Description

With this course, the students have the opportunity during the first part to practice through exercises, case studies, tools usage the techniques of Project management acquired in the course Project Management principles. During the second part of this course, they will review the concepts of Advanced project management with the Agile methodology SCRUM. This is done through exercises, games and simulation of an Agile project with Sprints.

Learning Objectives and Outcomes

- Practice through a case study over several sessions the Project management concepts acquired during the Project Management principles course
- Use a Project management software tool (MS Project or ProjectLibre) to prepare a plan, define the baseline and track the project over several weeks
- Understand the Agile project management approach and the conditions to use Agile versus Waterfall traditional
- Review in details the SCRUM framework and the different phases of a SCRUM project
- Know how to build and prioritize a Product backlog
- Practice the roles and the sprint of a SCRUM project during a simulation exercise

Course Schedule and Contents

Session#1
- Group exercise: Characters in a project team
- Review business case and project charter of the case study
- Review the construction of a budget and hourly resource costs
- Preparation of a project plan using a software project management tool
- Demo of the main features of a project management software

Session#2
- Group Exercise: Earned value calculation
- How to input actuals in the project?
- First few weeks' simulation
- Earned value table and reporting

Session#3
- Introduction to Agile methodologies
- Conditions to use Agile
- SCRUM framework with roles, ceremonies and artefacts

Session#4
- Group exercise: Risk management

- Case study introduction for the end of the project to prepare exercise of status report communication
- Agile: Definition and structure of User stories, examples
- Estimating techniques
- Planning poker presentation

Session#5
- Presentation of VivfySCRUM tool
- Group Exercise: Practice of planning poker
- Group Exercise: Use planning poker for a Web development project and input data into VivifySCRUM tool

Session#6
- Waterfall: Review of the status report and the situation of the project, risks, action plan
- Group exercise: Preparation of Sprint backlog with a case study preparing sprints based on business value and risk criteria
- Definition of the velocity

Session#7
- Online Quiz exam with 50 questions
- Description of the simulation game using the Lego Digital Designer
- Preparation of a Product backlog with User stories, Planning poker estimation and input in the SCRUM tool (VivifySCRUM)
- Preparation of 3 sprints with their sprint backlog for the execution in the afternoon Session #8

Session#8
- Execution of the Sprints simulation game with 2-3 Sprints
- Active practice of the daily standup review meeting, Sprint review and retrospective meetings
- Wrap up and feedback

Grading

Attendance & Participation	30%
Exercise & Homework	20%
Quiz 100 Questions with no document	20%
Exam Simulation game	30%

Policies

- I expect you to be on time and to be respectful of those talking or presenting
- Attendance in every class is expected. Class participation and discussion are strongly encouraged.
- One exercise has to be done and completed between Session 4 and 6

- Sessions 7 and 8 are done the same day, preparation can be extended during the break between the 2 sessions
- Students can install the freeware ProjectLibre and VivifySCRUM on their laptop to prepare a project plan based on the exercise

Bibliography

- *Agile Scrum Introduction*, Đức Quốc
- *Essential Scrum, A practical guide to the most popular agile process*, Kenneth s. Rubin, Addison Wesley
- *Agile and Iterative Development: A Manager's Guide,* Craig Larman
- *Agile Estimating and Planning*, Mike Cohn
- *Agile Project Management with Scrum*, Ken Schwaber
- *Agile Retrospectives*, Esther Derby and Diana Larsen
- *Agile Software Development Ecosystems*, Jim Highsmith
- *Agile Software Development with Scrum*, Ken Schwaber and Mike Beedle
- *Scrum and The Enterprise*, Ken Schwaber
- *Succeeding with Agile*, Mike Cohn
- *User Stories Applied for Agile Software Development*, Mike Cohn
- *Product Development for the Lean Enterprise*, Michael Kennedy. Oaklea Press. 2003