

PROGRAM Technologies and languages of communication

MODULE Cognitive psychology

ECTS 6

YEAR RUNNING 1°

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CONSULTATION TIME appointment to be agreed by appointment via email

LEARNING AND SKILLS OUTCOMES

The teaching aims to make the student achieve the following learning outcomes.

1. With reference to knowledge and understanding, the student will be able to contribute to the design of technological systems, services and products according to the principles of usability, cognitive psychology and ergonomics;
2. With reference to applied knowledge and understanding, the student will be able to identify resources and obstacles related to interaction design;
3. With reference to critical thinking, the student will be able to evaluate and analyze studies and projects of technological systems and products in which psychological and social aspects are involved;
4. With reference to communication skills, the student will be able to describe in a clear way and with an adequate language the modalities of interaction between users and technologies, identifying their specificities under the light of the theories and models of Psychology;
5. With reference to the ability to learn, the student will be able to conduct an analysis of the user experience in interacting with technologies.

Skills outcomes:

- provide students with the knowledge of the main theoretical models and concepts of cognitive and social psychology most relevant to operate in the sectors covered by the course of study;
- promote knowledge of the most suitable methodological aspects to intervene from an interprofessional perspective in the contexts of the ergonomic design of interactive systems and interfaces, also from a research and knowledge production perspective;
- understand which are the salient and significant psychological processes in the contexts of the technological design of interactive systems between users and technologies;
- analyze situations and concrete cases in order to identify the specificity and contribution of psychology in the contexts of the design of interactive user-technology systems.

SYLLABUS AND TIMELINE

The course is developed on four teaching units linked together by transversal topics. The teaching units will consist of both topics closer to the field of digital technology design and classic themes of psychology applied to the "social". The teaching units are:

- 1) basic cognitive processes (perception, attention, learning, language, thought, memory) and their applicability to Interaction Design; individual, social and contextual factors;
- 2) social cognition and communication (basic processes of social psychology applied to interaction with digital technologies)
- 3) cognitive ergonomics and social ergonomics
- 4) notes on research methodology for the study of Interaction Design and User Experience

The lessons will be aimed at fostering the development of skills that focus on cognitive aspects (at an individual and social level) and on communication as a social process mediated and supported by technologies.

The aim will be to deepen the role of the main technological communication devices and understand how they interact with individual cognitive processes and with collective phenomena;

the interaction between technologies and people in different contexts (physical and social) will also be studied in depth, through the participation of people in groups (formal and informal) and networks, but also in specific sectors.

Finally, classical themes of social psychology will be addressed such as identity, persuasion, social cognition, attitudes, cooperation and conflict and their declinations in the context of communication and digital technologies.

SUGGESTED PRE-REQUISITE QUALIFICATIONS

None

METHOD OF ASSESSMENT

Drafting of a project work on the topics covered by the course and intermediate tests with questionnaires as a predefined alternative or small individual or group projects.

ASSESSMENT CRITERIA

- With reference to knowledge and understanding, the final exam will assess the student's acquisition of the fundamental notions relating to the topics listed in the detailed teaching program.
- With reference to the application of knowledge and skills acquired, the final exam will assess the student's ability to connect the different topics covered and the ability to resolve issues involving psychological mechanisms and cognitive processes.
- With reference to communication skills, the final exam will evaluate, in addition to the contents expressed, the ability to clearly describe the aspects related to the interaction between users and technologies, identifying their specificities in the light of theories and models proper to Psychology.

TYPE OF EXAMINATION ASSESSMENT

The final exam, for attending students and non-attending students, will take place with an oral interview of course contents and the assigned study texts.

However, for attending student the final oral evaluation will also take into

consideration the level and quality of active participation of the student to the activities and works carried out during the course.

Indications for the exam texts are provided by the teacher.

On-going Evaluation

The on-going evaluation is based on the implementation of research/in-depth research during the course, the participation and the individual/group presentations on the course contents.

The details for each task will be illustrated during the semester.

These activities, to be held during the period of the course, are part of on-going evaluation and include the making of:

- in-depth study of research (individual and/or in team) on a subject chosen and agreed with the teacher.
- presentation and speech in the classroom (individual and/or in team) on a subject chosen and agreed with the teacher.
- participation and sharing of learning materials through remote cooperation/communication environments

Final Evaluation

The final evaluation is cumulative, consider: La valutazione finale è cumulativa, tiene conto di:

- Active participation in classroom
- Active participation at individual and/or team work
- Results of the ongoing evaluation based on presentations made in the classroom
- Individual interview (oral) on all course contents and assigned textbooks.

MARKING CRITERIA

Level of detail: includes references to other bibliographic sources in addition to recommended materials, databases, articles, sites, blogs;

0-4 points will be awarded in the presence of little/no reference to bibliographical sources other than those indicated by the lecturer and therefore with a low level of in-depth study; 5-7 points will be awarded in the presence of an adequate/sufficient level of in-depth study with recourse to sources outside the suggested materials; 8-10 points will be awarded in the presence of complete and exhaustive references to at least one source outside the materials indicated by the lecturer.

Completeness and quality of the arguments: non-triviality, non-common sense, coverage of the argumentative range on the explored topic, critical ability;

0-4 points will be awarded in the presence of poor quality arguments, copy-paste mode and/or poor coverage of topics relevant to the subject; 5-7 points will be awarded in the presence of sufficient/discreet adherence to the topics dealt with relevant to the subject; 8-10 points will be awarded in the presence of good/excellent completeness of the arguments and close relevance of what is dealt with to the course content;

Argumentative ability and linguistic properties on the concepts of the subject.

0-4 points are awarded in the presence of poor communicative competence and equal linguistic property on topics in the area of psychology; 5-7 points are awarded in the presence of sufficient argumentative competence and fair linguistic property on topics in the area of psychology; 8-10 points are awarded in the presence of excellent argumentative competence in the description of psychological concepts and processes.

CRITERIA FOR AWARDING THE FINAL VOTE

Vote	Descriptors
< 18/30	Fragmentary and superficial knowledge of contents, errors in applying concepts, lacking exposure.
18 - 20/30	Sufficient but general knowledge of contents, simple exposure, uncertainties in the application of theoretical concepts
21 - 23/30	Knowledge of appropriate but not in-depth contents, ability to apply theoretical concepts, ability to present contents in a simple way
24 - 25/30	Appropriate knowledge of contents and broad, discrete ability to apply knowledge, ability to present contents in a comprehensive way.
26 - 27/30	Precise and comprehensive knowledge of contents, good ability to apply knowledge, analytical capability, clear and correct exposure
28 - 29/30	Extensive, comprehensive and in-depth knowledge of contents, good application of contents, good analytical and synthetic ability, confident and correct exposure.
30-30 cum laude/30	Very extensive, comprehensive and in-depth knowledge of content, well-established ability to apply content, excellent analysis, synthesis and links interdisciplinary, mastery of exposure.

LEARNING MATERIALS

Students are required to complete the preparation for the exam by integrating the teaching materials discussed during the classroom lessons with the following mandatory volumes:

A text to be chosen from:

1a) Johnson J. (2020), *Designing with the Mind in Mind. A simple guide to understanding user interfaces design rules*, Elsevier, Cambridge [Paperback ISBN: 9780128182024, eBook ISBN: 9780128182031]

1b) Sharp H., Rogers Y., Preece J. (2019), *Interaction Design: Beyond Human-Computer*



Interaction. Wiley, ISBN: 978-1-119-54725-9

An optional in-depth text

Norman, D.A. (2013). *The design of everyday things*. Revised and expanded edition. New York (N.Y.): Basic books.

Selection of papers in English

Handouts written by the teacher