UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Laboratory of Physical Techniques For Optometry

2021-2-E3002Q012

Aims

The course aims to provide students with basic practical knowledge to carry out the optometric examination aimed at determining the user's refractive conditions and the appropriate classification of the case to get the best optical correction prescription.

Contents

View examination.

Preliminary and performancy optometric tests for the case classification.

Detailed program

Measurement of Visual Acuity, Contrast Sensitivity and curve construction, Static Retinoscopy, Refraction, Cover Test, Horizontal and Vertical phorias, Fixation Disparity, Degrees of Fusion, Measure of Vergences, Measure of Vertical Vergences, Accomodative Amplitude, Near Point of Convergence, Accomodative Facility, Vergence Facility, Negative and Positive Relative Accommodation, Fused Cross Cylinders, MEM, NOTT and Bell Retinoscopy, Ocular Motility, Ophthalmoscopy, Colors Vision (Ishihara Tablets, Farnsworth Test and Lanthony Test), Amsler Test, Addition attempt, Introduction to analysis with the graphical method, Introduction to integrated analysis.

Prerequisites

Knowledge deriving from the courses: Anatomy and histology human and ocular, Geometric and ophthalmic optics with laboratory, Optical and ophthalmic systems with laboratory, Physical techniques for the general optometry

Teaching form

The course takes place in the laboratory (except for some introductory lessons of the new tests that you prefer to keep in the classroom). During the lessons the students are divided into eight groups and, among the year, they are invited to change frequently groupmates to allow the examination and the study of different cases.

During Covid-19 emergency time, some lessons could be performed by using different modalities: frontal lesson and recorded lesson in e-learning platform.

Textbook and teaching resource

The course uses the professional instrumentation present in the laboratories: paper and electronic optotypes, phoropter, trial frame, set lenses, prisms, retinoscope, ophthalmoscope, test with polarized filters, test with anaglyphic filters.

Textbooks:

David b. Elliott, "Clinical procedures in Primary Eye Care", Elsevier Saunders, Fourth Edition 2013

Other optional textbooks:

W. J. Benjamin, "Borish's clinical Refraction", Butterworth Heinemann Elsevier, Second Edition 2006

M. Scheiman & B. Wick, "Clinical Management of Binocular Vision. Heterophoric, Accommodative, and Eye Movement disorders ", Lippincott Williams & Wilkins, FifthEdition 2019

Other teaching resources provided by teachers on the e-learning platform

Semester

The course is annual from October to the end of May (indicatively)

Assessment method

During the course, two partial tests on all the subjects studied until then are proposed to the students. Their overcoming replaces the total examination envisaged during the regular examination sessions. The profit examination consists of a practical test carried out in the laboratory in which the student must perform a complete optometric examination and the execution of all the tests required by the teacher chosen among those studied during the year. During the exam will be presented some questions about the tests procedures, the meaning of the results obtained and on what other investigations could be initiated to confirm or deny the hypothesis developed in relation to the clinical case that occurred or could virtually occur.

Office hours

By appointment before the lessons.