COURSE OUTLINE

(1) GENERAL

SCHOOL	ENGINEERING		
ACADEMIC UNIT	INFORMATICS AND COMPUTER ENGINEERING		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE		**SEMESTER**	**8th**
COURSE TITLE	HUMAN-COMPUTER INTERACTION		

INDEPENDENT TEACHING ACTIVITIES if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures	2	
Tutoring	1	
Laboratory activities	1	
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).	4	5

COURSE TYPE general background, special background, specialised general knowledge, skills development	Scientific Area, Skills Development
PREREQUISITE COURSES:	
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes (English)
COURSE WEBSITE (URL)	

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.
Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

Upon successful completion of the course, students:

They will have acquired knowledge of the theoretical background and technological evolution of Human-Computer Interaction

They will have understood the problems that arise during interaction between the user and the computer

They will have acquired skills in designing and implementing user interfaces

They will be able to evaluate user interfaces and implement user-friendly interactive systems in different environments.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management
	Respect for difference and multiculturalism
	Respect for the natural environment
Adapting to new situations	Showing social, professional and ethical responsibility and sensitivity to gender issues
Decision-making	
Working independently	Criticism and self-criticism
Team work	Production of free, creative and inductive thinking
Working in an international environment	……
Working in an interdisciplinary environment	Others…
	…….
Production of new research ideas	

Search, analysis and synthesis of data and information, using and using the necessary technologies

- Adapting to new situations
- Autonomous work
- Teamwork
- Working in an interdisciplinary environment
- Generating new research ideas
- Exercising criticism and self-criticism
- Promoting free, creative and deductive thinking

(3) SYLLABUS

- Introduction: Subject matter and scientific areas
- Interactive systems usability
- Interaction devices
- Interaction Modes and Technologies.
- Interface Design Principles
- Theoretical Design Models (Four Level Model, GOMS approach, Action Stages Model)
- Human-Centred Design, Human-Centred Design Variations (Ethnographic Observation, Participatory Design)
- Interactive Systems Design Tools and Methods
- Methods and Techniques for the Evaluation of Interface Systems
- Natural Language Interfaces - Voice Interfaces
- Collaborative Processes and Social Media
- Utility-oriented Web Design, Mobile Device Interface Design

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY Face-to-face, Distance learning, etc.	• Face to face • Practice in the laboratory
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY Use of ICT in teaching, laboratory education, communication with students	• in Teaching, • in Laboratory Education, • in Communication with students
TEACHING METHODS The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc. The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS	**Activity** / **Semester workload** Lectures: 26 Tutoring and exercises: 13 Laboratory exercises: 13 Self-study: 30 Preparation of Work: 43 **Course total** (25 hours load per credit hour unit): 125
STUDENT PERFORMANCE EVALUATION Description of the evaluation procedure Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other Specifically-defined evaluation criteria are given, and if and where they are accessible to students.	Written examination (50%) Assignments/Exercises (50%)

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

1. N. Avouris, Ch. Katsanos, N. Celios and K. Moustakas, Introduction to Human-Computer Interaction, University of Patras Publications, 2016.
2. Δ. Akumianakis, User-Computer Interface: A Modern Approach, Keydarithmos, 2006.
3. P. Koutsambasis, Human-Computer Interaction: Principles, Methods and Principles, Methods, Methods and Examples, KeyDarithmos, 2011.
4. P. Koutsambasis, Evaluation of Interactive Systems with a focus on the User-centred,."Kallipos" repository, Electronic Book, 2016.
5. B. Shneiderman & C. Plaisant, Σχεδίαση Διεπαφής Χρήστη (6ηέκδοση), Εκδόσεις Τζιόλα, 2016.
6. J.J. Garrett,Βασικά Στοιχεία της Εμπειρίας του Χρήστη: Σχεδίαση Ιστοτόπων με Ανθρωποκεντρικά Κριτήρια, Εκδόσεις Κλειδάριθμος, 2011.
7. Dix A., Finlay J., Abowd G., Beale R., Επικοινωνία Ανθρώπου - Υπολογιστή (3η

έκδοση), Εκδόσεις Μ. Γκιούρδας, 2007.
8. J. Preece , Y. Rogers, H. Sharp, D. Benyon , S. Holland, T. Carey, Interaction Design: Wesley, 2015.
9. I.G. Clifton, Android User Interface Design: Γνώση της λειτουργίας του Android: Μετατροπή ιδεών και σκίτσων σε Beautifully Designed Apps, Addison-Wesley, 2013.
10. L. Rosenfeld, P. Morville, J. Arango, Αρχιτεκτονική πληροφοριών: Για τον Παγκόσμιο Ιστό και την Beyond (4η έκδοση), O'Reilly Media, 2015.
11. S. Hoober, E. Berkman, Designing Mobile Interfaces, Patterns for Interaction Design, O'Reilly Media, 2011
12. J. Lazar, J.H. Feng, H. Hochheiser, Research Methods in Human-Computer Interaction, (2η έκδοση), Morgan Kaufmann, 2017
13. J. Nielsen, R. Budiu, Mobile Usability, New Riders, 2012
14. J. Johnson, GUI Bloopers 2.0: Common User Interface Design Don'ts and Dos, Morgan Kaufmann; 2 έκδοση, 2007

- Interesting Connections:

1. ACM Transactions on Computer-Human Interaction (ACM)
2. International Journal of Human–Computer Interaction (Taylor & Francis)
3. International Journal of Human–Computer Studies (Elsevier)
4. Journal of Interaction Science (Springer)
5. Human–Computer Interaction (online, Taylor & Francis)
6. Pervasive and Mobile Computing (Elsevier)
7. Universal Access in the Information Society (Springer)