

1. Course Code

2231

2. Course Title

Project Management

3. Teacher

ITO, Mamoru

4. Term

Spring 1

5. Course Overview and Objectives

Today, various projects are undertaken from software development to providing social services. In this class, the students will learn the fundamental concepts of project management from both managerial and technical aspects through lectures. They will also learn how to apply the skills required of a project manager through group discussions and exercises.

6. Course Goals (Attainment Targets)

- (1) Identify the phases of the project management life cycle, including planning, executing, and monitoring and controlling.
- (2) Understand the processes implemented in project management.
- (3) Comprehend basic tools and techniques to manage a project successfully.
- (4) Optimize results while managing the triple constraints: cost, time and scope.
- (5) Demonstrate the principles and practice of team leadership.
- (6) Analyze the ethical issues in the project management.

7. Correspondence relationship between Educational goals and Course goals

Educational goals of the school			Course Goals
High level ICT skills	Basic academic skills		(1), (2)
	Specialized knowledge and literacy		(3), (4)
Human skill (Tankyu skill)	Ability to continually improve own strengths		(1), (2), (3)
	Ability to discover and resolve the problem in society	Problem setting	(4), (5), (6)
		Hypothesis planning	(4), (5), (6)
		Hypothesis testing	(4), (5), (6)
		Practice	(4), (5), (6)
	Fundamental Competencies for Working Persons	Ability to step forward	(5), (6)
		Ability to think through	(4), (5)
		Ability to work in a team	(5)
Professional ethics			(6)

8. Course Requirements (Courses / Knowledge prerequisite for this course)

None.

9. Textbooks (Required Books for this course)

None.

10. Reference Books (optional books for further study)

- Project Management Institute. A Guide to the Project Management Body of Knowledge (PMBOK Guide)
- Project Management Institute. Software Extension to the PMBOK Guide Fifth Edition

11. Evaluation

Goals	Evaluation method & point allocation					
	examination	Quiz	Reports	Presentation	Deliverables	Other
(1)	○	○				
(2)	○	○				
(3)	○	○	○			
(4)	○	○	○			
(5)	○		○	○		
(6)	○		○	○		
Allocation	30	30	30	10		

12. Notes

This course provides the course materials on Moodle.

13. Course plan

(Notice) This plan is tentative and might be changed at the time of delivery

Lesson 1: Foundation of project management

(Lecture, 45 min. Exercise, 45 min.)

This lesson provides the students with the essential concepts of project management from both a theoretical and applied perspectives.

- Definitions of project, process, and program
- Portfolio management and strategy
- Project manager and team

Lesson 2: Project environment

(Lecture, 45 min. Exercise, 45 min.)

The students learn the professional work environment and support systems for project managers.

- Organizational process assets
- Corporate Knowledge Base
- Project management office (PMO)
- Organizational influences on projects

Lesson 3: Charter / Scope

(Lecture, 45 min. Exercise, 45 min.)

Every project begins with a charter and then clarifies the scope of the project. The students will understand how to start a project and how to manage its scope.

- Project charter
- Project management plan
- Managing stakeholder needs and requirements
- Integrated change control

Lesson 4: Work breakdown structure (WBS)

(Lecture, 45 min. Exercise, 45 min.)

WBS is hierarchical decomposition of the total scope of work. The project team carries out the work based on the WBS to accomplish the project objectives.

- Decomposition
- Structuring and organizing the WBS
- WBS dictionary
- Work package

Lesson 5: Time and cost estimation

(Lecture, 45 min. Exercise, 45 min.)

The project team estimates project duration and cost for scheduling and budgeting.

- Analogous estimating, parametric estimating, three-point estimating, and bottom-up estimating
- Schedule baseline and cost baseline
- Contingency reserve and management reserve

Lesson 6: Stakeholder engagement and communications

(Lecture, 45 min. Exercise, 45 min.)

The stakeholders could impact the project or perceive to be impacted by the project. The project teams engage them in project to get better support.

- Identification of stakeholders
- Stakeholder analysis
- Salience model
- Four opportunities and five levels of engagement

Lesson 7: Network diagram and scheduling

(Lecture 45 min, Exercise, 45 min.)

Project managers develop project schedules by analyzing network diagrams.

- Forward and backward passes
- Critical path method
- Arrow diagramming method (ADM) and precedence diagramming method (PDM)
- Lags and leads
- Fast tracking and crashing

Lesson 8: Earned value analysis (EVA)

(Lecture 45 min, Exercise, 45 min.)

EVA is the most important tool to control the cost and schedule. It enables us to predict the project performance based on past performance.

- Planned value (PV), earned value (EV), and actual cost (AC)
 - Schedule variance (SV) and cost variance (CV) for variance analysis
 - Performance Indexes: schedule performance index (SPI) and cost performance index (CPI)
 - Estimate to complete (ETC) and estimate at completion (EAC)
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Lesson 9: Risk analysis

(Lecture 45 min, Exercise, 45 min.)

Since every project is unique, therefore it brings the risks for unforeseen situations.

- Risk breakdown structure (RBS)
- Qualitative / quantitative risk analyses
- Risk probability and probability impact matrix
- Five alternative strategies for threats and opportunities

Lesson 10: Quality

(Lecture 45 min, Exercise, 45 min.)

Meeting quality expectation is the one of the key success factors in a project. But what is quality? The students will understand the meaning of good quality.

The students will grasp the concept of quality and its management.

- Quality and grade
- Ishikawa's 7 Basic Tools of Quality
- Cost of quality
- Control chart

Lesson 11: Procurement

(Lecture 45 min, Exercise, 45 min.)

Procurement is to purchase or acquire the product, services, or results needed from outside of project team. It includes legal, binding, and penalty point of view.

- Types of contracts and risks
- Source selection method
- Types of bid documents
- Make-or-buy decisions

Lesson 12: Ethics

(Lecture 45 min, Exercise, 45 min.)

Project managers often face difficult situations where the individual may be asked to compromise his or her integrity or values. Ethics is about making the best possible decisions concerning people, resources and the environment.

- Code of ethics and professional conduct
- Ethical decision making framework
- Ethical case studies

Lesson 13 - 14: Case study

(Exercise, 180 min.)

The students form several groups to discuss and analyze a case study and write project documents in a group.

- Project charter
 - Work breakdown structure (WBS) and Gantt chart
 - Risk register
 - Agenda and documents for a kick off meeting
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Lesson 15: Presentation

(Presentation 90 min.)

Each group conducts a kick off meeting using the project documents prepared at the previous classes.

Lesson 16: Term-end examination

(Examination 90 min.)

A multiple-choice exam is conducted to evaluate the level of understanding of each student. Your answers to these questions will all be processed by computer.
