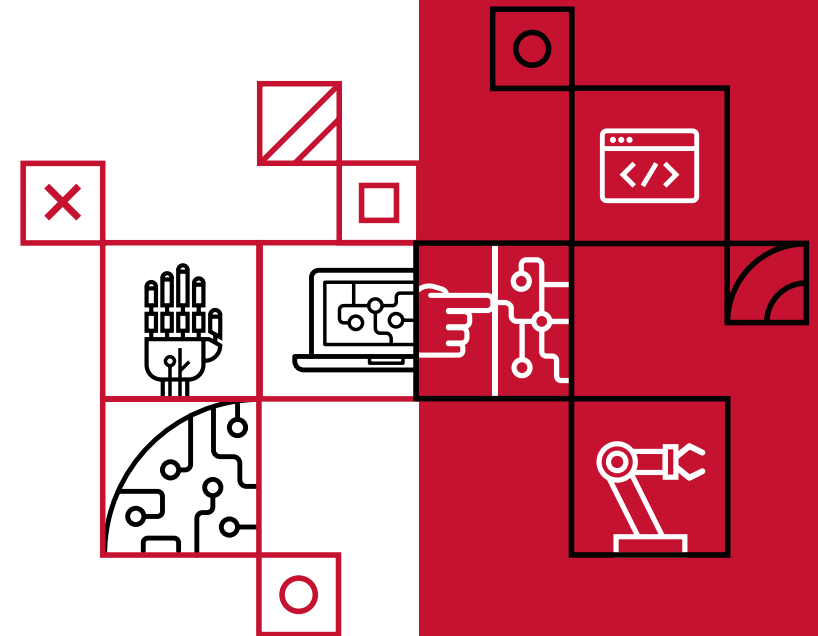


Advanced Training Program User Experience Design

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Carnegie Mellon University
Instituto Superior Técnico, UL
Faculdade de Ciências, UL
Faculdade de Ciências e Tecnologia, UNL

Carnegie
Mellon
Portugal 



Improve your User Experience Design skills

The Advanced Training Program in User Experience Design aims to educate and qualify active agents, aspirants or well-established professionals, as well as researchers and academics in the area of Human-Computer Interaction, in an interdisciplinary, structured and stimulant learning environment.

The User Experience Design program provides students with cutting-edge knowledge related with interactive technologies while simultaneously developing the necessary skills for its future application in designing novel and compelling user experiences.

The Advanced Training Program offers curricular units on design and evaluation of interactive systems with a strong emphasis on human centered design techniques and the technologies that support novel user experiences. The course will also focus on the comprehension of human skills and the consequences of the use of interactive technologies as tools for work related tasks, new lifestyles and experiences mediated by computing technology.



A diverse experience

The Advanced Training Program in User Experience Design comprises 10 modules that account for 13 ECTS. The course offers a hands-on approach experience exposing students to a diverse set of contents through cutting-edge methods and tools.

Core Module

User-centered Research and Evaluation

March 2022 (TBC)

The UCRE module provides an overview and introduction to the field HCI. The course covers fundamental research methodologies that are employed in the design of physical and digital systems/environments.

- User research
- Task analysis
- Analytic and empirical evaluation methods

Coordinator(s): Raelin Musuraca (CMU)

ECTS: 2

Lecture hours/ weeks: 30h/1w

Core Module

Interaction Design Studio

March 2022 (TBC)

This course is addressed to professionals directly or indirectly involved in interaction design and user interface design decisions for screen-based software products and services.

- Elements of interaction design
- Methods: research, concept generation, prototyping, and refinement
- Techniques: sketching, storyboarding, wireframing, prototyping

Coordinator(s): Skip Shelley (CMU)

ECTS: 2

Lecture hours/ weeks: 30h/1w

Core Module

Programming Usable Interfaces / Software Structures for UIs

April 2022 (TBC)

The PUI module provides an introduction to usability and its main components, as well as an overview of the iterative user interface design methodology, while covering the several steps of the iterative cycle, focusing more on the prototyping and evaluation steps.

- Visual design principles
- Design and conduction of usability tests
- Future user interfaces and interaction techniques
- UI programming frameworks

Coordinator(s): Augusto Esteves (IST),
Manuel Fonseca (FCUL), Nuno Correia (FCT-UNL)

ECTS: 2

Lecture hours/ weeks: 30h/1w

Data driven Design (TBC)

The Data Driven Design module will focus on the different methods for data collection, user profiling, and A/B testing, the most common form of large-scale experimentation and UX design.

- Learn how data can steer the design of Web applications, conversational assistants etc.
- Basics on data collection, experimentation, and A/B testing
- Discuss the right environment for data-aware design

Coordinator(s): João Magalhães (FCT-UNL)

ECTS: 1

Lecture hours/ weeks: 18h/1w

A diverse experience

Augmented and Virtual Reality

April 2022 (TBC)

This module will cover Augmented Reality and Virtual Reality at large and introduce the key concepts, the main interaction design guidelines, and how to prototype for Extended Reality.

- Learn about different types of AR and VR input/output
- How to prototype for XR
- Discuss interface design and interaction techniques for AR and VR
- Discuss visual and non-visual AR

Coordinator(s): Daniel Lopes, Augusto Esteves, Diogo Cabral – IST

ECTS: 1

Lecture hours/ weeks: 18h/1w

Digital Media and Storytelling

May 2022 (TBC)

This module will explore the properties of non-linear, multi-linear, and interactive forms of narratives: video games, interactive content on the web, interactive TV, video on demand, and location based media.

- Create, produce, and distribute digital media
- Develop storytelling strategies supported by digital media
- Production of content, distribution and integration in interactive applications.

Coordinator(s): Nuno Correia and Teresa Romão – FCTUNL

ECTS: 1

Lecture hours/ weeks: 18h/1w

Service Design

May 2022 (TBC)

Service Design module will focus on defining and studying services and data-driven product service systems, while learning the basics of envisioning and designing them.

- Design new service offerings that function within these systems
- Explain and demonstrate how a service unfolds through design and communication

Coordinator(s): Valentina Nisi (ITI/LARSyS), Jodi Forlizzi (CMU)

ECTS: 1

Lecture hours/ weeks: 18h/1w

Human AI Interaction

May 2022 (TBC)

Human AI Interaction will explore how combining the complementary strengths of Humans and AI can benefit people and communities, by harnessing the power of AI while giving people a central role in the design process.

- Describe general topics that are relevant when building AI systems.
- Apply Human-AI guidelines to real-life examples
- Design a simple AI Interactive system

Coordinator(s): Tiago Guerreiro and João Guerreiro – FCUL

ECTS: 1

Lecture hours/ weeks: 18h/1w

Web and Mobile Accessibility

June 2022 (TBC)

This module explains how people with disabilities rely on different tools and strategies when using interactive applications and teaches accessible design techniques for visual design, information design, user experience design and interaction design.

- Recognize the impact of design decisions on accessibility
- Explain how people with disabilities identify and distinguish user interface components based on their properties
- Design accessible user interfaces

Coordinator(s): Carlos Duarte and Luís Carriço – FCUL

ECTS: 1

Lecture hours/ weeks: 18h/1w

Digital Service Innovation

June 2022 (TBC)

This module will focus on Digital service innovation that involves applying concepts from service design to meet the need of customers and users.

- Design digital service prototypes for the purpose of discovering unmet needs of customers and users
- Differentiate between products and services and designing systems comprised of products and services
- Model the problem, the competitive environment, value creation, user experience and the digital service itself

Coordinator(s): Skip Shelley (CMU)

ECTS: 1

Lecture hours/ weeks: 18h/1w

Our partners

The Advanced Training Program in User Experience Design offers many opportunities for industry placement, particularly through optional interdisciplinary capstone projects. The capstone projects are structured to cover the end-to-end design process of a product development lifecycle for a novel user-experience. Working with faculty mentors and their industry partners, teams produce user research, product designs and interactive prototypes to improve or design new applications to a partner's existing technology. The project culminates with a presentation of the teams' final prototypes which usually lead to new products or services and/or industry spinoffs.



What to expect



Demonstrate knowledge and skills that enable the development of applications and interactive services that answer to the users' needs and/or provide innovative experiences;



To be able to apply knowledge on the development of human centered interactive systems and services in new situations and in technological, organizational and social contexts;



To be able to integrate methodologies and related technical competencies that would allow the development of solutions or judgements on the research, processes, and technological options, leading to the promotion of efficient and pleasant interactive systems;



Be able to communicate the HCI values, justifying and quantifying their methodological and technological choices in a clear way and justifying the importance of the cost/benefit of the principles and activities of HCI;



Demonstrate skills to integrate new knowledge, technologies, methods and techniques that are relevant in the context of the interactive systems and services development.

Who can apply

The candidates should have a pre-Bologna degree (Licenciado) or master's degree in one of the main areas of the Advanced Training Program: Informatics or Computer Science, Design and Psychology or similar areas (Sociology, Anthropology, Multimedia, Communication Science, Electrical and Computer Engineering Or Telecommunications, Mechanical Engineering, Industrial Management).

Being a program oriented towards candidates with professional experience, preference will be given to candidates with experience in interactive technologies.

Optionally, candidates can also submit the IELTS/TOEFL tests.

Course structure

The Advanced Training Program will have a total duration of 216 hours, which corresponds to 13 ECTS.

The students will be exposed to lectures, laboratory work and seminars with invited guests. The course will start in January and will run through June.

World class faculty



Nuno Nunes (IST)
UxD Program Coordinator



Diogo Cabral (IST)



Jodi Forlizzi (CMU)



Luis Carriço (FCUL)



Manuel Fonseca (FCUL)



Nuno Correia (UNL)



Skip Shelly (CMU)



Teresa Romão (UNL)

Classes schedule

Modules 1-3 are 5 day modules with a duration of 1 week.
Modules 4-10 are 3 day modules.

	Weekdays	Saturday
10:00	Lecture	Seminar
11:00		
12:00		Studio / Lab
13:00		
14:00	Studio / Lab	Studio / Lab
15:00		
16:00		

Module	2022*
UCRE	March
IxDS	March
PUI	April
Dig. Media & Storytelling	May
Data Driven UX	TBC
Service Design	April
Aug. Virt. Reality	April
Human AI	May
Accessibility	June
Digital Service Innovation	June

*Dates are still subject to confirmation



Application & Tuition

The fee for the complete program will be of 10.000€ (10 modules). Candidates who are working in an affiliated CMU Portugal company will have a 10% discount on the full price.

Applications must be submitted directly to the CMU Portugal Program at cmuportugal.org/admissions-and-scholarships/. The candidates will need to submit a CV, motivation letter, higher education degree(s) certificate(s), and 2 recommendation letters. ILTS/TOEFL tests are optional.

