UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

# COURSE SYLLABUS

# Optometric Investigative Techniques - II

**2627-1-F1702Q007**

## 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

1. 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)
2. Development of eye & visual system
3. Development of binocular vision & accommodation
4. Development of refractive errors in childhood & prescribing criteria
5. Examination methods in children: visual acuity, refractive error, binocular vision, accommodation, ocular health
6. Optometric factors in learning disabilities/difficulties
7. Management of binocular vision anomalies in children
8. Myopia management in children
9. 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

Textbooks:
• Evans BJW Pickwell's Binocular Vision Anomalies, Sixth edn. Elsevier: Philadelphia; 2021.
• Wilkins AJ, Evans BJW Vision, Reading Difficulties, and Visual Stress, Third edn. Springer Nature: London; 2024

Lecturers' handouts

Slides of the lectures

Scientific papers suggested by the lecturers

## Semester

Second Semester

## Assessment method

Student Assessment is based on:
• Final written assessment
• Final oral assessment

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 80% of the unit mark maximum (24 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 20% of the unit mark maximum (6 out of 30).

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

## Office hours

Appointment needed

## Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION