



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Optometric Investigative Techniques - II

2425-1-F1702Q007

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#### Aims

General aims of the module

To develop a student's theoretical understanding of the development of the eye and the visual system across childhood and extend the range of competencies of the student in paediatric optometry.

To improve the ability to make refraction in children and determine the appropriate optical correction of refractive errors and strategies to manage myopia progression

To allow students to interact with other professionals in this field.

Specific learning outcomes (LO)

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

-LO1: theoretical knowledge about the development of the eye and visual system across childhood and how to perform refraction in children

-LO2: practical skills to perform refractive and binocular vision assessment in children

-LO3: practical skills to perform visual assessment in children

-LO4: theoretical knowledge about the principle of correction with spectacles and contact lenses in children

#### Contents

The module will cover principles of ocular refraction, visual function assessment, and optical correction in children

#### Detailed program

Principles of paediatrics: general development in infancy (Principal theories of childhood development, general and ocular development in infancy, prematurity, common genetic problems in paediatrics, eye diseases and other

medical conditions affecting the eyes in children, history taking paediatric subjects)

1. Development of eye & visual system
2. Development of binocular vision & accommodation
3. Development of refractive errors in childhood
4. Examination methods in children: visual acuity, refractive error, binocular vision, accommodation, ocular health
5. Optometric factors in learning disabilities/difficulties
6. Optical prescribing for children
7. Myopia management in children
8. Children & contact lenses

## **Prerequisites**

See curricular prerequisites for the admission Master's Degree Program

## **Teaching form**

Learning objectives will be pursued through different teaching methods:

- Frontal Lecture (7 hours on topic n.1)
- Online non-interactive asynchronous lectures (12 hours on all topics: 2-9)
- Online interactive synchronous lectures (8 hours on topics n. 2-9)
- In person Labs/clinics's topics (12 hours on topics n. 5, 8)
- In person Online tutoring
- Student-managed learning

## **Textbook and teaching resource**

Lecturers' handouts

Slides of the lectures

Scientific papers suggested by the lecturers

## **Semester**

Second Semester

## **Assessment method**

Student Assessment is based on three tasks:

- Short Essay
- Final written assessment
- Final oral assessment

The Short Essay is a 1000-word review (individual writing) on a specific strategy to manage myopia progression. It aims to verify the student's achievement of LO4.

It must be delivered within the term of the module and worth 20% of the unit mark maximum (6 out of 30).

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

2 out of 30: the review is based on at least 10 peer-reviewed references indexed in PubMed

1 out of 30: the review summarizes the rationale underneath the myopia control strategy.

2 out of 30: the review reports efficacy outcomes of the strategy and compare them to other treatment/strategy

The Final written exam is based on 20 Multiple choice questions (MCQs) and one open question which investigate theoretical knowledge learning that concerns LO1 and LO4

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 exam is based on oral open questions that investigate the ability to describe practical procedures concerning with of LO2, 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 grade will be represented by the sum of the marks achieved in the single three tasks. The minimum mark to pass is 18 out of 30.

## **Office hours**

Appointment needed

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION

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