ISOM 3010: Information Systems Project Management

COURSE INSTRUCTOR	**TA**
Dr. Jeevan Jaisingh	Mr. Aaron Lee
jeevan@ust.hk	imaaron@ust.hk
Room: LSK 4038	Room: LSK 4065
Ph: +852 2358 7639	Ph: +852 2358 7638

Website: http://canvas.ust.hk Use your ITSC account to login.
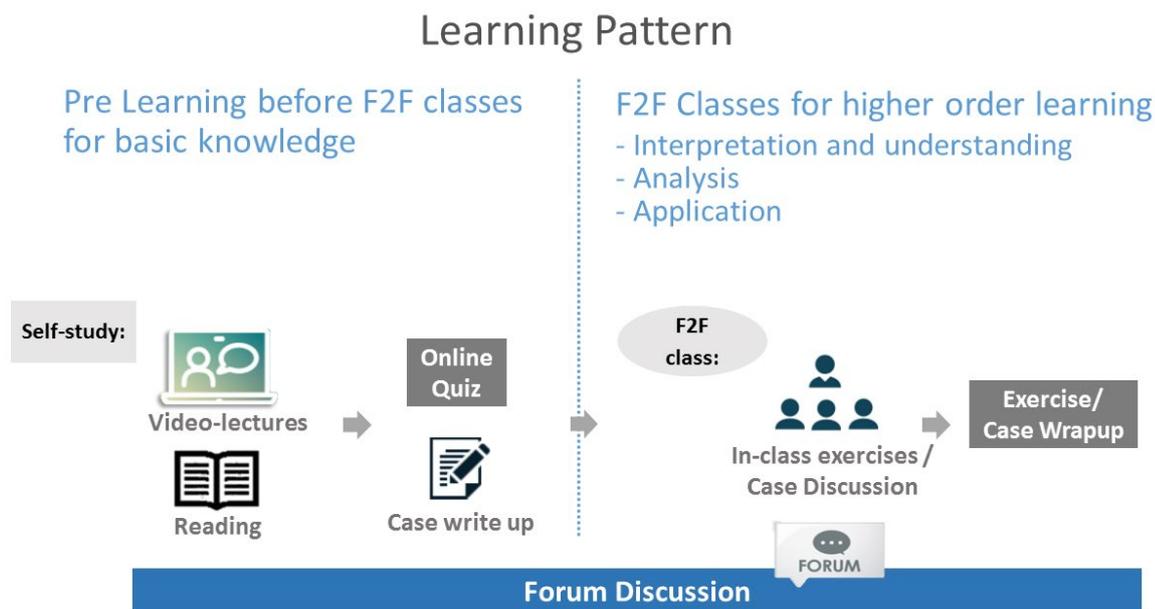
COURSE DESCRIPTION:

Nearly every company executes projects – construction projects, software development projects, new drug approvals etc. The successful management of these projects requires some application specific and industry knowledge. At the same time, there are some common skills needed to successfully manage these projects – no matter what the application area or industry. The course focuses on these common skills, knowledge and tools that are needed by all project managers to successfully manage a project with a specific focus on Information Systems projects. Topics include investment decisions, resource planning, cost planning, scheduling, earned value management, and risk assessment and control.

The course will be taught in a blended learning mode. Foundational material on project management and essential project management software skills are taught online through videos. The in-class time is used for higher-order learning such as case discussions, running group activities, practice problems and discussing more advanced concepts.

COURSE INTENDED LEARNING OUTCOME:

- Analyze the core issues in Information Systems project management and identify critical success factors
- Solve several project management problems with appropriate tools and techniques
- Compare and contrast different project management methodologies
- Identify the major project deliverables and when they are due

COURSE LEARNING PATTERN:

Learning Pattern

Pre Learning before F2F classes for basic knowledge

F2F Classes for higher order learning
- Interpretation and understanding
- Analysis
- Application

Self-study:

Video-lectures

Reading

Online Quiz

Case write up

F2F class:

In-class exercises / Case Discussion

Exercise/ Case Wrapup

FORUM

Forum Discussion

In the blended learning mode, students will do self-study before the Face-to-Face(F2F) classes (F2F means that the class meet online via Zoom this semester). As part of self-study, students will watch the video lectures posted to canvas and then attempt the online quiz which tests them on the material. Students will also do the required reading for each week and write the case write ups in the weeks that a case write-up is required. Students can use the discussion forum to post questions/clarifications. The F2F classes will focus on higher order learning and will involve case discussions, in-class exercises, and discussion of problems areas and advanced concepts.

COURSE GRADING POLICY*:*

The grade for the course will be based on the following weight:

DISTRIBUTION	%
Case Write-up (5)	15
Class Participation	10
Quizzes	10
Mid-Term Exam	30

Project
    -   Report (22.5)
    -   Presentation (12.5)
	35

CASE WRITE-UP:

Case write-up will be judged based on your answers to **five** case question(s) that you will enter on canvas *before* coming to F2F class. The case write-ups will be judged on clarity of response, and supporting arguments provided.

CLASS PARTICIPATION:

Participation will be judged based on your contributions to in-class discussions and online discussion boards. In-class participation is valued more than online participation. Your scores would depend on the quality of the comments made and the value added to the discussion. Attendance in class **will not** contribute towards class participation.

QUIZZES:

After watching the videos for each week, attempt the concept checking quiz for that week. The quiz will test you on your understanding of the material. You are allowed three attempts at each quiz, and your highest score will be recorded. The quiz should be submitted *before* coming to F2F class.

MID-TERM EXAM:

The mid-term is a closed book & closed notes exam. It will be based on material that was covered during the course. The exam will not require you to use MS Project. The exam will have multiple choice, T/F, essay type & short case study questions. Examples of questions that can appear on the exam will be provided.

PROJECT

You will apply what you have learnt in the course to an Information Systems Project. You will work in groups of ~ 5. See a detailed description of the project at the end of this document.

COURSE MATERIAL:

- Short cases/cases etc. posted to Canvas or provided in class

COURSE SCHEDULE:

Schedule	Module	Agenda	Reading/ Videos	Deliverables (Check canvas for exact deadlines)
Feb. 5	F2F Class (Intro)	Introduction to Course and Blended learning	Course Description	
Feb. 6-18	Online Self-study 1	Project Management Relevance Projects & Project Management Projects and Organizational Structure (Part 1 & 2) Triple Constraint Project Management Framework	Lecture videos **Case:** *The Fate of the Vasa*	Case Write-up 1 Quiz 1
Feb. 19	F2F Class 1	Discussion of Problem Areas Case discussion: Vasa Group Exercise		
Feb. 20-25	Online Self-study 2	Project Selection Importance Project Selection Process Project Charter Case Example of Project Selection Scope Planning Collecting Requirements	Lecture videos **Case**: *Volkswagen of America: Managing IT Priorities*	Case Write-up 2 Quiz 2
Feb. 26	F2F Class 2	Discussion of Problem Areas Case Volkswagen Short Case discussion		
Feb. 27- Mar. 3	Online Self-study 3	Defining & Sequencing Activities Scheduling Tools Estimating Activities Critical Path Method (Part 1 & 2) Resource Leveling	Lecture videos **Case**: *Omega Research Institute*	Case Write-up 3 Quiz 3
Mar. 4	F2F Class 3	Discussion of Problem Areas Short Case Discussion Group Exercise Problem solving on CPM Group Exercise Case discussion: Omega Research		
Mar. 5-10	No quiz	Creating a new plan using Microsoft Project Creating a task list Defining resources Allocating resources to tasks Formatting views and reports	Lecture Videos	
Mar. 11	F2F Class 4 (Lab 1)	Discussion of Problem Areas MS Project Exercise		
Mar. 12-17	Online Self-study 5	Critical Chain Project Management Cost Planning Program Evaluation & Review Technique	Lecture Videos	Quiz 5
Mar. 18	F2F Class 5	Discussion of Problem Areas Short Case Discussions Problem Solving PERT Group Exercise		

Mar. 19-24	Online Self-study 6	Risk Planning Earned Value Management	Lecture videos **Case**: *Teradyne Corporation: The Jaguar Project*	Quiz 6 Case Write-up 4
Mar. 25	F2F Class 6	Discussion of Problem Areas Group Exercise Practice problem EVM Mid-term review		
Mar. 26		**MID TERM EXAM (Evening)**		
Mar. 27-Apr. 7 (Mid-Term Break)	Online Self-study 7 (Lab 2)	Recording Progress	Lecture videos	
Apr. 8	F2F Class 7 (Lab 2)	Discussion of Problem Areas MS Project Exercise		
Apr. 9 - Apr. 14	Online Self-study 8	Information Systems Implementation Integrative Change Control Monitoring Quality Project Closing	Lecture videos **Case**: *CISCO ERP Implementation*	Quiz 8 Case Write-up 5
Apr. 15	F2F Class 8	Case Discussion: CISCO Short Case discussion: Rich-con		
Apr. 16-21	Online Self-study 9	Agile: Scrum	Lecture videos	Quiz 9
Apr. 22	F2F Class 9	Discussion of Problem Areas Short Case Discussions Group Exercise Project Consultation		
Apr. 29		Course wrap up		
May. 6		Project Presentation		

DELIVERABLES:

Due Date (due at 23:59 on Canvas)	Module	Deliverables
Feb. 18	Online Self-study 1	- Case Write-up: *The Fate of the Vasa* - Quiz 1
Feb. 25	Online Self-study 2	- Case Write-up: *Volkswagen of America: Managing IT Priorities* - Quiz 2
Mar. 3	Online Self-study 3	- Case Write-up: *Omega Research Institute* - Quiz 3
Mar. 17	Online Self-study 5	- Quiz 5
Mar. 24	Online Self-study 6	- Case Write-up: *Teradyne Corporation: The Jaguar Project* - Quiz 6
Apr. 14	Online Self-study 8	- Case Write-up: *CISCO ERP Implementation* - Quiz 8
Apr. 21	Online Self-study 9	- Quiz 9

READING/VIDEOS LIST:

Schedule	Module	Online Video (Canvas)	Reading
Feb. 6-18	Online Self-study 1	- PM Relevance - Project and Project Management - Projects and Org. Structure (Part 1 & 2) - Triple Constraint - Project Management Framework	- The Fate of the Vasa
Feb. 20-25	Online Self-study 2	- Project Selection Importance - Project Selection Process - Project Charter - Case example of Project Selection - Scope Planning - Collecting Requirements	- Volkswagen of America: Managing IT Priorities
Feb. 27-Mar. 3	Online Self-study 3	- Defining & Sequencing Activities - Scheduling Tools - Estimating Activities - Critical Path Method (Part 1 & 2) - Resource Leveling	Omega Research Institute
Mar. 5-10	Online Self-study 4	- Creating a new plan using MS Project - Creating a task list - Defining resources - Allocating resources to tasks - Formatting views and reports	
Mar. 12-17	Online Self-study 5	- Critical Chain Project Management - Cost Planning - Program Evaluation & Review Technique	
Mar. 19-24	Online Self-study 6	- Risk Planning - Earned Value Management	- Teradyne Corporation: The Jaguar Project
Mar. 27-Apr. 7	Online Self-study 7	- Recording progress	
Apr. 9-14	Online Self-study 8	- Information Systems Implementation - Integrative Change Control - Monitoring Quality - Project Closing	- CISCO ERP Implementation
Apr. 16-21	Online Self-study 9	- Agile: Scrum	

Group Project

Key Dates:

Group formation	Mar. 4th
Topic Selection & Approval	Mar. 18th
Project Consultation	Mar. 19th – May 6th
Final Presentations	May 6th
Project Report (due date)	May 7th

In this project, you are provided with the opportunity to apply what you have learnt in the course to an Information Systems Project. You will work in groups of ~ 5. All group members are expected to contribute equally to the project. At the end of the course, students may be asked to do a peer evaluation of their groups. Your final score on the group project may be reduced if the peer evaluation by your group mates suggests that your contribution has not been up to par.

There are two options for the group project. You will need to select the organization (Option 1) or App developer (Option 2) that you will be designing/redesigning an interface for (e.g. an existing/new web interface/app.). The scope of the project only involves collecting the requirements and designing the interface and **does not** involve coding/programming the functionality of the interface/app.

Option 1:
In Option 1 you are developing/modifying the interface of an Information System for an organization (e.g. Hang Seng, Cathay, HKUST). The requirements for selecting the target organization are:
(1) You should have relatively easy access to the target users/stakeholders of the organization and can interview with a small number of them without the need for any compensation.
(2) The organization does not already possess any existing application/interface for the business process, or the existing interface has problems.
Note: due to special situation this semester, if your group would be able to contact relevant stakeholders online (maybe an online interview via Zoom or Skype), you can still choose option 1.

Option 2:
In Option 2, you are playing the role of an app development company who develops apps for smartphones. You will design the interface for a new app made by this app developer:
(1) Since the app does not have existing customers, you will collect the requirements for the app from proxy customers/users.
(2) The app should try and accomplish something that is not being done by currents apps in the marketplace or improves upon the current apps.

Each group can choose either Option 1 or Option 2. Once you have made your selection, you will need to perform all the steps described below:

Step 1: Develop Business case & Project Charter
Conduct a high-level assessment of the requirements with users/stakeholders to develop the business case & project charter.

Step 2: Collect Requirements
Once the project has been approved, plan to collect requirements for the project from users/stakeholders using appropriate methodologies (for e.g. if you are planning to interview the users you may want to develop a questionnaire, or you may decide to conduct a focus group).

Step 3: Create Work Breakdown Structure (WBS)
Logically arrange/breakdown and organize the work to be done into tasks to create a WBS

Step 4: Develop a detailed project schedule

Develop a more detailed schedule for the execution of your interface/app development. You should present all the tasks that you think are relevant to the conclusion of your project, their durations (estimate them using techniques taught in class), dependencies and expected deliverables. In addition, also identify the types of resources needed to execute the tasks. You should use MS Project to assist you with developing the detailed schedule. Generate appropriate reports for reporting to management.

Step 5: Create a risk management plan and other relevant deliverables

You should develop the risk management plan and include information on the methodologies used. You may also develop other relevant deliverables such as project communications plan, roles and responsibility matrix, staffing management plan, if they are relevant.

Step 6: Create prototype

Create prototypes using appropriate software to show the interface and the navigation between different screens. Some software that is often used to create the interface include Adobe Fireworks, Visio, Pencil, Balsamiq, Invasion

Step 7: Record progress

Record progress made on the project and compare with baseline schedule. Generate appropriate reports to show relevant metrics to management.

Deliverables

1. Project report, **22.5 points**: (30-40 pages, 11-point font, 1.5 spacing)
   Submission: Upload to Canvas
   The report should contain:
   a. A brief explanation of what you are doing on the project and why it is relevant
   b. Relevant project deliverables from each step
   c. Rationale for choice of approach used in each Step: Explanation for what your group did, how you did it, & why you did it a certain way. For example, with reference to estimating effort on tasks, you may explain, what technique you used for estimation and why you chose that particular technique.

   The criteria used for judging the project report will be:

Criteria	Weightage
Completeness of project deliverables	30%
Rationale for choice of approach used in each Step	30%
Complexity of project chosen	10%
How realistic is the project	15%
Organization of report and clarity	15%

2. Project Presentation, **12.5 points** (duration TBD):
   Submission: Upload ppt. to Canvas, 1 hr. before presentation
   The presentation should contain
   a. A brief explanation of what you are doing on the project and why it is relevant
   b. Rationale for choice of approach used in each Step Explanation for what your group did, how you did it, & why you did it a certain way. For example, with reference to estimating effort on tasks, you may explain, what technique you used for estimation and why you chose the technique.
   c. Presenting the actual project deliverables (except project interface and navigation) is not necessary. So, avoid presenting deliverables such as project charter, schedule, risk management plan etc. They should be included as part of the report.

d. A short demo of the interface and navigation between screens

The criteria used for judging the project presentation will be:

Criteria	Weightage
Demo of interface and navigation	25%
Explanation of rationale for choice of approach	30%
Complexity of project chosen	10%
How realistic is the project	15%
Overall Clarity of presentation	20%