UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Psychophysics and Perception

2223-1-F9201P006

Learning area

Learning objectives

During the course, the student will deal with the main topics of visual perception (color, light, motion, time) and learn how to use and manage the main psychophysical methods employed to study human behavior. Moreover, the main procedures of data analysis used in experimental psychology will be introduced.

Contents

The details of the course contents will be decided at the beginning of the course. Ideally, the course is divided in two parts. In the first part, the basic knowledge about how to design behavioral experiments are introduced (review of basic statistic concepts and learning of the main psychophysical methods). In the second part, some topics relevant to the specific course of study (as color perception, object perception, psychology of time and space, visual communication and oral presentations) are discussed. Using the methods introduced in the first part of the course, practice exercises and experiments by are planned. The general feature of the course is theoretical and applied for the both parts. Statistical analyses are performed using Jamovi whereas the psychological experiment are prorammed using Psychopy..

Detailed program

FIRST PART. Basic concepts and methods for designing behavioural experiments: classic psychophysics and psychophysical methods; Thurstone method of paired comparisons; introduction to Signal Detection Theory and its

applications; review of basic statistics; introduction to Jamovi; Data visualization; hypothesis testing; practical introduction to Generalized Linear Models (GLM).

SECOND PART. The study of some topics in psychology of perception. Objects perception, light and colour perception, time and space perception, motion perception, belief contexts and suggestion, visual communication and oral presentations, practice examples of use of experimental methods in applied psychological context. Introduction to Psychopy

Prerequisites

Nothing specific.

Teaching methods

Lectures, discussions, practical training.

Lessons will be held in presence, unless further COVID-19 related restrictions are imposed.

Assessment methods

Oral examination. The final evaluation is based also on the work done during the course, on a written report on a topic discussed in the second part of the course, and a short report (abstract, methods and results) on an experiment carried out with Psychopy.

An oral examination in English, French, or German instead of an oral exmination in Italian can be arranged for Erasmus students.

Written exercises and reports can be presented in English, French, or German.

Textbooks and Reading Materials

The reference material for studying is put online on this site.

The reference textbooks for further detailed study are the following ones:

G.A. Gescheider, *Psychophysics. The Fundamentals,* London: Lawrence Erlbaum, 1997 (3d ed), libro che è disponibile in formato ebook nella biblioteca dell'università (<http://search.ebscohost.com.proxy.unimib.it/login.aspx?direct=true&db=nlebk&AN=602134&site=ehost?live&scope=site>).

Gallucci Marcello; Leone Luigi, Modelli statistici per le scienze sociali, Pearson, 2012.

Goldstein, E. Bruce, Sensation & Perception, 2010

Grondin, S. (2013). *Psychology of Perception*, Springer

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | RESPONSIBLE CONSUMPTION AND PRODUCTION | CLIMATE ACTION