

COURSE OUTLINE

1. GENERAL

| | | | |
|---|---|------------------------------|----------------|
| SCHOOL | ENGINEERING | | |
| DEPARTMENT | PRODUCT AND SYSTEMS DESIGN ENGINEERING | | |
| LEVEL OF STUDIES | Undergraduate | | |
| COURSE CODE | 3202 | SEMESTER | 6 |
| COURSE TITLE | INTERACTION DESIGN | | |
| INDEPENDENT TEACHING ACTIVITIES <i>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</i> | | WEEKLY TEACHING HOURS | CREDITS |
| Lectures | | 3 | 6 |
| <i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i> | | | |
| COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i> | Special background, skills development | | |
| PREREQUISITE COURSES: | NONE | | |
| LANGUAGE OF INSTRUCTION and EXAMINATIONS: | GREEK/ENGLISH | | |
| COURSE DELIVERED TO ERASMUS STUDENTS | YES | | |
| MODULE WEB PAGE (URL) | https://eclass.uowm.gr/ | | |

2. LEARNING OUTCOMES

| Learning outcomes |
|--|
| <p>Upon completion of this course, students must be able to:</p> <ul style="list-style-type: none"> • Understand and apply the tools and methods used in human-centered design approach (interview, observation, ethnography research) aiming to uncover not just the immediate needs and wants of the users, but to get behind the driving motivations and values that underpin the framework of users' needs, demands, and constraints. • Conduct on-site observation of "real" users' activity by knowing how to design a research protocol, how to determine the proper sources/ elements for extracting data information about human behavior as well as the proper recording devices, based on a thorough understanding of the requirements and specificities of each particular field study. • Use the various task analysis methods (e.g. flow charts, hierarchical task analysis, link analysis, operational sequence diagrams) for representing, visualizing the observed activities and the emerging patterns of human behavior, according to a particular context. • Interpret the findings of their analysis and demonstrate a breadth of knowledge and cohesive understanding of the various challenges and opportunities technologies are being developed to address. • Conduct user testing by means of mock-ups, prototypes or other techniques to evaluate new and/or emerging design solutions they may raise unintentional barriers in some use cases. • Convert design requirements and specifications to concepts and prototypes • Understand software tools, development platforms and related technologies for designing |

and programming interactions

- Develop and program interactions for a number of different hardware platforms and devices (ubiquitous computing and Internet of Things)
- Design and develop prototypes on platforms such as Arduino, Raspberry Pi, Android etc.
- Analyse and conduct case studies and develop applications on a variety of different areas such as: entertainment, education, work, cultural, everyday activities etc.
- Design and develop original microinteractions

General Skills

Knowledge: Students gain advanced knowledge in the methodological problem-solving for design and gain a critical understanding of the relevant theoretical paradigms and principles that govern a modern design practice.

Skills: Students acquire advanced skills while gradually acquiring the ability to organize information, to present multiple ideas as solutions to complex and open-ended and ill-defined design problems.

Capabilities: Students, through the collaborative design process, are developing advanced skills that enable them to manage complex techniques and projects, where sharing is required to take responsibility for decision-making in uncertain design situations.

3. COURSE CONTENTS

Interaction Design concerns itself with analyzing and modelling the structure of the composite dialogue that develops between actors/subjects and interactive artefacts (interactive objects, products and services). It also concerns the interactive activities and interrelations that co-develop on the basis of the actual interaction. The understanding of this complex network of relations is afforded by the analysis of the interacting actors/subjects, their activities, the contexts that these take place and the technologies in use.

The primary goal of this course is the study of the aforementioned relations, to eventually transform to the design and development of interactive artefacts, systems and services that could potentially fulfil user needs and desires. The underlying theoretical background and the methods used in this course follow the human-centered design paradigm and current theories for the design of interactions.

However, the types of interaction, as well as the type of interactive products & systems being studied, are not restricted to computer based examples. This is because the objective in the design of interactive products & systems is not only to optimise the technological system to be more flexible or usable, but rather an effort to add value to the user experience through his/her interaction with these systems.

4. TEACHING METHODS - ASSESSMENT

| | |
|---|--|
| MODE OF DELIVERY | In class, face to face |
| USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY | <ul style="list-style-type: none">• Video and slide presentations via projector• Support of teaching process via the electronic |

| | | |
|---------------------------|---|--------------------------|
| | platform e-class | |
| | <ul style="list-style-type: none"> • Communication with students. | |
| TEACHING METHODS | Activity | Semester workload |
| | Lectures | 90 |
| | Non-directed study | 60 |
| | | |
| | Course total | 150 |
| ASSESSMENT METHODS | <p>Final written exam which includes:</p> <ul style="list-style-type: none"> i. Short-answer questions ii. Multiple choice questions iii. Problem solving <p>Assignments</p> | |

5. ATTACHED

Eudoxus repository:

- Βιβλίο [320155]: ΑΞΙΟΛΟΓΗΣΗ ΔΙΑΔΡΑΣΤΙΚΩΝ ΣΥΣΤΗΜΑΤΩΝ ΜΕ ΕΠΙΚΕΝΤΡΟ ΤΟΝ ΧΡΗΣΤΗ, ΠΑΝΑΓΙΩΤΗΣ ΚΟΥΤΣΑΜΠΑΣΗΣ
- Βιβλίο [320310]: Εισαγωγή στην αλληλεπίδραση ανθρώπου-υπολογιστή, ΝΙΚΟΛΑΟΣ ΑΒΟΥΡΗΣ, ΧΡΗΣΤΟΣ ΚΑΤΣΑΝΟΣ, ΝΙΚΟΛΑΟΣ ΤΣΕΛΙΟΣ, ΚΩΝΣΤΑΝΤΙΝΟΣ ΜΟΥΣΤΑΚΑΣ

Additional textbooks:

- Rogers, Y., Sharp, H., & Preece, J. (2015). Σχεδίαση Διαδραστικότητας: Επεκτείνοντας την Αλληλεπίδραση Ανθρώπου-Υπολογιστή (4η έκδοση). Αθήνα: Γκιούρδας.
- Norman, D.A. (2010). Σχεδιασμός των Αντικειμένων της Καθημερινότητας. Αθήνα: Κλειδάριθμος.