MODELLO D (inglese)	
General Information	
Academic subject	Interaction Design
Degree course	Computer Science (second-level degree in Computer Science)
Curriculum	
ECTS credits	9
Compulsory attendance	No
Language	English

Subject teacher	Name Surname	Mail address	SSD
	Maria Francesca Costabile	maria.costabile@uniba.it	INF/01

Office Hours	Location	Day and time
	Room 519	Thursday 11.30am - 1.30pm

ECTS credits details			
Basic teaching activities	Lectures (6 credits) Practice section (2 credits) Student project (1 credit)		

Class schedule	
Period	Second semester
Year	First year
Type of class	Lectures, practice section

Time management	
Hours	78
Hours of lectures	48
Hours of practice section	30

Academic calendar	
Class begins	February 26th, 2018
Class ends	June 1st, 2018

Syllabus	
Prerequisites/requirements	There are not mandatory requirements, but it is better if students know about basic elements of Human-Computer Interaction (HCI)
Expected learning outcomes (according to Dublin Descriptors) (it is recommended that they are congruent with the learning outcomes contained in the Didactic Regulation and Prospectus a.a. 2017-2018)	*Knowledge and understanding* The course is about the interaction design. The course's learning outcomes are: 1) students will deepen principles, methodologies and techniques for the "good" design of interactive systems, previously studied in the basic course of HCI of the "Laurea Triennale" and will learn more about advanced interaction technology; 2) students will learn and become able to apply techniques and metrics to evaluate the user experience; 3) students will learn about End-User Development (EUD) issues and how to design interactive systems that support end users to tailor and evolve the systems they use.

	Students acquire this knowledge through teacher's lessons and possibly specific seminars, as well as discussions and exercises through which they practice what they have learned. In this way, they also gain awareness of their understanding skills and on how these shills can be improved.
	Applying knowledge and understanding In order to enable students to apply the acquired knowledge, they perform both individual and collaborative exercises. In addition, students are required to develop a project in which they apply some of techniques presented in class, having selected the most appropriate ones for the specific case. This project contributes to the final assessment of the student and thus to the final grade the student gets for the course.
	Making judgements An important objective of the course is that the student achieves the ability to integrate knowledge, handle complexity and make decisions during the design, development and evaluation of the system software modules related to the interaction with users. The exercises performed during the course, which are discussed by teacher and students, are a means to train students to make judgements. This ability is evaluated by the teacher and contributes to the final grade, which also takes into account the active participation of the student to the discussions in class and the presentation of the project.
	Communication Students are encouraged to work in groups and are often invited to illustrate the outcome of exercises carried out individually or in groups, with the goal of developing their communication skills. Students are also required to develop a project in which they apply some of the learned techniques, selecting those ones that they feel most appropriate (based on their ability to make judgments). The presentation of this project is part of the oral examination and allows the student to demonstrate his/her communicative abilities by illustrating the performed work using some slides previously prepared.
	Learning skills In order to stimulate their own learning skills, students are solicited to deepen some topics not discussed in detail by the teacher, using books and/or other sources different from the textbook. Student will present in class these topics and might also discuss them during the final examination. Students are also invited to attend seminars held by other lecturers, internal to the department or visiting researchers, and they will be asked to discuss in class the content of such seminars.
Contents	
Course program	**Introduction:** Objective of the course, basic elements of HCI (brief recall from previous courses), usability and user experience, User-Centred Design; Norman's interaction model.

	Interaction design: What interaction design is and how it relates to HCI and other fields, design principles, requirement analysis, prototyping, interaction and co-evolution model. **User Studies:** Methods for gathering, analysis and presentation of user data, qualitative analysis, quantitative analysis. **Statistical methods for HCI:** descriptive statistics, inferential statistics, dependent and independent variable, measuring and controlling variables, parametric test (t-test, ANOVA), nonparametric test (χ^2, test di Wilcoxon-Mann-Whitney), use of software tools for data analysis. **Usability engineering:** Depening methodologies and techniques for evaluating usability of software systems, in particular user test, controlled experiment, field study, analytical evaluation **Advanced interfaces:** interaction with mobile systems, ubiquitous systems, large multitouch screens, virtual agents, anthropomorphism, emotional Interaction, virtual reality, augmented reality. **Personalization of user interfaces:** adaptability and adaptivity **End-User Development (EUD):** definitions, culture of participation, the long tail model, meta-design, methodologies for creating EUD systems (SSW, SER), **Information Visualization and Visual Analytics:** definitions, strategies, techniques, example of systems. **Practice section** - Design and evaluation of prototypes and/or interactive systems, user studies - Application of statistical methods for HCI - Case studies on usability evaluation of websites.
Bibliography	1. Preece, J., Rogers, Y., Sharp, H. "Interaction Design, beyond human-computer interaction", John Wiley & Sons, 4th Edition, 2015. 2. Tullis, T., Albert, B. Measuring the user experience, collecting analyzing, and presenting usability metrics, Morgan Kaufmann Publisher, 2nd Edition, 2013. 3. Shneiderman, B. Plaisant, C. Designing the user interface, strategies for effective human-computer interaction, Pearson Higher Education, 5th Edition, 2010. 4. - Graziano, A. M., Raulin, M. L. Research methods, a process of inquiry, Pearson, 2005. 5. Scientific articles indicated by the teacher.
Notes	Book n. 1 is the textbook; topics of all chapters are discussed in class.

	Book n. 2: the student has to read the first 6 chapters. Book n. 3: the student has to rea d chapter 14. Book n. 4: chapters about controlled experiments, low and high constrain studies.
Teaching methods	Lectures in class with the support of slides prepared by the teacher. Practice section. A project to be developed in group, with the supervision of the teacher.
Assessment methods (indicate at least the type written, oral, other)	The main assessment method is the final examination that includes: 1) a written test asking the student to answer both closed and open questions about the course program; 2) an oral exam where the written test is discussed and the project developed in group is presented. A partial examination takes place in the middle of the course; it is similar to the written test of the final examination and it is composed of open and/or closed questions on the program already completed. Only students who attend about 80% of the lessons can take advantage of this partial examination, in order to stimulate them to attend lessons. The project to be developed is assigned at the beginning or during the semester of lessons. Students who do not attend the lessons must meet the teacher at the beginning of the semester to define the project. The final written test can be taken once the project has been delivered. Delivery must occur 7 days before the date of the examination. The 7-day limit is not valid for the first examination date of the summer session. The score of the project is valid for all examinations of the academic year.
Evaluation criteria (Explain for each expected learning outcome what a student has to know, or is able to do, and how many levels of achievement there are).	In order to assess the knowledge acquired by student, and also the acquired abilities to make judgments, to communicate as well as the learning skills, the written test (individual) is evaluated on the basis of the correctness of the answers provided by the student and, considering the open answers, his/her ability to synthesise, the clarity of the presentation, the examples provided to better illustrate the written text, the ability to make comparisons and provide their own critical views. The project will be evaluated taking into account how it has been thoroughly carried out, the appropriateness of the techniques used, the originality of the solutions, the clarity and the synthesis capabilities that result from the produced documentation (written report and slide presentation). The written test scores approximately 70% of the overall examination rating, while the project and its presentation about 25% and the remaining 5% takes into account the student's active and autonomous participation in classroom discussions, exercises and other activities performed during the course.
Further information	