

Subject:

# Object-oriented Analysis and Design

## Course overview

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# Course overview

## ❖ **Course's objectives**

- Provide students with key concepts in Object-oriented analysis and design.
- Help students have ability to analyze a given domain and suggest an object-oriented design.
- Provide students with skills of using UML.
- Provide students with basic knowledge about Object-Oriented Design Patterns and their usage.

## ❖ **Duration**

- Total hours: 60 (30+30)

# Subject's contents

- ❖ Chapter 1: Overview
- ❖ Chapter 2: User requirements
- ❖ Chapter 3: Class design
- ❖ Chapter 4: Interaction diagram
- ❖ Chapter 5: Design patterns

# Text books and references

- [1] Bernd Bruegge, Allen H. Dutoit. Object-Oriented Software Engineering. Prentice Hall, 2010.
- [2] Kim Hamilton, Russell Miles, *Learning UML 2.0*, O'Reilly, 2006.
- [3]. Bernd Bruegge, Software Engineering Using UML Patterns and Java, 2010.
- [4] E. Gamma, R. Helm, R. Johnson, J. Vlissides: *Design Patterns- Elements of Reusable Object-Oriented Software*, Addison-Wesley, 1995.
- [5] James W. Cooper, *The Design Patterns Java Companion*, Addison-Wesley, 1998.
- [6] Horstmann, Cay, Object-Oriented Design & Patterns, Second Edition, John Wiley & Sons, 2006.
- <http://www.oodeign.com><sup>4</sup>

# Grading

- Assignments: 30%
  - In-class, Home works
  - Work in group
- Seminar: 20%
- Final exam: 50%
  - Project