## COURSE DESCRIPTION – ACADEMIC YEAR 2015/2016

<table>
<thead>
<tr>
<th>Course title</th>
<th>Seminars in Human Machine Interaction</th>
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<tr>
<td>Course code</td>
<td>72021</td>
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<tr>
<td>Scientific sector</td>
<td>M-PSI/01</td>
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<tr>
<td>Degree</td>
<td>Master in Computer Science (LM-18)</td>
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<tr>
<td>Semester</td>
<td>1</td>
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<tr>
<td>Year</td>
<td>1</td>
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<tr>
<td>Credits</td>
<td>4</td>
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<tr>
<td>Modular</td>
<td>No</td>
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| Total lecturing hours | 20                                    |
| Total lab hours       | 16                                    |
| Total exercise hours  | --                                    |

### Attendance
Highly recommended, as books alone may be not sufficient; attendance to labs is mandatory, because labs require group work and rapid assessment feedback on “how” to carry on exercises by the teacher.

### Prerequisites
Basic maths; working knowledge of descriptive statistics

### Course page
http://www.inf.unibz.it/~gennari/shmi.html

### Specific educational objectives
The course belongs to the type "affini o integrative – formazione affine".

The course gives general overview knowledge and skills necessary for designing and evaluating interactive information systems, centered on their users. In particular:

- Context of use analysis: models of user behaviour; task analysis
- Interface and interaction design
- Interface and interaction evaluation: usability goals and analysis; user experience goals and analysis

The course is organised into 4 main blocks:

- (20% of the course) Context of use analysis and specifications: data gathering methods and specification formats, including context of use scenarios and models of user behaviour, primarily, personas and task analysis, primarily hierarchical
- (35% of the course) Design specification principles and patterns, focussing on web design patterns; design specification formats, including key-path scenarios from context scenarios, and wireframes for prototyping web interfaces
- (40%) Usability/user experience evaluation and analysis of interactive products with: inspection methods, heuristics; methods for small-scale empirical studies
- (5%) of the course) HMI lifecycles

### Lecturer
Rosella Gennari

### Contact
Piazza Domenicani 3, Room 2.01, gennari@inf.unibz.it, 0471-016964

### Scientific sector of lecturer
INF/01

### Teaching language
English

### Office hours
By appointment via mail; preferably after the course lecture or labs.

### Lecturing Assistant (if any)
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### Contact LA
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### Office hours LA
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### List of topics
- Models of user behaviour
- Task analysis
- Interaction design
- Interface evaluation
- Usability analysis

### Teaching format
Frontal lectures, labs with exercises.

### Learning outcomes

**Knowledge and understanding:**
- Know the main methods for the design of user-centred systems.

**Applying knowledge and understanding:**
- Be able to assess the usability of a web and mobile information system with quantitative and heuristic methods.
- Be able to design and execute experimental analyses on information systems or their components.

**Making judgments**
- Be able to plan and re-plan a technical project activity aimed at building an information system and to bring it to completion by meeting the defined deadlines and objectives.

**Communication skills**
- Be able to coordinate the work of a project team and to interact positively with members of the group.
- Be able to interact and collaborate with peers and experts in the realization of a project or research.

**Learning skills**
- Be able to autonomously extend the knowledge acquired during the study course by reading and understanding scientific and technical documentation in Italian, German and English.
- Be able, in the context of a problem-solving activity, to extend even incomplete knowledge taking into account the objective of the project.

### Assessment
- Mandatory written exam with review and exercise questions
- Optional written report for lab projects, done in groups.

In case of a positive mark, the project report will count for all 3 regular exam sessions.

### Assessment language
English

### Evaluation criteria and criteria for awarding marks
The final exam is written. It has: verification questions, based on the course lectures; transfer of knowledge questions and exercises, mainly based on the lab tasks. The exam allows students to cumulate at most 12 points, and students must cumulate at least 9 points to pass it (75%).

During labs, groups of students will have tasks to tackle, collected into 6 sets; the course teacher will be present and assist groups with rapid formative feedback.

Students, who are present at labs, have circa two weeks for handing in their solutions to a set of tasks. Solutions to a set are worth a bonus...
of 0, 0.5 or 1 point for the final exam. Presence in labs is necessary (but not sufficient) for earning the bonus.

Tasks consist of transfer-of-knowledge questions, exercises; some tasks require students to elaborate solutions to real-life problems.

A detailed explanation concerning lab tasks and deadlines will be given in the course introductory lecture, discussed with students and then recorded as-is in the companion introductory slides.

| Required readings | • Designing for the Digital Age, Goodwin, A.  
| | • Measuring the User Experience, Tullis, T. and Albert, B.  |
| Supplementary readings | Suggested readings for complementing the book material, as used in teacher slides, are regularly posted at http://www.inf.unibz.it/~gennari/shmi.html.  |
| Software used | -- |