1. Course Code

2231

2. Course Title

M11e: Project Management

3. Teacher

ITO, Mamoru

4. Term

Spring 2

5. Course Requirements (Courses / Knowledge for this course) and Important Information

None.

6. Course Overview and Objectives

Projects today range from software development to the provision of social services. In this course, you will learn the basic concepts of project management from business and technical perspectives through lectures. Through group discussions and practical exercises, you will learn how to apply the necessary skills of a project manager. You will also learn how to create effective presentation slides, which is a useful skill for your future career.

7. Course Outline

1 Foundation of project management
2 Project environment and work ethics
3 Project scope and WBS (Work Breakdown Structure)
4 Project estimation
5 Stakeholder engagement
6 Project scheduling
7 Earned value analysis
8 Risk analysis
9 Project quality
10 Project procurement
11 Agile approaches
12 Effective presentation slides
13 Group exercise
14 Group exercise
15 Presentation of group exercise results
16 Term-end examination (multiple-choice and open-book format)

8. Textbooks (Required Books for this course)

None.

9. Reference Books (optional books for further study)

Project Management Institute, editor. The Standard for Project Management and a Guide to the Project Management Body of Knowledge (PMBOK Guide). Seventh edition, Project Management Institute, Inc, 2021.

10. 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)
(8)

11. 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)

12. Evaluation

Goals	Evaluation method & point allocation					
	Examination	Quiz	Reports	Presentation	Deliverables	Reflection
(1)	○	○		○	○	○
(2)	○	○		○	○	○
(3)	○	○		○	○	○
(4)	○	○	○	○		○
(5)	○		○	○		○
(6)	○		○	○		○
(7)						
(8)						
Allocation	30	25	10	10	20	5

13. Evaluation Criteria

Examination	A multiple-choice exam evaluates students' comprehension, application, and thinking skills regarding the course content. Since it is an open-book exam, students can use their own materials and are not required to memorize information.
Quiz	Multiple-choice quizzes evaluate students' comprehension, application, and thinking skills regarding the course content.
Reports	Student reports are evaluated based on their accuracy and completeness, clarity and conciseness, and adherence to instructions.
Presentation	Student presentation is evaluated based on its accuracy and completeness, clarity and conciseness, and conformity to objectives.
Deliverables	Student deliverables are evaluated based on their accuracy and completeness, clarity and conciseness, and adherence to instructions.
Reflection	Students' reflection journals are evaluated based on their depth and quality.

14. Active Learning

Hourly percentage of active learning within the whole class time		40%
1	Active learning such as problem solving assignment using the knowledge and skills acquired in class.	All the time
2	Active learning such as group works and discussions.	All the time
3	Outcome presentations and feedbacks.	Sometimes
4	Students actively make decisions on how the class should be conducted.	Not at all

15. Notes

- Course materials will be provided on Moodle or Google Classroom.
- Although you may attend classes online, we strongly encourage you to attend in person whenever possible.
- If you attend classes online, you may be asked to turn on your video.
- Some class sessions will be recorded and made available on demand for the duration of the course.

16. 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 students with the essential concepts of project management from both a theoretical and applied perspective.
- Definitions of project, process, and program
- Portfolio management and strategy
- Project manager and team

Lesson 2: Project environment and work ethics (Lecture, 45 min. Exercise, 45 min.)

Students learn about organizational influences on projects, support systems for project managers, and work ethics.
- Vision, mission, and values
- Strategic planning
- organizational structures
- Work ethics and code of conduct

Lesson 3: Project scope and WBS (Lecture, 45 min. Exercise, 45 min.)

Every project starts with a project charter that defines the scope of the project. Understand how to start a project, how to manage the scope, and how to create a WBS.
- Project Charter and Project Management Plan
- Integrated Change Management
- WBS structuring and organization
- Work Packages (WP)

Lesson 4: Project estimation (Lecture, 45 min. Exercise, 45 min.)

The project team estimates project duration and costs 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 5: Stakeholder engagement (Lecture, 45 min. Exercise, 45 min.)

Stakeholders can affect the project or perceive themselves to be affected by the project. Project teams involve them in projects to get better support.
- Identification of stakeholders
- Stakeholder analysis
- Salience model
- Four opportunities and five levels of engagement

Lesson 6: Project scheduling (Lecture, 45 min. Exercise, 45 min.)

Project managers develop project plans 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 7: Earned value analysis (EVA) (Lecture 45 min, Exercise, 45 min.)

EVA is the primary cost and schedule control tool. It allows us to predict 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)

Lesson 8: Risk analysis (Lecture 45 min, Exercise, 45 min.)

Because every project is unique, there is a risk of unforeseen situations.
- Risk breakdown structure (RBS)
- Qualitative/quantitative risk analyses
- Risk probability and probability impact matrix
- Five alternative strategies for threats and opportunities

Lesson 9:Project quality (Lecture 45 min, Exercise, 45 min.)

Meeting quality expectations is one of the key success factors in a project. But what is quality? Students will understand the concept of quality and how to manage it.
- Quality and grade
- Ishikawa's 7 Basic Tools of Quality
- Cost of quality
- Control chart

Lesson 10: Project procurement (Lecture 45 min, Exercise, 45 min.)

Procurement is to purchase or acquire the product, services, or results needed from outside of the 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 11: Agile approaches (Lecture 45 min, Exercise, 45 min.)

In recent years, the number of high-uncertainty projects has increased. Agile approaches have emerged to explore feasibility in short cycles and to adapt quickly based on feedback. This unit provides an overview of the characteristics and practices of an agile approach.
- Introduction to Agile
- Characteristics of project life cycles
- Implementing agile

Lesson 12: Effective presentation slides (Lecture 45 min, Exercise, 45 min.)

In a project, there are many opportunities to make presentations to stakeholders, and you will learn how to create effective presentation slides.
- Presentation difficulties
- Basic rules
- Design basics and principles
- Graphs and tables

Lesson 13 - 14: Group exercise (Exercise, 180 min.)

Students will create a hypothetical problem-solving project, develop a project plan using the methods learned in class, and present it at the kick-off meeting.
1. Form a group of 3-4 people
2. Decide on the theme (problem) to be addressed
3. Decide on the assignment of tasks and create a project plan
4. Present the plan at the kick-off meeting

Lesson 15: Presentation of group exercise results (Presentation 90 min.)

Each group will have a kickoff meeting based on the plans prepared during the group exercises. Make sure that everyone can give a presentation.

Term-end examination (Examination 90 min.)

A timed, multiple-choice exam is administered to assess students' understanding, application, and critical thinking of course content. This is an open-book exam, allowing students to use their own study materials.