

# Digital Project Management 2016-17

Last Updated Monday, 03 July 2017

## 2016-17 Course Syllabus

The course provides an overview of the roles, responsibilities, and management methods of the digital project manager. The course assumes no prior knowledge in management techniques and is intended to teach students how to develop approaches and styles of management for digital projects. The course assumes a basic understanding of software analysis, design and development techniques.

- To provide students with a clear understanding of the unique risks, issues, and critical success factors associated with digital projects

- To introduce students to the role and function of project management
- To explain the stages and process of the project life cycle
- To understand the various techniques for planning and managing a digital project
- To examine basic methodologies for software design, development, testing, implementation and deployment
- To examine various techniques for managing a team working on digital projects
- To understand the need and techniques for managing users and user expectations
- To learn project planning and tracking techniques
- To understand SCRUM as a modern agile approach to Digital Project Management
- To provide students with hints on how to handle the final stages of a projectClasses
- Introduction - Monday 6 March 17 - 10.15 &ndash; 13.00 room VS8-A

- Administrative items [slides]

- digital transformation [slides]

- Introduction & Fundamentals [slides]

- A Pico-project - Wednesday 8 March 17 - 13.30 &ndash; 15.00 room VS8-B

- Pico-project submission form

- Pico-project discussion

- Classic Mistakes - Monday 13 March 17 - 10.15 &ndash; 13.00 room VS8-A

- Classic Mistakes [slides]

- Classic Mistakes Enumerated by McConnel

- Ten copies of a Case Study by McConnet to work on [1,2,3,4,5,6,7,8,9]

- More on Classic Mistakes - Wednesday 15 March 17 - 13.30 &ndash; 15.00 room VS8-B

- review and discussion on Annotated version of McConnel's case study

- Basics - Monday 20 March 17 - 10.15 &ndash; 13.00 room VS8-A

- Digital Project Management (part I) [slides]

- Homework-1 assigned [template]

- Digital Project Management (part II) [slides]

- Planning - Monday 27 March 17 - 10.15 &ndash; 13.00 room VS8-A

- Planning Phase (part I) [slides]

- phases in details

- lifecycle planning

- Planning - Wednesday 29 March 17 - 13.30 &ndash; 15.00 room VS8-B

- Planning Phase (part II) [slides]

- Matching Lifecycles to Project

- Project plans

- WBS - Monday 3 April 17 - 10.15 &ndash; 13.00 room VS8-A

- Work Break Down Structures [slides]

- Introduction to Planning, Estimating, Scheduling

- Work Breakdown Structures: Types, Formats, Techniques and Guidelines

- Homework-2 assigned

- Estimation - Wednesday 5 April 17 - 13.30 &ndash; 15.00 room VS8-B
- Estimation [slides]
- Measuring size, complexity and effort
  
- Estimation Methodologies
  
- Issues & Guidelines
  
- Scheduling - Monday 10 April 17 - 10.15 &ndash; 13.00 room VS8-A
- Scheduling [slides]
- Fundamentals
- Techniques: Network Diagrams & Bar Charts
- Optimization Techniques
- Mythical Man-Month
  
- Mid-term test preview [slides]
- Wednesday 12 April 17 - 13.30 &ndash; 15.00 room VS8-B CANCELLED
- Open Project (part I) Wednesday 19 April 17 - 13.30 &ndash; 15.00 room VS8-B
- Open Project (part I) - Homework-3 assigned [slides]
  
- Wednesday 3 May 17 - room VS7-A + VS7-B
  
- Mid-term test [slides]
- Requirements - Wednesday 10 May 17 - 13.30 &ndash; 15.00 room VS8-B
- More on Requirements [slides]
  
- Monday 15 May 17 - 10.15 &ndash; 13.00 room VS8-A CANCELLED
- Risk Management
  
- Change Management - Wednesday 17 May 17 - 13.30 &ndash; 15.00 room VS8-B
- Change Management [slides]
- The Feature-Creep Phenomenon
  
- Feature Set Control
  
- Project Recovery
- SCRUM - Monday 22 May 17 - 10.15 &ndash; 13.00 room VS8-A
- overall process [diagram]
  
- user stories: story points and business value
  
- roles: Scrum Team, Product Owner, and Scrum Master
- Artifacts: product Backlog, Sprint Backlog, and Release Backlog
- tools: Burndown Chart and Task Board
- Meetings: sprint planning, daily scrum, sprint review and sprint retrospective
- Reference: P. Deemer, G. Benefield, C. Larman, B. Vodde (2009). "The Scrum Primer".
- Risk Management - Wednesday 24 May 17 - 13.30 &ndash; 15.00 room VS8-B
- risk management [slides]
- Risk Assessment: Risk Identification, Risk Analysis & Risk Prioritization
  
- Risk Control: Risk Management Planning, Risk Resolution & Risk Monitoring
  
- midTerm test review [marks]
  
- Project Control - Monday 29 May 17 - 10.15 &ndash; 13.00 room VS8-A
- Project Control [slides]
- Progress Monitoring
- Status Reporting
- Earned Value Analysis [example1,example2]
  
- People Dimension - Wednesday 31 May 17 - 13.30 &ndash; 15.00 room VS8-B
- People Dimension [slides]
- Project Roles
  
- Staffing profile

- Hiring
- Team models and successful projects
- Optimal team size
- Tools: RAM and Skill Matrix
- Project Quality Management - Monday 5 June 17 - 10.15 &ndash; 12.15 room VS8-A
- Project Quality Management [slides]
- Software Quality Assurance
- Integration
- Test planning
- Types of testing
- Test metrics
- Test Environments
- Open Project (part II) - Wednesday 7 June 17 - 13.30 &ndash; 15.00 room VS8-B [slides]
- estimating feature size
- organizing the development in sprints
- Open Project (part III) and Final Phases - Monday 12 June 17 - 10.15 &ndash; 13.00 room VS8-A
- open project III [slides]
- assigning resources to features
- scheduling features during the sprint
- homework III assignment
- Final phases [slides]
- Final Steps: Migration, Roll-Out, Training, Documentation, Shipping Details, and Installation
- Maintenance
- Post Project Reviews (Post-mortems)
- Success tips
- Capability Maturity Model (CMM)
- Preview of the End-of-the-term test [slides]
- Wednesday 15 June 17 - 13.30 &ndash; 15.00 room VS8-B
- time to work on Homework-3
- Monday 19 June 17 - 10.15 &ndash; 13.00 room VS8-A
- time to work on Homework-3
- End-of-the-term test Wednesday 21 June 17 - 13.30 &ndash; 15.00 room VS7-A + VS7-B
- End-of-the-term test [slides] Homework Assignments Why
- Apply, in a simplified context, some of the points presented in class
- Develop project related capabilities
- Develop teamwork ability What
- Homework 1 (5 points): Statement of Work for your project [template]
- Homework 2 (10 points): Initial Work Breakdown Structure (WBS) for your project
- Homework 3 (16 points): Get able to manage a project with open project How
- in order to communicate the groups, please use this form. You will receive an email offering on our installation of Open Project. For any problem, please refer to lor.onofrio - at - gmail.com and cc emanuele.dellavalle - at - polimi.it.
- work in team (up to 3 people)
- Working alone is possible, but you should believe in the italian byword &ldquo;Chi fa da se, fa per tre"; literally,

&ldquo;who works alone works for three&rdquo;; more broadly, &ldquo;If you want something done, do it yourself&rdquo;;Due day

- If you follow the classes

- Homework 1 &ndash; class 5 &ndash; 26.3.2017 evening

- Homework 2 &ndash; class 11 &ndash; 11.4.2017 evening

- Homework 3 &ndash; end of the course &ndash; 21.6.2017 morning

- If you do not follow the classes

- Homework 1, 2 and 3 &ndash; 1 week before the exam session

- For those that follow the classes

- Mid-term test: 3.5.2017 (1h30m) [slides]

- End-of-the-term test: 21.6.2017 (1h30m)

- If you like the mark you can register it at the first summer exam session

- For those that do not follow the classes

- Any exam session will do

- The exam consists of a mid-term and a end-of-the-term tests

- it is not possible to do the two tests in separate sessions

The exam consist in a practical part (20% of the grade) and a theoretical part (80% of the grade).

- The theoretical part will be evaluated with a written and (optionally) an oral test. The written test is composed of questions to be answered in free text, regarding any of the course subjects, and exercises, regarding the more technical content. The oral test consists of a discussion about the written test and the practical part of the exam. It can include also questions on any subject of the course.

- The practical part consists in simulating the activities of a digital project manager. This activities will be partially conducted in class during the course and partially at home (as homework). The student will document those activities in written reports. The evaluation is based on the content of those reports and (optionally) on an oral discussion.

- Recommended texts (not mandatory)

- These provide two very different viewpoints: In-the-trenches vs. PMI textbook perspective

- &ldquo;Rapid Development&rdquo;;, Steve McConnell

- &ldquo;Information Technology Project Management&rdquo;;, Kathy Schwalbe

- More reading

- &ldquo;Quality Software Project Management&rdquo;;, D. Shafer

- &ldquo;Software Project Survival Guide&rdquo;;, Steve McConnell

- &ldquo;Peopleware&rdquo;;, T. DeMarco and T. Lister

- "The Scrum Primer", P. Deemer, G. Benefield, C. Larman, B. Vodde

- Acknowledgements  
This course is largely based on Prof. John Musser class notes on "Principles of Software Project Management"

- Original information is available at <http://www.projectreference.com/>

- Reuse and republish permission was granted.