

## SYLLABUS DEL CORSO

### Optometry and Low Vision

2425-1-F1702Q008

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#### Aims

General aims of the module

To develop a student's theoretical understanding of aging of eye and visual system, and the conditions of visual impairments. To extend the range of competencies of the student in geriatric optometry and low vision. To improve clinical decision-making in selecting the optical and non-optical aids for low vision people. To allow students to interact with other professionals in management of advanced clinical cases in geriatric optometry and low vision.

Specific learning outcomes (LO)

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

- LO1: theoretical knowledge about the aging of the human body, eye, and visual system
- LO2: practical skills to perform a comprehensive visual assessment and refractive techniques in geriatric people
- LO3: theoretical knowledge about the principle of low vision correction by optical and non-optical aids and practical skills to select for the individual needs these kinds of solutions

#### Contents

The module will cover principles of geriatric optometry and low vision

#### Detailed program

1. Principles of aging of the human body and geriatrics. Patient in advanced age: psychological, physiological (general health features, illness, and disabilities), and social profile. Basics of age-related physiological and pathological changes in the visual system.
2. Age-related optical changes in the eye and the visual system.

3. Accommodation/pupil mechanisms: effects of ageing
4. Presbyopia: demographics, theories, and management in the clinical practice
5. Optometric techniques to assess the quality of vision across the elderly, from psychophysics to electrophysiology
6. Visual impairment and Low vision: definitions, epidemiology, and regulations
7. Evaluation of visual impairment in elderly people and clinical cases
8. Optical and digital (non-optical) low vision aids (Basic optics of magnifiers and prescription rationale, aids for peripheral visual field loss)
9. Lighting in low vision

## **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 (11 hours on all topics: 2-9)
- Online interactive synchronous lectures (10 hours on topics n. 2, 3, 5 and 7)
- In person Labs/clinics's topics (12 hours on topics n. 3, 4, 5, 7 and 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:

- Group work
- Final written assessment

- Final oral assessment

The Group work is a formal collaborative group activity of a few students (max 4) carried out during the semester to arrange a group presentation. This summative activity is based on a specific scientific theme assigned by the lecturer within the field of “Age-related optical changes in the eye and the visual system.” Group work assessment aims to verify the student’s achievement of LO1. It must be delivered within the term of the module and worth 20% of the unit mark maximum (6 out of 30). The assessment is based on the following marking scheme:

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

2 out of 30: the presentation is coherent with the main theory/ies of the theme

1 out of 30: the presentation reports different perspectives within the theme

1 out of 30: the presentation is aligned to the scientific format of graphs/standard of units/statistics etc

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

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 3 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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