UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Tecniche Fisiche per L’optometria Generale 2

2021-2-E3002Q010-E3002Q028M

Aims

The broad objectives of this course are the following:

- enable students to understand the theoretical concepts of the neurophysiological mechanisms which rule the binocular visual system and their investigation through the most widely shared optometric techniques.

- provide the tools for a global assessment of data obtained from the optometric examination in order to recognize the visual problem and adopt an adequate corrective strategy.

Contents

Basics of binocular vision;

Vergence and accomodation evaluation through optometric tests;

Non-strabismic anomalies of binocular vision;

Accomodative anomalies;

Optometric examination: case history, analysis and prescription.

Detailed program

- Basics of binocular vision: motor and sensory fusion mechanisms, retinal correspondence, stereopsis and related tests.

- Preliminary tests

- Accomodation, Vergence, Phorias and AC/A Ratio;
- Functional tests performed in free space and with the phoropter to assess accomodation (amplitude, lag/lead, flexibility, negative and positive relative accomodation);
- Functional tests performed in free space and with the phoropter to assess vergence (amplitude, fusional reserves, flexibility);
- Fixation disparity

- Optometric analysis methods: visual graphic analysis, OEP analytical method, Morgan normative analysis, Fixation disparity, and Integrative Analysis
- Functional accomodative anomalies: classification, investigation and treatment.
- Non-strabismic anomalies of binocular vision: classification, investigation and treatment.
- Case history;

- Prescription guidelines;
- Presbyopia: description and corrective solutions;
- Visual field investigation
- Color Vision

Prerequisites

- Basic knowledge of ocular anatomy and physiology

- Basic knowledge of ophthalmic optics.

- Knowledge from the course "Tecniche Fisiche per l'Optometria Generale - I modulo".

Teaching form

Lectures will be available via *synchronous* (live) classes on Tuesday and Wednesday 8.30-10.30 or in asynchronous way.

Textbook and teaching resource

- Borish’s Clinical Refraction, W. J. Benjamin, 2nd Edition, Elsevier

- Clinical Procedures in Primary Eye Care, David. B. Elliott, 4th Edition Elsevier

- Clinical Management of Binocular Vision: Heterophoric, Accommodative, and Eye Movement Disorders. M. Scheiman, B. Wick, 5th Edition. Wolters Kluwer

Semester

II year, II semester from March 2nd 2021.

Lectures will be available on the e-learning course page.

Assessment method

Oral exam.

During the Covid-19 emergency, the WebEx platform will be used.

Office hours

Appointment needed: federica.cozza@unimib.it

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