# Syllabus

## Course Description

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Human Centered GUI Design</th>
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<tbody>
<tr>
<td>Course Code</td>
<td>76229</td>
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<tr>
<td>Scientific Sector</td>
<td>INF/01</td>
</tr>
<tr>
<td>Degree</td>
<td>Bachelor's in Computer Science</td>
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<tr>
<td>Semester</td>
<td>1st</td>
</tr>
<tr>
<td>Year</td>
<td>3rd</td>
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<tr>
<td>Credits</td>
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<table>
<thead>
<tr>
<th>Total Lecturing Hours</th>
<th>40</th>
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<tbody>
<tr>
<td>Total Lab Hours</td>
<td>20</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>-</td>
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<tr>
<td>Course Page</td>
<td><a href="https://ole.unibz.it/">https://ole.unibz.it/</a></td>
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</tbody>
</table>

## Specific Educational Objectives
- Type of course: caratterizzanti
- Scientific area: discipline informatiche

## Lecturer
- Eleonora Mencarini

## Scientific Sector of the Lecturer

## Teaching Language
- English

## Office Hours
- Tuesday from 09:00 to 10:00. Please, set first an appointment by email. office POS 1.04, first floor, Faculty of Computer Science, piazza Domenicani 3

## Teaching Assistant
- TBA

## Office Hours

## List of Topics Covered
- Introduction to the history of Human Computer Interaction (HCI)
- Psychology of interaction: essentials, with a focus on memory, visual perception and attention
### Design approaches and methods: formal, informal
- Web interface design principles
- Web interface design patterns
- Introduction to evaluation: ethical concerns, expert-based evaluation and user-based evaluation

### TEACHING FORMAT
- Lectures and laboratories

### LEARNING OUTCOMES

#### Knowledge and understanding:
- Gain a solid knowledge of the theoretical foundations of computer science
- Develop a deep knowledge of key principles, techniques and methodology for software design, development and maintenance

#### Applying knowledge and understanding:
- Ability to apply knowledge to the analysis, design, development and evaluation of hardware and software systems which satisfy set requirements
- Ability to select and use innovative technologies and apply sound methodologies to the application context and problem

#### Making judgments:
- Ability to collect and interpret useful data for autonomous judgement of information systems and their usage;
- Ability to engage in reflection on ethical and socioeconomic issues connected to information system

#### Communication skills:
- Ability to structure and write technical documentation
- Ability to work in group for designing computing systems

#### Learning skills:
- Acquiring abilities necessary for autonomous study
- Acquiring abilities necessary to develop projects in companies, institutions or development communities, including distributed ones.

### ASSESSMENT

- Written exam and project work:
  - written project report done in groups
  - written exam to verify theory

### ASSESSMENT LANGUAGE
- English

### EVALUATION CRITERIA AND CRITERIA FOR AWARDING MARKS
- **Criteria for awarding marks**
  
  Final mark = average of groupwork mark and individual written exam mark.

- **Evaluation criteria for attending students**
Attending students will be evaluated on the basis of an individual written exam on the principles and processes addressed during the course, and of a group project report.

The group report will present a description of the activities carried out to complete the project in relation to the theoretical concepts presented during the module. The project will be organized around the 4 phases of Interaction Design: Analysis, Design, Prototyping and Evaluation. The report must be 10 pages long and must include the following sections:

- Introduction: description of the design problem considered and explanation of its criticalities;
- Benchmarking: analysis of the existing products addressing the same design problem;
- Data collection & analysis: description of the procedure followed for gathering data about users’ needs, of the analysis and findings, and of the user requirements
- Design: Personas, Concepts, Scenarios
- Low Fidelity Prototype: justification of the main design choices and flowchart presentation
- First Evaluation: procedure and results
- Medium Fidelity Prototype: justification of main design choices in relation to the design principles addressed during the lessons and link to the interactive prototype
- Second Evaluation (procedure and results)
- Conclusion: critical reflection on the project, including what the students have learned, what aspects they would have improved if the project could be redone from scratch, how the project could be carried on.

All documentation related to the project elaboration (e.g. interviews, questionnaires, previous versions of the prototype, etc.) must be stored in an online repository that has to be accessible to the examiner.

The criteria for the assessment of the group project and report are:

1. Conceptual quality of the content, including the level of the critical reflection in relation to the topics presented during the lessons
2. Clarity of the explanation of the design choices
3. Originality, creativity, and innovation of the proposed solution
4. Complexity and coherence of the interactive prototype in relation to the theoretical aspects presented during the lessons
5. Clarity of the text, in terms of content, layout (including figures, tables), ability to summarize in own words.

In the case of non-sufficient score or if the score is refused, then at the next examination round the students will have to rewrite the report individually, improving the previous version with the indications provided in the examiner’s assessment.

**Evaluation criteria for non-attending students**

Non-attending students will have to take a written exam and to conduct the project individually. The evaluation criteria for their project are the same used for the attending students. The final mark is the average between the written exam mark and the project report mark.
### Required Readings


### Supplementary Readings

Recommended reading will be assigned weekly during classes.

### Software Used

A range of free software to carry out the course project will be presented during classes.