UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Cognitive Psychology

2425-1-F5105P001

Learning area

Applied Experimental Psychological Sciences

Learning objectives

Knowledge and understanding

• Students will develop a deep understanding of cognitive concepts and theories by reviewing major research findings.

• Knowledge of experimental methods: what happens in experiments and how results are explained with theories

• Knowledge of main real-world applications of research findings and how they are relevant to everyday life.

• The laboratory will teach students basic programming abilities in Matlab.

Applying knowledge and understanding

• Students will be able to apply their understanding of main cognitive theories and concepts in order to design experiments related to everyday issues.

• They will be able to design a simple experiment and implement it in Matlab.

Contents

We will analyze the flow of information processing in the mind. In particular, the course aims at explaining how people perceive and attend to the environment, how people learn and remember, and how they reason and make decisions. Applications to everyday situations will be presented. The ultimate goal will be to explain, manipulate, and replicate behavior in everyday contexts.

Detailed program

Student will be exposed to basic principles, problems, findings and research methodologies in the following topics:

• Perception

• Attention

• Memory

• Knowledge representation

• Problem-solving

• Reasoning and decisions

Prerequisites

Course attendance requires fluent spoken and written English as a necessary pre-requisite: all lectures, laboratory tutorials, and all study material and exams will be in English.

It is assumed that students have knowledge and understanding of the basic methodology and theories in General Psychology. Students lacking such basic knowledge are encouraged to ask for a list of basic references.

Teaching methods

The course will be held in presence. The first part (42 hours) will consist of lectures and in-class activities. The second part (16 hours) will be an interactive practical course taking place in the computer labs.

The first part will consist of lectures on specific topics followed by moments of in-class discussion where specific research articles will be critically analyzed and discussed.

In the second part, students will learn the basic of the Matlab programming language, a languae that is used in programming experiments in cognitive science.

In order to encourage active learning, during the first part optional activities will be offered to the students. Interested students will be divided in small groups and either develop a research project on one of the course topics or make presentation on specific topics in class (flipped classrom).

Assessment methods

The exam will verify the level of mastery of the course contents with special attention to:

• Theoretical references

• The use of technical language

• Methods and experimental procedures

• Ability to elaborate course contents

To better verify the achievements of the learning objectives the exam will be both written and oral. The written exam will consist of multiple-choice questions and open-ended questions on the course lecture topics. For the practial part the exam will be written consisting in multiple-choice and short-answers questions.

The oral exam will consist in questions on the course topics and in the presentation and discussion up-to-date research articles on the course topics presented in class.

For students attending the course, the examination could be partially or totally replaced by evalutarion of activities their participated to during term time (e.g research project or in class presentations).

Textbooks and Reading Materials

M. W. Eysenck & D. Groome (Eds.) (2023) Cognitive Psychology Revisiting The Classic Studies. Sage.

Lecture slides and additional material will be provided at the beginning of the course and made available on the course website.

Sustainable Development Goals

QUALITY EDUCATION