



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Physical Techniques for General Optometry 2

2526-2-E3002Q028M

Aims

The aims fall within the area of "Professional Training" and refer to the following Dublin descriptors:

1- Knowledge and Understanding

- provide theoretical knowledge of the neurophysiological mechanisms that regulate the binocular visual system and their investigation through the most commonly used optometric techniques;
- provide tools for a comprehensive evaluation of the data obtained from the optometric examination in order to correctly identify the visual problem and adopt an appropriate corrective strategy.

2- Applying Knowledge and Understanding

- develop the skills necessary to conduct optometric visual analyses;
- provide scientific and technical knowledge to apply the acquired understanding during the conduction of optometric visual analyses.

3- Making Judgements

- develop the ability for autonomous reflection on the program content.

4- Communication Skills

- acquire communication skills within the scope of the course content.

5- Learning Skills

- develop the ability for autonomous reflection on the program content with the aim of acquiring learning skills in view of future developments in the field.

Contents

Basics of binocular vision;

Vergence and accommodation evaluation through optometric tests;

Non-strabismic anomalies of binocular vision;

Accommodative 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
- Accommodation, Vergence, Phorias and AC/A Ratio;
- Functional tests performed in free space and with the phoropter to assess accommodation (amplitude, lag/lead, flexibility, negative and positive relative accommodation);
- 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 accommodative anomalies: classification, investigation and treatment.
- Non-strabismic anomalies of binocular vision: classification, investigation and treatment.
- Case history;
- Prescription guidelines;
- Presbyopia: description and corrective solutions;

Prerequisites

- Basic knowledge of ocular anatomy and physiology
- Basic knowledge of ophthalmic optics.
- Knowledge from the course "Tecniche Fisiologiche per l'Optometria Generale - I modulo".

Teaching form

Frontal lectures (in Italian).

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

Assessment method

Written exam:

- clinical case discussion to assess problem-solving skills;
- closed-ended questions on topics covered in the lectures to assess knowledge acquisition.

There are no midterm tests.

The final grade is obtained by the grade point average of the two marks achieved in each module of the course.

Office hours

Appointment needed

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION
