



# Software Methodologies and Architectures



# Teacher

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- ▶ **Meets students**
  - ▶ Monday 15-17

# Training Goals

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- ▶ To present the software development models and the concepts of project management
- ▶ To present some examples of methodologies
- ▶ To present the architectural pattern
- ▶ To present the principles of software testing

# Program

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- ▶ **Models and methodologies for software development**
  - ▶ Models
  - ▶ Examples of methodologies
- ▶ **Agile methodologies**
  - ▶ Agile principles and techniques
  - ▶ Examples of agile methodologies
- ▶ **Concepts of project management**
  - ▶ Project estimation
  - ▶ Examples of approaches to estimate costs and time
- ▶ **Design pattern**
  - ▶ Creational patterns
  - ▶ Structural patterns
  - ▶ Behavioral patterns

# Exam

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- ▶ 6 CFU
- ▶ Oral discussion to verify the understanding of the course contents

# Material

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- ▶ Course site:
- ▶ [http://didattica.agentgroup.unimore.it/wiki/index.php/Metodologie\\_e\\_Architetture\\_Software](http://didattica.agentgroup.unimore.it/wiki/index.php/Metodologie_e_Architetture_Software)

# Reference texts

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- ▶ Teachers' slides

- ▶ Thanks to prof. Flavio Bonfatti and prof. Marcello Missiroli

- ▶ Books:

- ▶ C. Ghezzi, D. Mandrioli, M. Jazayeri. Fundamentals of Software Engineering. Pearson
  - ▶ C. Ghezzi, D. Mandrioli, M. Jazayeri. Ingegneria del Software (2/Ed.). Pearson Education Italia
- ▶ Eric Freeman, Elisabeth Robson. Head First Design Patterns. O'Reilly Media
- ▶ E. Gamma, R. Helm, R. Johnson, J. Vlissides. Design Patterns. Pearson