# Course Introduction

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Software Project Management
MSc in Computer Science
University of Camerino

SPM

# Course Responsible, Lessons, Exams

- Andrea Polini
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- Software Project Management
  - lessons:
    - Wednesday – from 9am to 11am
    - Thursday – from 9am to 11am
  - web: http://didattica.cs.unicam.it/...

- Exam dates:
  - Wednesday, February 5th and 26th, 2020 - at 9am
  - Wednesday, June 17th, 2020 - at 9am
  - Wednesday, July 8th, 2020 - at 9am
  - Wednesday, September 9th and 23rd, 2020 - at 9am
  - Wednesday, February 3th and 24th, 2021 - at 9am

# Course Organization

- SPM (~6ETCS) illustrates two quite orthogonal approach to software project management:
  - Project Management following "*Command and Control*" inspired approaches
  - Project Management following agile strategies

# Course Objectives

### Knowledge and Abilities

The course intends to provide to the students basic knowledge on the subject of project management in relation to the development of complex software systems. At the end of the course you should be able to understand why making prediction on software development is so complex and strategies for project planning, resource allocation executions, monitoring, etc.

At the same time at the end of the course you will have learned the principle of agile methodologies and you will be able to apply SCRUM to the development of a complex software system.

# Study material 1/2

- **Reference books**:

  📕 Bob Hughes, Mike Cotterell
  *Software Project Management, 5th Ed.*
  McGraw-Hill, 2009

  📕 Andrew Stellman and Jennifer Greene
  *Learning Agile Understanding Scrum, XP, Lean, and Kanban*
  O'Reilly 2015.

# Study material 2/2

- **Additional textbooks**:

    📕 Roger Pressman and Bruce Maxim
    *Software Engineering a Practioner's Approach $8^{th}$ Ed*.
    McGraw-Hill 2015.

    📕 Ian Sommerville
    *Software Engineering $10^{th}$ Ed*.
    Addison Wesley 2016.

    📕 Mitch Lacey
    *The SCRUM Field Guide*
    Pearson 2016.

    📕 Robert K. Wysocki
    *Effective Project Management $7^{th}$ Ed*.
    John Wiley and Sons 2014.

- **PMI Certification**

    📕 *PMBOK Guide*

# Visual Paradigm



Visual Paradigm supports Università di Camerino with UML tools and
ERD tools under the Visual Paradigm Academic Training Partner Program.

UNICAM students can download and install the enterprise version of Visual Paradigm
at the following link:

- https://ap.visual-paradigm.com/universita-di-camerino

# Contents

- Software Development Processes
- Agile Project Management
    - Scrum
    - eXtreme Programming (XP)
    - *Lean*
    - *Kanban*
- Principles of Software Project Management
- Project and Programme Management
- Project Estimations and Planning (COCOMOII)
- Activity Management
- Risk Management
- Resource Allocation
- Project Execution and Monitoring

# Final Exam!!!

1. **Group project** (2-3 members – under "negotiation")
   - You will be asked to develop a project over the duration of the semester with intermediate checkpoints (meeting with the teachers/product owner). The group will have to use the typical practices of SCRUM.
   - the project requires to deliver a working prototype that will be illustrated to the teacher. The date for the discussion meeting has to be agreed in advance, and one week before the meeting a report has to be delivered to the teacher, and the software released.
2. **Written paper** – date fixed for the exam
   - The paper will include questions and exercises on the main topics of the course

The mark is structured according to a "50-50" schema considering respectively the project, and the written paper. For both papers the pass mark is fixed to 18. Students willing to improve their final mark can ask for an additional oral examination.

## Any order to respect?

The project has to be delivered before taking part to the written paper.

# Software Development Processes

- What doos software life-cycle mean?
- Can you clearly state the differences between activities vs. phases?
- Can you list relevant perspectives for a software development process?
- Can you mention at least one software development process model?