Course Syllabus

1. **Course Title:** Information Technology in Construction Management Practice
2. **Course Code:** ICMP411219
3. **Credit Units:** 1 (0/1/2) (0 units of theory/ 1 unit of practice/ 2 units of self-study)

   Duration: 8 weeks (0 hours of theory + 6 hours of practice, and 12 hours of self-study per week)
4. **Course Instructors**

   1/ MSc. Nguyễn Văn Khoa

   2/ MSc. Nguyễn Thanh Tú

   3/ Dr. Hà Duy Khánh

   4/ MSc. Bùi Phạm Đức Tường
5. **Course Requirements**

   Prerequisite courses: None

   Previous courses: Construction Management and Safety (CMSA330419)

   Parallel courses: None

6. Course Description

It is one module of practical subjects related to knowledge on economics and construction management. This course equips students to use MS Project software. The exercise on MS Project in the scheduling and management of construction projects.

7. Course Goals

Goals	Goal description	Programme ELOs
G1	Understand and manipulate the basic tools in MS. Project for scheduling and project management. Understand the scheduling steps.	1.3
G2	Ability to analyze, explain and argue by using the informatics tools to solve the problems in project management. Ability to study and lifelong learning.	2.1, 2.4, 2.5
G3	Ability to team-work, read and understand technical documents in English.	3.1, 3.3
G4	Ability to design, optimize the practical problems in scheduling and construction project management.	4.3, 4.4

8. Course Learning Outcomes (CLOs)

CLOs		CLO Description	Programme ELOs
G1	**G1.1**	Knowing the steps to schedule a project	1.3
G2	**G2.1**	Knowing MS Project to analyze and manage the progress, the	2.1

		resources for project.			
	G2.2	Self-learning ability, desire to learn and lifelong learning.			2.4, 2.5
G3	**G3.1**	Teamwork ability			3.1
	G3.2	Reading and written the English terminologies used in scheduling management and project management.			3.3
G4	**G4.1**	Establish, analyze and offer solutions to solve the problem of scheduling in practice.			4.3, 4.4

9. Learning Resources

- Textbooks:

1. FCE, Lecture notes

- References:

1. Lương Đức Long (chủ biên), **Ứng dụng MS Project 2007 trong lập tiến độ và quản lý dự án xây dựng,** NXB Xây Dựng – 2011.

2. Lưu Trường Văn, Lê Hoài Long, **Ứng dụng MS Project 2007 trong quản lý dự án xây dựng**, NXB Lao động Xã hội – 2010.

10. Student Assessment:

- Grading scale: **10**

- Assessement plan:

Type	Content	Timeline	Assessement method	CLOs	Rate (%)
Report - Presentation					**30**
BL#1	Students prepare in groups (approximately 4 students) and set up the construction schedule for the project with MS Project.	Week 7	Presentation	G1.1,G2.1, G3.1, G4.1	**30**
Final exam					**70**
	- Content of the exam includes all the outcomes of the course. - Duration: 90 minutes	Week 8	By computer	G1.1, G2.1,G2.2, G3.1,G4.1	

11. Course content:

Week	Content	CLOs
1	*Lesson 1: Initial setup for project* (0/3/6) *Lesson 2: Enter data* (0/3/6).	

		A/ Content and pedagogical methods in class: *(6)* **Content:** 1.1 Get familiar with MS Project 1.2 Set up parameters for the project 1.3 Initial setup for project 2.1 Task dependency 2.2 Input 2.3 Show project **Pedagogical methods:** + Presentation and manipulation of lecture. + Students practice	G1.1,G2.1, G2.2
		B/ Self-study content: *(12)* + Review and rework on computer + Applying for the group working	G1.1,G2.1, G2.2, G3.1,G3.2
2		*Lesson 3: Resources setting (0/6/12)*	
		A/ Content and pedagogical methods in class: *(6)* **Content:** 3.1 Resources 3.2 Create a list of resources 3.3 Assign resources 3.4 Review the allocation of resources 3.5 Assign fixed costs 3.6 Information about project costs **Pedagogical methods:** + Presentation and manipulation of lecture. + Students practice	G1.1,G2.1, G2.2
		B/ Self-study content: *(12)* *+ Review and rework on computer* *+ Applying for the group working*	G1.1,G2.1, G2.2, G3.1,G3.2
3		*Lesson 4: Format the project according to user (0/3/6)* *Lesson 5: Format the timescale (0/3/6)*	
		A/ Content and pedagogical methods in class: *(6)* **Content:** 4.1 Change the format on Gantt chart 4.2 Change the format on network diagram 5.1 Format the timescale **Pedagogical methods:** + Presentation and manipulation of lecture. + Students practice	G1.1, G2.1, G2.2, G4.1
		B/ Self-study content: *(12)* + Review and rework on computer + Applying for the group working	G1.1, G2.1, G2.2, G3.1, G3.2, G4.1
4		*Lesson 6: Insert image and external MSP component (0/2/4)*	

		Lesson 7: Edit the conflicts in progress (0/2/4) *Lesson 8: Adjustment of resource conflicts (0/2/4)*	
		A/ Content and pedagogical methods in class: *(6)* **Content:** 6.1 Insert drawing 6.2 Insert Microsoft excel workshop and other objects 6.3 Insert illustration info 6.4 Insert illustration on task note or resource note 7.1 Add the resources for task 7.2 Overtime 7.3 Adjust the duration 7.4 Adjust the duration within slack time 7.5 Change the constraint for task 7.6 Adjust the task dependency 7.7 Split a task 7.8 Notes on shortening project 8.1 Identify conflict 8.2 Resolving resource conflicts **Pedagogical methods:** + Presentation and manipulation of lecture. + Students practice	G1.1, G2.1, G2.2, G4.1
		B/ Self-study content: *(12)* + Review and rework on computer + Applying for the group working	G1.1, G2.1, G2.2, G3.1,G3.2, G4.1
5		*Lesson 9: Baseline (0/1/2)* *Lesson 10: Record and Tracking project (0/2/4)* *Lesson 11: Control project by Earned Value Method (0/3/6)*	
		9.1 Set and delete a baseline 9.2 Set and delete an interim plan 10.1 Tracking by MSP 10.2 Total tracking 10.3 Tracking by time phase 10.4 Update task as schedule 10.5 Reschedule 11.1 Know about EVM 11.2 Values on EVM 11.3 Evaluation criteria 11.4 EVM and questions on project management 11.5 Calculate EVM by MSP **Pedagogical methods:** + Presentation and manipulation of lecture. + Students practice	G1.1, G2.1, G2.2, G4.1

	B/ Self-study content: *(12)* + Review and rework on computer + Applying for the group working	G1.1, G2.1, G2.2, G3.1,G3.2, G4.1
6	*Lesson 12: Make Reports (0/1/2)* *Lesson 13: Print (0/1/2)* *Lesson 14: Filter (0/1/2)* *Lesson 15: Using tools of analysis in MS. Project (0/1/2)* *Lesson 16: Import and export data in MSP (0/2/4)*	
	A/ Content and pedagogical methods in class: *(6)* **Content:** 12.1 Make reports with available format 12.2 Make reports by visual 13.1 Print the reports in MSP 13.2 Print by views 14.1 Applying filter 14.2 Group the task 14.3 Work breakdown structure (WBS) 15.1 Adjust start date 15.2 Copy Picture to Office Wizard 15.3 Analysis schedule by PERT 16. Import and export data **Pedagogical methods:** + Presentation and manipulation of lecture. + Students practice	G1.1, G2.1, G2.2, G4.1
	B/ Self-study content: *(12)* + Review and rework on computer + Applying for the group working	G1.1, G2.1, G2.2, G3.1,G3.2, G4.1
7	*Report the assignment by group (0/6/12)*	
	A/ Content and pedagogical methods in class: *(6)* **Content:** + Report **Pedagogical methods:** + Students present the project by group + Lecture comment and review	G1.1, G2.1, G2.2, G4.1
	B/ Self-study content: *(12)* + Review and rework on computer.	G1.1, G2.1, G2.2, G4.1,G4.2
8	**Final exam** *(0/3/0)*	
	A/ Content and pedagogical methods in class: *(3)* **Content:** + Final exam on computer	

	Pedagogical methods: + Final exam on computer	
	B/ **Self-study content:** none	

12. Learning Ethics

Students must do homework by themselves. If plagiarism is found students will get zero point.

13. Date of first approval: August 1st, 2012

14. Approved by

Dean	**Head of Department**	**Instructor**
A/Prof. Dr. Nguyễn Trung Kiên	**MSc. Nguyễn Văn Khoa**	**MSc. Nguyễn Văn Khoa**

15. Date and Up-to-date content

1ˢᵗ time: Date:	Instructor: Head of Department: