

# II.2318 – Software Engineering and Java

Teacher in charge: Gilles Carpentier

Pre-requisites: Algorithmics basics

Organization: 14 lectures

Assessment: 1 final written examination

ECTS: 5 ECTS

## Context

Development links design and coding. Applying the proper methods for design and using the proper tools in order to generate the code, are key factors for time to market efficiency and high-quality standards.

## Goals

The course has two main objectives:

1. the use of object-oriented analysis to properly design classes.
2. use of the proper java for the web framework according to the kind of application context.

## Skills

### Concepts

- Why Object Technology ?
- Classes, objects, attributes, constructors, methods,
- Relations( dependency, associations, inhéritence
- UML ,notation, class diagram
- Java fundamentals
- Object collections
- Streams
- swing GUI
- Servlet
- JSP
- jdbc
- Grails
- ROO
- Spring, GWT, vaadin

### Skills

- OO analysis of customer requirements, UML class diagram
- Design and test of an object model using blueJ, java and JEE development.

## Teaching method

Each week will have the following format: lecture and then laboratory session.

## Tools used

for UML : Umbrello, Modelio

for Java : BlueJ, eclipse Spring Tool Suite

## Bibliography

Objects first with Java (David J. Barnes, Michael Kölling)