UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Psicofisica e Percezione

2425-1-F9201P006

Aims

The course aims to provide the tools and knowledge necessary to conduct experimental research in visual perception, with the introduction and analysis of different psychophysical paradigms. To this end, visual phenomena of interest to the world of design (both traditional and digital) will be presented, with a focus on light intended as a perceptual presence.

Contents

First part

- Elements of psychometrics
- Basic notions of psychophysics
- Main experimental paradigms developed in the field of psychophysics

Second part

- The role of illusions in experimental psychology
- A quick look at the three main theories of visual perception
- Analysis of perceptive phenomena and processes: visual field organization, amodal completion, transparency, the problem of perceptual constancies; color, third dimension, light-color interactions, brightness and luminosity.

Detailed program

The course is divided into two parts.
Part I:

- Measure and measurement in experimental psychology
- Data and measurement scales
- Psychophysics: basic notions
- Psychophysical methods for experimental research
- Let's create an experiment, step by step

Part II:

- Why psychology of perception?
- The concepts of *reality* and *illusion*
- Gestalt, Cognitivism, Ecological theory
- Segmentation of the visual field into meaningful units
- Amodal completion and anomalous figures
- A stimulus for two percepts: homochromatic figures and phenomenal transparency
- The third dimension
- Colors and black & white
- Light

Prerequisites

None

Teaching form

Frontal lessons, discussions, and student presentations.

Textbook and teaching resource

- Slides from the lessons
- Journal papers that will be made available on the course's e-learning page
- Daniele Zavagno e Daniele della Vedova (in press, available in Sept.-Oct.), *Fenomenologia della luce. Tra percezione e arte.*, Mondadori Università, Milano. (chapters 1-8)

For those wishing to learn more about psychophysics:
G.A. Gescheider (1997). *Psychophysics. The Fundamentals*, London: Lawrence Erlbaum. The book is available in ebook format at the university library.

Semester

Primo semestre

Assessment method

The student can choose between two assessment methods:
A) **Oral interview** concerning the entire programme.

B) **Project examination** consisting of the following parts:
1. Journal club: Classroom Presentation of an article among those made available by the teacher;
2. Project essay. Design of an experiment regarding a phenomenon chosen among those presented during the lessons. The structure of the essay, which will be explained in detail during the first lessons, should include the following: abstract, brief introduction, experimental hypothesis, experimental design (independent and dependent variables), participants, psychophysical method, type of data, hypothetical results and their significance in realtion to the phenomenon.
3. oral interview mainly concerning the project.

Office hours

Wednesday, from 11:00 to 12:30.

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY | REDUCED INEQUALITIES