



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Optometric Investigative Techniques - I

2425-1-F1702Q001

Aims

General aims of the module

To refine the student's theoretical understanding of clinical refraction, binocular vision assessment, visual functionality and primary vision care. To improve clinical decision making in providing evidence based optometric intervention from optical devices to visual training. To allow students to interact with other professionals in the field of vision sciences and being capable to describe a clinical case in scientific contexts.

Specific learning outcomes (LO)

By the end of the module, a successful student will gain:

- LO1: theoretical knowledge about the main objective and subjective techniques of ocular refraction and the relationship between ocular refraction and binocular vision
- LO2: practical skills to perform objective and subjective refractive techniques as well as binocular vision assessment.
- LO3: practical skills to perform a comprehensive visual assessment and determine the effect of optical correction on visual functioning
- LO4: theoretical knowledge about the principle of primary vision care and the ability to perform a basic assessment of primary vision care
- LO5: knowledge on how to write an optometric case report according the international standard

Contents

The module will cover principles of ocular refraction and optical correction, visual function assessment, and primary vision care.

Detailed program

1. Diagnostic drugs
2. Cyclopegic vs non cyclopegic refraction
3. Objective Refraction: Retinoscopy, autorefractometry, wavefront refraction
4. Subjective Refraction
5. Binocularity, accommodation and refraction
6. Visual Psychophysics: visual acuity, contrast sensitivity, color vision assessment
7. Anterior chamber angle assessment
8. Tonometry
9. General Fundus Examination (Direct/Indirect Ophthalmoscopy)
10. The pupil and pupillary reflexes: from neurophysiology to clinical appraisal
11. Perimetry in clinical practice
12. Optometric Case Studies. How to write a clinical case

Prerequisites

See curricular prerequisites for the admission Master's Degree Program

Teaching form

Learning objectives will be pursued through different teaching methods:

- Online non-interactive asynchronous lectures (14 hours on topics 1-11)
- Online interactive synchronous lectures (7 hours on all topics)
- In person Labs/clinics's topics (12 hours on topics n. 3, 4, 5, 6, 7, 8, 9, 11, 12)
- Online tutoring
- Student-managed learning

Textbook and teaching resource

Lecturers' handouts

Slides of the lectures

Scientific papers suggested by the lecturers

Semester

First Semester

Assessment method

Student Assessment is based on four tasks:

- Short Essay
- Group work
- Final written assessment
- Final oral assessment

The Short Essay is a 1000-word individual report on a clinical case, previously seen in the labs. It aims to verify the student's achievement of LO5. In the Essay, the student must describe the clinical case chosen according to the international guidelines.

It must be delivered within the term of the module and worth 16.7% of the unit mark maximum (5 out of 30).

The marks will be allocated according to the following marking scheme:

2 out of 30: The report is written according to the CARE guidelines (for Case Reports)

2 out of 30: report demonstrates understanding and grasp of the material involved.

1 out of 30: Correct use of the international standard of units (SI units)

The Group work is a formal collaborative group activity of a few students (max 5) carried out during the semester to arrange a group presentation. This summative activity is based on a specific scientific theme assigned by the lecturer using objective and subjective refractive techniques. Group work assessment aims to verify the student's achievement of LO2. It must be delivered within the term of the module and worth 13.3% of the unit mark maximum (4 out of 30). The assessment is based on the following marking scheme:

1 out of 30: Technique description and clinical utility evaluation

1 out of 30: Evidence-based validity of the technique

1 out of 30: Review of relevant literature evidence on the topic

1 out of 30: Communication Effectiveness

The Final written examination is based on 20 Multiple choice questions and one open question which investigates the theoretical knowledge learning that concerns LO1 and LO3.

This assessment is delivered at the end of the module and is worth 40% of the unit mark maximum (12 out of 30).

The Final oral examination is based on oral open questions that investigate the ability to describe practical procedures concerning with of LO2, LO3, and LO4.

This assessment is delivered at the end of the module and is worth 30% of the unit mark maximum (9 out of 30).

The final grade will be represented by the sum of the marks achieved in the single 4 tasks. The minimum mark to pass is 18 out of 30.

Office hours

By appointment

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION
