

ORTOTTICA GENERALE (OAU211)

1. LANGUAGE

Italian.

2. COURSE CONTENTS

Coordinator: Prof. SALERNI ANNABELLA

Year Course: 2

Semester: 1

UFC: 6

Modules and lecturers:

- GENERAL ORTHOPTICS 1 (OAU14B) - 2 cfu - ssd MED/50

Prof. Maria Teresa Rebecchi

- GENERAL ORTHOPTICS 2 (OAU15B) - 2 cfu - ssd MED/50

Prof. Roberta Mattei

- STRABISMUS 1 (OAU16B) - 1 cfu - ssd MED/30

Prof. Annabella Salerni

- STRABISMUS 2 (OAU17B) - 1 cfu - ssd MED/30

Prof. Gustavo Savino

3. BIBLIOGRAPHY

1. BAGOLINI B. ZANASI M. *Strabologia: diagnosi e terapia dello strabismo e del nistagmo*. Verduci Editore, 2007 MANDATORY (Cap.4,5,6 pg 156-165, cap 7,8,9,10,11,12,13,14,15,17)

Furthermore, students will have to choose either 2 or 3

2. E.C. CAMPOS *Strabismo Manuale di diagnosi e terapia*, ed. Bononia University Press. (cap 4 pg53-54, cap 5, 7,8,9,10,11,12,13)

3. GK VON NOORDEN, EC CAMPOS, *Binocular Vision and Ocular Motility: Theory and Management of Strabismus..* Mosby, VI ed. E.C. CAMPOS (part two: all chapters; part three: all chapters)

4. LEARNING OBJECTIVES

Provide students with the tools to develop basic clinical reasoning in order to build a correct approach to the diagnosis and treatment of ocular motility and binocular vision pathologies through in-depth knowledge of orthoptic semeiotics, of the fundamental concepts for the evaluation and treatment of concomitant and incomplete strabismus, of the treatment of amblyopia and of the different forms of pathology of ocular motility and binocular vision (etiology, pathogenesis, clinic, diagnosis and differential diagnosis, hints of non-surgical therapy).

- **Knowledge And Understanding (Dublino 1).**

At the end of the course the student must have an in-depth knowledge of the clinical characteristics of the main pathologies of ocular motility and binocular vision (concomitant and uncommon strabismus, ocular nystagmus). He will also have to have well understood the basics of orthoptic semeiotics and have acquired all the notions relating to the execution of the various diagnostic tests. Finally, he must have learned the modalities of rehabilitation therapy for amblyopia and concomitant exo- and exo-deviations.

- **Applying knowledge and understanding (Dublino 2)**

The student must be able to transfer the acquired knowledge into clinical practice (through professional training).

- **Making judgements (Dublino 3)**

Faced with a not particularly complex clinical case, the student will have to choose and apply first of all the tests necessary to arrive at a correct diagnosis and, secondly, set up a therapeutic plan.

- **Communication skills (Dublino 4)**

In addition to knowing how to master the correct technical language, the student must, at this point in his training course, demonstrate that he is able to relate to the patient also in the context of the information to be provided to him.

- **Capacità di apprendere – Learning skills (Dublino 5)**

The student must be able to deepen the topics covered by reading scientific articles recommended by the teachers

5. PREREQUISITES

It is necessary for the student to have passed all the exams of the first year of the course including the annual professional internship exam.

6. TEACHING METHODS

Lectures with presentation of exemplary clinical cases, practical demonstrations concerning orthoptic semeiology.

- *Knowledge and understanding (Dublino 1):*

The lessons will have an interactive cut not only by encouraging students' questions but also by encouraging students to express personal opinions that will be discussed in the classroom and correctly addressed by the teacher.

- *Applying knowledge and understanding (Dublino 2):*

Presentation of real and / or simulated clinical cases will favor the ability to apply in practice what has been learned in theory. The process of practical application of the acquired knowledge will be perfected during the professionalizing internship.

- *Making judgements (Dublino 3):*

The discussion in the classroom led by the teacher both of the theoretical notions gradually acquired and of the exemplary clinical cases will be a fundamental moment in the acquisition of clinical reasoning skills..

- *Communication skills (Dublino 4):*

The mastery of a correct technical-scientific language (fundamental requirement for the student at the end of the second year of the course) will be achieved under the guidance of the teachers both

through continuous exercise in asking or answering questions and through exposure in the classroom of clinical cases or small reports on topics related to the programs of the Integrated Course. It will be the responsibility of the course teachers and the internship tutors that the student is also able to communicate with the patient in a correct but easily understandable language.

- *Learning skills (Dublino 5):*

The teachers will be responsible for directing students to the critical reading of scientific articles appropriate to their level of preparation, then asking that what has been learned is reported in the classroom with short reports, the basis for plenary discussion. In this way, students will be progressively encouraged to deepen their preparation independently

7. OTHER INFORMATIONS

Teachers can receive students by appointment from Monday to Thursday morning 12-13 at the ophthalmology of the Policlinico Gemelli Foundation

8. METHODS FOR VERIFYING LEARNING AND FOR EVALUATION

The test will be oral aimed at ascertaining the general knowledge of the topics covered as well as the ability of the student, for example in the face of a simulation of a clinical case, to correctly apply orthoptic semeiology and clinical reasoning allowing to formulate a diagnostic hypothesis valid. The final grade (expressed out of thirty) comes from the weighted average of the marks obtained for the individual modules pertaining to the Integrated Course. The student who proves to have acquired the knowledge and skills provided by the course by arguing in a coherent and complete manner (i.e. demonstrating clinical reasoning skills), who is able to apply the fundamentals learned to the concrete case, obtains 30/30 cum laude express in an appropriate technical language.

- *Knowledge and understanding (Dublino 1):*

The exam will include questions aimed at verifying the level of theoretical preparation achieved with particular attention to the student's ability to know how to relate the topics covered in the different Modules (for example the differences and the points of contact between the concomitant and incoming exodeviations) .

- *Applying knowledge and understanding (Dublino 2):*

Many questions will be transversal and related to simulated clinical cases, allowing to evaluate not only the theoretical preparation of the student but also his ability to set up a correct semeiological, diagnostic and, when foreseen by the programs, therapeutic approach with reasoning.

- *Making judgements (Dublino 3):*

The assessment of the level of independent judgment achieved will come from Dublin1 and Dublin 2.

- *Communication skills (Dublino 4):*

The ability to express in a correct scientific language will be evaluated but also, and above all, the

communicative ability in terms of clarity and expository logic.

• *Learning skills (Dublino 5 di metodi didattici):*

The ability to learn will be assessed during the year (as shown for Dublin 5) and enhanced during the final exam

9. PROGRAM

General orthoptic 1

Pre-verbal age:

anamnesis and observation: PAC, epicanthus, craniofacial changes, nystagmus

Corneal reflexes: Hirschberg, Krimsky test

Ocular motility examination, doll's head phenomenon

Pre-school age, school age:

Irvine 4 DP test

Cover-uncover test, prismatic cover test, angle in all gaze positions.

Determination of the deviation: variability, incompleteness

Anomalous fusional movements PAT, PPT

Assessment of asthenopic disorders,

Motor fusion evaluation

Diplopia assessment:

Red filter test, Bielschowsky test

Hess-Lancaster screen

Binocular field of view at the Goldmann perimeter

Try prisms for diplopia in adults (paretic squint, concomitant decompensated squint)

PAC evaluation: paretic, nystagmus, restrictive

Treatment of amblyopia: basic concepts; Occlusion, optical and pharmacological penalization, filters: risks and advantages of each treatment.

General orthoptic 2

Orthotic evaluation and treatment of: primary and secondary exodeviations; primary and secondary exodeviations.

Strabismus 1

Features of concomitant strabismus; Exodeviations; Exodeviations;

Vertical deviations; Ciclodeviation;

Alphabetic syndromes;

Ocular nystagmus.

Outline of non-surgical therapy of the treated forms.

Strabismus 2

Etiology, diagnosis and clinical features of paralytic strabismus; Neurogenic paralysis, myogenic, restrictive limitation; Forced duction and active force generation test; Recording of eye movements: diagnostic utility; Comparison between paralytic and non-paralytic strabismus; Comparison between congenital and acquired paralytic strabismus;

III cranial nerve palsy: etiology, symptoms and clinical signs; Paralysis IV n.c. : etiology, symptoms and clinical signs;

Paralysis VI n.c. : etiology, symptoms and clinical signs;

Concept of inter- and supra-nuclear paralysis;

Congenital and acquired restrictive squinting.

Cranial disinnervation syndromes.

Stiff necks of ocular origin: etiopathogenesis and clinical characteristics.