Peterson, S. (2014). Construction accounting and financial management, 3rd ed. London: Pearson. References: [1] Guenther, D. A. (2006). Financial reporting and analysis. New York: McGraw Hill. [2] Halpin, D.W. and Senior, B.A. (2009). Financial management and accounting fundamentals for construction. John Wiley and Sons.

54. Advanced Artificial Intelligence In Civil Engineering And Construction Management (CE412IU)

Course name	- *ADVANCED ARTIFICIAL INTELLIGENCE IN CIVIL ENGINEERING AND CONSTRUCTION MANAGEMENT* - *TRÍ TUỆ NHÂN TẠO NÂNG CAO TRONG KỸ THUẬT VÀ QUẢN LÝ XÂY DỰNG*
Course designation	*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.*
Course type	☐ *General knowledge* ☐ *Fundamental* ☑ *Specialized knowledge* ☐ *Internship/Project/Thesis* ☐ *Others:……..*
Semester(s) in which the course is taught	
Person responsible for the course	*Nguyễn Bá Quang Vinh (PhD)*
Language	English
Relation to curriculum	Elective

<table>
<tr><td>Teaching methods</td><td>Lecture, presentation, discussion, and assignments</td></tr>
<tr><td>Workload (incl. contact hours, self-study hours)</td><td>(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[31]: 90</td></tr>
<tr><td>Credit points</td><td>3 credits/4.64 ECTS</td></tr>
<tr><td>Number of periods</td><td>Theory: 45
Practice: 0</td></tr>
<tr><td>Required and recommended prerequisites for joining the course</td><td>Calculus, Mechanics of Material 1, Artificial Intelligence In Civil Engineering And Construction Management</td></tr>
<tr><td>Course objectives</td><td>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</td></tr>
<tr><td>Course learning outcomes</td><td>Upon the successful completion of this course students will be able to:
<table>
<tr><td>Competency level</td><td>Course learning outcome (CLO)</td></tr>
<tr><td>Knowledge</td><td>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</td></tr>
<tr><td>Skill</td><td>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.</td></tr>
<tr><td>Attitude</td><td>CLO5. Work independently and professionally.</td></tr>
</table></td></tr>
</table>

[31] 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.

<table>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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>Representations, measurements, data types</td><td>1</td><td>T, U</td></tr>
<tr><td>Traditional supervised algorithms ML</td><td>2</td><td>T, U</td></tr>
<tr><td>Ensemble learning</td><td>3</td><td>T, U</td></tr>
<tr><td>Deep learning</td><td>4</td><td>T, U</td></tr>
<tr><td>Case studies</td><td>1</td><td>T, U</td></tr>
<tr><td>Course project</td><td>3</td><td>T, U</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td><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.</td></tr>
</table>

55. Feasibility and Appraisal Project (CM401IU)

Course name	**CM401IU – Feasibility study and appraisal project** CM401IU – Đồ án lập và thẩm định dự án đầu tư
Module designation	A practice construction project is carried out, including construction project feasibility study and appraisal. Students are supposed to apply the knowledge in the courses of construction project feasibility study and appraisal to this project composing of composing a feasibility study of a construction project including project scope, objectives, needs analysis, financial analysis, economic analysis, … and finally writing a report.
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, MSc. Nguyen, Pham Duy Phương
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, 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[32]: 30

[32] When calculating contact time, each contact hour is counted as a full hour because the organisation of the

<table>
<tr><td>Credit points</td><td>1 credit (Theory: 00 + Practice: 01)
2.45 ECTS</td></tr>
<tr><td>Number of periods</td><td>Theory: 00
Practice: 30</td></tr>
<tr><td>Required and recommended prerequisites for joining the module</td><td>- Prerequisites:
- Corequisites:
- Previous course: CM308IU – Project Feasibility Study and Appraisal</td></tr>
<tr><td>Module objectives/intended learning outcomes</td><td>Overall objectives are to equip IU students with knowledge and skills of compiling a project feasibility study
Students who complete the course will be able to perform the following tasks:
(1) developing a project feasibility study
(2) presenting and defense the project feasibility study</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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 feasibility study requirements and criteria</td><td>1</td><td>I</td></tr>
<tr><td>Project scope, objectives, needs, and the related documents</td><td>1</td><td>T, U</td></tr>
<tr><td>Technical analysis</td><td>2</td><td>T, U</td></tr>
<tr><td>Total construction investment amount</td><td>2</td><td>T. U</td></tr>
<tr><td>Financial analysis</td><td>3</td><td>T, U</td></tr>
<tr><td>Economic analysis</td><td>2</td><td>T, U</td></tr>
<tr><td>Project risk analysis</td><td>1</td><td>T, U</td></tr>
<tr><td>Project environmental impact (EIA)</td><td>1</td><td>I</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Constructed-response test</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
</table>

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	Textbook: [1] Knut Samset, *Early Project Appraisal – Making the Initial Choices*, 2010, 1st edition. References: [1] William B. Brueggeman, Jeffrey D. Fisher, *Real Estate Finance and Investments*, 2008, 13th edition. [2] David C. ling, Wayne R. Archer, *Real Estate Principles – a Value Approac*h, 2008, 2nd edition.

56. Construction Project (CE403IU)

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[33]: 30

[33] When calculating contact time, each contact hour is counted as a full hour because the organisation of the

<table>
<tr><td>Credit points</td><td>1 credit (Theory: 00 + Practice: 01)
2.45 ECTS</td></tr>
<tr><td>Number of periods</td><td>Theory: 00
Practice: 30</td></tr>
<tr><td>Required and recommended prerequisites for joining the module</td><td>- Prerequisites:
- Corequisites:
- Previous course: CE311IU - Construction Engineering</td></tr>
<tr><td>Module objectives/intended learning outcomes</td><td>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.</td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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></td></tr>
</table>

schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

	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). *Construction Methods and Management*, Pearson, 8th edition. [2] R. L. Peurifoy, C. J. Schexnayder, R. L. Schmitt, and A. Shapira. (2018). *Construction Planning, Equipment, and Methods*, McGraw-Hill Education 9th edition.		

III.2. IU ELECTIVE (6 Crds)

57. Fundamental of Financial Management (BA016IU)

Course designation	*BA016IU– Fundamentals of Financial Management* provides students with basic concepts of financial management. The course is provided based on foundation knowledge of financial accounting and economics. This course may fulfill requirements of the curriculum for students majoring in business administration in general; however, it is the foundation for students majoring in finance , banking and accounting. For those students that major in finance, banking and accounting, they can take higher level courses in finance after this course, to count for some, Corporate Finance, Financial Institutions and Market, Portfolio Theory and Investment Analysis, International Finance, Business Analysis and Valuation, etc.
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Dr. Nguyen Canh Tien MSc. Le Hong Nhung MSc. Phan Ngoc Anh MSc. Le Dang Thuy Trang MSc. Tran Nhat Minh MSc. Vu Khanh Thien
Language	English

<table>
<tr><td>Relation to curriculum</td><td>Compulsory</td></tr>
<tr><td>Teaching methods</td><td>Lecture, lesson, 2 class tests</td></tr>
<tr><td>Workload (incl. contact hours, selfstudy hours)</td><td>Total workload: 128
Contact hours: 38 (15 classes, 1 class = 3 periods, 1 period = 50 minutes)
Private study including examination preparation, specified in hours: 90</td></tr>
<tr><td>Credit points</td><td>3</td></tr>
<tr><td>Required and recommended prerequisites for joining the course</td><td>Financial Accounting – BA184IU</td></tr>
<tr><td>Course objectives</td><td>The aim of this course is to expose students to and familiarize them with the theoretical frameworks and practical matters of financial management.. The learning experience will include: an introduction to financial management; time value of money; techniques of pricing of financial instruments such as bonds and stocks; evaluation of major projects; the relationship between risk and return; an introduction to Capital Asset Pricing Model (CAPM) and
Portfolio theory; and cost of capital and capital structuring</td></tr>
<tr><td>Course learning outcomes</td><td>Upon the successful completion of this course students will be able to:
<table>
<tr><td>Competency level</td><td>Course learning outcome (CLO)</td></tr>
<tr><td>Knowledge</td><td>CLO1: Recognize concepts, theories and fundamental knowledge in finance.</td></tr>
<tr><td>Skill</td><td>CLO2: Identify value, culture and beliefs of others.</td></tr>
<tr><td>Attitude</td><td>CLO3: Explain the ethical requirements of business activities
CLO4: Hold skills and knowledge of global citizens</td></tr>
</table></td></tr>
</table>

58. Business Communication (BA006IU)

Course designation	*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 sucessful job search, resumes, cover letters, and job interviews.*
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 (whether lecture, exercise, laboratory session, etc.): 37.5 Self-study includes examination preparation, specified in hours[57]: 90
Credit points	3 credits/4.64 ECTS
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

The description of the contents should clearly indicate the weighting of the content and the level.

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 disscusion. 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.		

59. Quality Management (BA018IU)

Course designation	This course introduces the principles of quality management, with emphasis on cross functional problem solving; providing a basic understanding of the philosophy, conceptual frameworks and the tools of the Total Quality Management.
Semester(s) in which the course is taught	Semester 1 of the fourth year
Person responsible for the course	TBA
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, Tutorial, Assignment, Case Analysis, Quizzes, Group Project

Workload (incl. contact hours, selfstudy hours)	(Estimated) Total workload: 135 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 45 Private study including examination preparation, specified in hours[34]: 90
Credit points	*3*

Required and recommended prerequisites for joining the course	Production and Operations Management
Course objectives	Understanding of quality terminology and concepts Explaining the relationships of quality management and firm performance Identifying and analyzing organizational and environmental factors that drive quality improvement. Understanding Total Quality Management concepts and apply quality control tools. Implementation of Plan, Do, Study and Act Cycles Analyzing and evaluating a Define-Measure-Analyze-Improve-Control Project and applying it in practice
Course learning outcomes	Upon the successful completion of this course students will be able to:

Competency level	Course learning outcome (CLO)
Knowledge	CLO1. Explain the philosophy of quality management, its principles, and its applications CLO2. Analyze the role and the importance of quality management in an organization
Skill	CLO3. Improve the technical proficiency to meet the increasing demand for quality CLO4. Analyze data to make decisions on quality for continuous improvement.

[34] 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.

	Attitude	CLO5. Explain the ethical requirements in quality management. CLO6. Evaluate behavioral and technical dimensions of total quality management and apply various approaches to quality improvement and innovation.
Content	Introduction to the principles of quality management, with an emphasis on cross-functional problem solving. This course will provide a basic understanding of the philosophy, conceptual frameworks and the tools of the Total Quality Management.	

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:

Homework, Assignment 15%	15%
Group Project 15%	15%
In-class quizzes, class participation 10%	10%
Midterm examination	30%
Final examination	30%
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 eight 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:** - Howard S. Gitlow et. al., Quality Management - 3rd edition, McGraw Hill, 2005. **Reference:** - Evans, Managing for quality and performance excellence -10th edition, Cengage Learning. - D.L. Goetsch and Stanley B. Davis, Quality Management- 5th edition, Prentice Hall, 2006.

60. Introduction to Business Administration (BA115IU)

1	**Course Name**	INTRODUCTION TO BUSINESS ADMINISTRATION
2	**Course Code**	BA115IU
3	**No of credits**	3 credits/4.64 ECTS
4	**Degree Level**	Bachelor in Business Administration
5	**Time Allocation**	15 classes; 1 class = 3 periods; 1period = 50 minutes
6	**Pre-requisite**	*No*
7	**Main objectives**	This course is designed to provide the student with the below objectives - To provide knowledge of functional areas of business management and the integration among them. - To give students a strong awareness of global issues, including an understanding of approaches to business ethics, business environment and multinational issues. - To develop students' basic research, analysis, writing, teaming, and presentation skills. - 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.
8	**Course Learning Outcomes**	LO1. Explain how rapidly the business world is changing and the importance of life long learning. LO2. Explain how global issues influence business entities. LO3. Understanding forms of business of ownership. LO4. Develop a high level of familiarity with four function of business management. LO5. Understaing basic characteristic of production and operation management. LO6. Explain theories about motivation. LO7. Understanding basic characteristic of HRM in an organisation. LO8. Understanding basic characteristic of marketing mix.
9	**Description**	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.
9	**Student's tasks**	1. Attend more than 80% of contact hours in order to be accepted to the final examination 2. Actively participate in class activities. 3. Fulfill tasks given by instructor after class. 4. Use their own laptop in class only for learning purpose. 5. Read the textbook in advance. 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.

10	**Teaching & Learning Materials**	Main textbooks: William G. Nickels, James M. McHugh, Susan M.McHugh – Understanding Business, 11th edition , McGraw-Hill
		IM, Video, PPT, Test bank
11	**Assessment scheme**	1. Homework/ asignments/ presentation; 30% ; 2. Midterm exam: 30%; 3. Final Exam; 40%
12	**Scoring scale**	100
13	**Schedule**	See Appendix 1

14	**Exam structure**	See Appendix 2	
15	**Approval Date**		
16	**Approval Level**		

61. Financial Accounting (BA005IU)

Course designation	BA005IU– Financial Accounting is the entry-level course which explores the basis of accounting that would be beneficial to students seeking a degree in the business area. Students will be introduced to the importance of accounting within the business environment and how accounting information can be utilized to facilitate business decisions. Students who decide to choose the Accounting and Finance major may go on to take the course Managerial Accounting or Auditing in the following semesters, which will focus on evaluating and auditing firms, and report information to stakeholders.
Semester(s) in which the course is taught	1, 2
Person responsible for the course	Mr. Vu, Tuan Anh
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, 2 big quizzes, project
Workload (incl. contact hours, selfstudy hours)	(Estimated) Total workload: 135 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 45 Private study including examination preparation, specified in hours[35]: 90
Credit points	3
Required and recommended prerequisites for joining the course	None

[35] 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 develops a basic understanding on the theories, principles, and applications of accounting and financial reporting, essentials in the IFRS standard, including topics such as the theory of debit and credit, accounts, special journals, the accounting cycle, notes and interest, accruals and deferrals, cash, receivables, inventory, fixed assets, and the analysis of financial statements. In general, its primary aim is to provide the basic knowledge in preparing and processing accounting transactions to present financial details in a relevant and effective manner, as well as interpreting this accounting information for different types of external and internal investors, management and other accounting information users.

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 importance of accounting information in decision making and the role it plays within the business environment CLO2. Compare the relevant procedures of the accounting information life cycle and transformation of accounting information during this process. CLO3. Differentiate the development of accounting principles and policies through accounting theories and undertakings of the accounting professions
	Skill	CLO4. Organize individuals or groups to work together to achieve a goal or solve problems arising from day to day business activities. CLO5: Identify the components that help to organize and assign individuals or groups to work together to achieve a goal or solve problems arising from day to day business activities CLO6: Explain the components that help to organize and assign individuals or groups to work together to achieve a goal or solve problems arising from day to day business activities
	Attitude	CLO7: Hold skills and knowledge of global citizens CLO8: Practice skills and knowledge of global

<table>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
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 to Accounting and Business</td><td>1</td><td>I, T</td></tr>
<tr><td>Analyzing Transactions</td><td>2</td><td>T, U</td></tr>
<tr><td>The Adjusting process</td><td>1</td><td>T, U</td></tr>
<tr><td>Completing the Accounting cycle</td><td>2</td><td>T</td></tr>
<tr><td>Accounting for merchandising business</td><td>2</td><td>T, U</td></tr>
<tr><td>Accounting for Inventories</td><td>2</td><td>T</td></tr>
<tr><td>Accounting for Receivables</td><td>1</td><td>T, U</td></tr>
<tr><td>Accounting for Fixed Assets</td><td>1</td><td>T, U</td></tr>
<tr><td>Accounting for current liabilities</td><td>0.5</td><td>I, T</td></tr>
<tr><td>Financial Analysis</td><td>0.5</td><td>I, T</td></tr>
</table></td></tr>
<tr><td>Examination forms</td><td>Multiple-choice questions, short-answer questions</td></tr>
<tr><td>Study and examination requirements</td><td>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.</td></tr>
<tr><td>Reading list</td><td>[1] Jerry J Weygandt, Paul D Kimmel, Donald E Kieso, Accounting Principles IFRS Version, Global Edition
[2] Carl Warren, Accounting With IFRS Essentials: An Asia Edition, 1st Edition</td></tr>
</table>

62. Organizational Behavior (BA130IU)

Course designation	*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.*
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@hcmuiu.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)	*(Estimated) Total workload: 135* *Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 45* *Private study including examination preparation, specified in hours[60]: 90*
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.
Course learning outcomes	Upon the successful completion After completing the course, students should have developed skills in:
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	Text book [1]· Robbins, S. P. and Judge, T. A. (2013), Essentials of Organizational Behavior, 12th edition, Pearson Education. Reference book: [2]· John W. Newstrom, (2014), Organizational Behavior-Human Behavior at Work, 14th Edition, International Edition, McGraw Hill. [3]· Hellrigel, D., Slocum, J., & Woodman (2010), Organizational Behavior, 13th

63. Business Computing Skills (BA120IU)

Course designation	*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.*
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: 135 Contact hours: 45 (15 hours of lecture and 30 hours of exercise) Private study including examination preparation, specified in hours[63]: 90
Credit points	03
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 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.

<table>
<tr><td>Course Learning Outcomes</td><td>Upon the successful completion of this course, students will be able to:
<table>
<tr><th>Competency Level</th><th>Course Learning Outcomes (CLOs)</th></tr>
<tr><td>Knowledge</td><td>CLO1. Summarize different technical knowledge to support management and supervisors.

CLO2. Describe written directions and specific documents for business general purposes.</td></tr>
<tr><td>Skills</td><td>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).</td></tr>
<tr><td>Attitude</td><td>CLO6. Recognize the advantages and disadvantages of ICT and the Internet in general and in business activities particularly.</td></tr>
</table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.

Weight: Lecture Session (01 class)[64]

Learning levels: I (Introduce); R (Re-enforce); M (Master)
<table>
<tr><th>Topic</th><th>Weight</th><th>Level</th></tr>
<tr><td>Introduction to Information Systems</td><td>1</td><td>I</td></tr>
<tr><td>Computer Hardware and Software</td><td>1</td><td>I</td></tr>
<tr><td>The Internet, Personal Email Account</td><td>1</td><td>I, R</td></tr>
<tr><td>MS Access – Creating Relational Tables</td><td>1</td><td>I, R</td></tr>
<tr><td>MS Access – Basic and Advanced Queries</td><td>1</td><td>I, R</td></tr>
<tr><td>MS Access – Forms and Reports Customization</td><td>1</td><td>I</td></tr>
<tr><td>MS Word – Creating Templates</td><td>1</td><td>I, R</td></tr>
<tr><td>MS Word – Mail Merge and Protecting Documents</td><td>1</td><td>I</td></tr>
<tr><td>MS Excel – Formulas and Functions</td><td>1</td><td>I</td></tr>
<tr><td>MS Excel – Charting</td><td>1</td><td>I</td></tr>
<tr><td>MS Excel – Pivoting Data (Table and Chart)</td><td>2</td><td>I, R</td></tr>
</table></td></tr>
</table>

	MS Excel – Sorting and Filtering	1	I
	MS Excel – Data Validation, What-If Analysis	2	I, R
	MS Excel – Introduction to VBA	1	I
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, 12th 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.		

IV. PROFESSIONAL PRACTICE AND RESEARCH

64. Summer Internship (CM306IU)

Course name	*- (in English): Internship* *- (in Vietnamese): Thực tập tốt nghiệp*
Course designation	**CM306IU – 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 Construction Management.
Course type	☐ *General knowledge* ☐ *Fundamental* ☐ *Specialized knowledge* *X 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 Phương, Dr. Nguyen, Van Tiep, Dr. Pham Thanh Tung
Language	English
Relation to curriculum	Compulsory
Teaching methods	Apprenticeship.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 240 Contact hours (lecture, exercise, laboratory session, etc.): 0 Private study including examination preparation, specified in hours[36]: 240
Credit points	3 credits (Theory: 0 + Practice: 45) 7.36 ECTS *(optional)*
Number of periods	Theory: 0 Practice: 45
Required and recommended prerequisites for joining the module	Construction Planning and Scheduling, Construction Cost Management
Course objectives	**Overall objectives** are to equip IU students with practical knowledge and skills at a construction company. Students who complete the course will be able to perform the following tasks:

[36] 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.

<table>
<tr><td></td><td>(9) applying theories and principles learned in academic coursework to specific situations with the internship experience based on practical works experience under supervision and guidance
(10) observing and analyzing the daily functioning of the work-place and reflecting on how people within the organization carry out its mission.
(11) getting motivated and confident about career options after graduating</td></tr>
<tr><td>Course learning outcomes</td><td>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: applying theories and principles learned in academic coursework to specific situations with the internship experience based on practical works experience under supervision and guidance</td></tr>
<tr><td>Skill</td><td>CLO2: observing and analyzing the daily functioning of the work-place and reflecting on how people within the organization carry out its mission.</td></tr>
<tr><td>Attitude</td><td>CLO3: getting motivated and confident about career options after graduating</td></tr>
</table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
(1) Internship Registration: register internship through Edusoft or form.
(2) Internship Application and Student Performance Record.
(3) Student Progress Report: The purpose of this report is to track student progress and ensure that students meet their required time commitment. This report is to be completed by the student and must be submitted to the Program Assistant no later than the last working day of each week. 5 points will be deducted from your final grade each time a progress report is submitted late.
(4) Supervisor & Advisor Evaluations: This questionnaire helps ensure that the DCE receives a complete and fair assessment of each student’s performance from the site supervisor and advisor. At the completion of the internship, students are responsible for requesting their site supervisor and advisor to complete and send this form to their advisor and then submit to the Program Assistant.
(5) Final Report: In order to receive credit and a final grade for an approved internship student, must submit the final</td></tr>
</table>

	report. See below for suggested final report requirements. This report is to be completed by the student and must be submitted to the Program Assistant no later than the due date (to be defined later). 10 points will be deducted from your final grade when the final report is submitted late.
Examination forms	Defense
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the internship. Students will be assessed based on their internship participation. Assignments/Examination: Students must have more than 50/100 points overall to pass this module.
Reading list	Textbook: [1] All related textbook in the CM program. References:

65. Thesis (CM420IU)

Course name	- *(in English): Thesis* - *(in Vietnamese): Luận văn tốt nghiệp*
Course designation	**CM420IU – Thesis** In the thesis, students can carry out project feasibility study or construction design/ compile bidding documents/ specifications/ contracts/ schedules for the construction projects or construction packages, including footings-foundations, slabs, beams, columns, construction general layout, … Student can also apply knowledge to do research topic in construction management.
Course type	☐ *General knowledge* ☐ *Fundamental* ☐ *Specialized knowledge* X *Internship/Project/Thesis* ☐ *Others:……..*
Semester(s) in which the module is taught	9
Person responsible for the module	Dr. Nguyen, Hoai Nghia, MSc. Nguyen, Pham Duy Phương, Dr. Nguyen, Van Tiep, Dr. Pham Thanh Tung
Language	English
Relation to curriculum	Compulsory
Teaching methods	Monitoring
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 150 Contact hours (whether lecture, exercise, laboratory session): 30 Private study including examination preparation, specified in hours[37]: 120
Credit points	10 credits (Theory: + Practice: 150) 24.55 ECTS *(optional)*
Number of periods	Theory: 0 Practice: 150
Required and recommended prerequisites for joining the module	Accumulating at least 120 credits, Internship (CM306IU), Business research method (BA161IU)
Course objectives	**Overall objectives** are to equip IU students with the knowledge application from the courses in the program of civil engineering to handle a problem in construction management. Students who complete the course will be able to perform the following tasks:

[37] 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.

<table>
<tr><td></td><td>(12) Having the understanding processes in design construction methodology to construct a project in civil engineering
(13) Developing general construction plan/ schedule/ specifications/ bidding documents/ contracts or conducting a research (explore, investigate, analyze) to solve a problem in construction management</td></tr>
<tr><td>Course learning outcomes</td><td>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: Having the understanding processes in design construction methodology to construct a project in civil engineering</td></tr><tr><td>Skill</td><td>CLO2: Developing general construction plan/ schedule/ specifications/ bidding documents/ contracts or conducting a research (explore, investigate, analyze) to solve a problem in construction management</td></tr><tr><td>Attitude</td><td>N/A</td></tr></table></td></tr>
<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
(6) Student is expected that you will spend full time within 15 weeks to conduct thesis. This time should be made up of reading standards, designing and drawing construction methodology a project; developing specifications/ bidding documents/ contracts; conducting a study in construction management and writing thesis report. Students will meet and discuss with advisor every week or dating any time when students get trouble.</td></tr>
<tr><td>Examination forms</td><td>Defense</td></tr>
<tr><td>Study and examination requirements</td><td>Attendance: A minimum attendance of 80 percent is compulsory for the checking. Students will be assessed based on their monitoring participation.
Assignments/Examination: Students must have more than 50/100 points overall to pass this module.</td></tr>
<tr><td>Reading list</td><td>Textbook:
[1] All related textbook in the CM program.
References:</td></tr>
</table>