



COURSE PRESENTATION FORM – ACADEMIC YEAR 2010/2011

COURSE NAME	Internet and Mobile Services
COURSE CODE	70222 (BSc + MSc Old – DM 509)
LECTURER	Francesco Ricci
TEACHING ASSISTANTS	--
TEACHING LANGUAGE	English
CREDIT POINTS	4
LECTURE HOURS	24
EXERCISE HOURS	12
TIME SPAN	27.09.2010 - 21.01.2011
TIME TABLE	See Timetable Page
OFFICE HOURS LECTURER	During the lecture time span: Tuesday, 15:00 – 17:00, Faculty of CS, POS Building, piazza Domenicani 3 , office 2.04
OFFICE HOURS TEACHING ASSISTANT	--
PREREQUISITES	Good knowledge of Java programming language, including principles of distributed computing, and of database management systems.
OBJECTIVES	<p>This course deals with the design and development of mobile services exploiting various mobile communication technologies.</p> <p>The course covers the motivation for the development of Mobile Services, enabling students to understand the open opportunities for developing such applications.</p> <p>Then, the course provides practical knowledge required for designing and building successful mobile applications mostly in the Java 2 Micro Edition platform. There will be illustrated principles for the design and the development of user friendly applications.</p> <p>The course also illustrates some advanced characteristics of mobile applications, such as location-based adaptation, personalization, and ubiquitous computing.</p>
SYLLABUS	<ul style="list-style-type: none">• Mobile Commerce and applications• Wireless communication technologies• Context-aware and location-based services



- Application architectures for mobile services
- Java 2 Micro edition (J2ME)
- Midlet development
- Designing usable mobile applications

TEACHING FORMAT

Frontal lectures, labs, and projects in teams (50 hours).

ASSESSMENT

- Final exam, written, 50 % of mark
plus
- Project in a small team (2 students) 50%

The project will consist in the design and implementation of a mobile service selected by the students.

At the end of the semester the group gives a presentation, including a demo of the implemented system, and writes a final report that includes the source code and instructions for compiling, installing and running the system.

READING LIST

There is no single updated text book covering the topics of this course.

For wireless standards and technologies:

- J. Schiller, Mobile Communications, Addison Wesley, 2003 (2. edition).

For J2ME programming:

- Sing Li and Jonathan Knudsen, Beginning J2ME: From Novice to Professional (3rd Ed.), Apress, 2005.
- Jonathan Knudsen, Kicking Butt with MIDP and MSA: Creating Great Mobile Applications, Addison-Wesley, 2008.

Reading material will be available on the course web site.

SOFTWARE USED

- Java Wireless Toolkit
- NetBeans

LEARNING OUTCOME

Upon completion of this course a student will be able to:

- Describe the fundamental technologies and standards required for building wireless applications
- Describe the basic driving factors (socio-economic and technical) that are pushing the diffusion of mobile services
- Explain the key issues associated with constructing mobile services and the main approaches taken to developing such services
- Design and create and evaluate a mobile application using the Java wireless toolkit.

COURSE PAGE

<http://www.inf.unibz.it/~ricci/MS/>