Course Syllabi

CODE 207

NAME Advanced Programming II

Credits 6 ECTS

Period Spring Semester

Course Specifications
Lectures where theoretical concepts, problems and algorithms are explained in the classroom whereas, in the laboratory, every student puts in practice these concepts resolving well-defined problems following the guidelines of the teacher. The course follows a practical approach using the Scala and Java programming languages.

Objectives and contents
The main objectives are to learn functional and parallel programming in contrast to traditional programming models. Classical problems are shown as well as their solutions following different approaches and the syntactic and semantics resources provided by Scala. A last objective is to learn how to create programs with GUI (Graphical User Interfaces) using a well-founded methodology.

Contents
1. Functional programming.
2. Concurrency: main concepts.
3. Concurrency: communication and synchronization.
4. Event driven programming.

Assessment
There are 3 midterm exams on i) functional programming, ii) semaphores and iii) monitors/locks, each with a value of 30%. Each exam must be passed with a minimum of 4 over 10. A passed exam is kept (no need to repeat it) in any ordinary call of the course. The remaining 10% of the mark corresponds to a home task on Java GUI.

Lecturer
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