Course guide
370036 - TERAPIES - Visual Therapies

Last modified: 22/03/2024

Unit in charge: Terrassa School of Optics and Optometry
Teaching unit: 731 - OO - Department of Optics and Optometry.

Degree: BACHELOR'S DEGREE IN OPTICS AND OPTOMETRY (Syllabus 2020). (Compulsory subject).

Academic year: 2023 **ECTS Credits:** 3.0 **Languages:** Catalan

LECTURER

Coordinating lecturer: Marc Argilés Sans

Others: Marc Argilés Sans
Alicia Aleson Carbonell
Elvira Peris March
Lluïsa Quevedo Junyent

PRIOR SKILLS

- Ability to analyze and diagnose binocular and accommodative dysfunctions.
- Know what amblyopia is at a physiological level.
- Basic skills of knowledge of optometric tests in the binocular and accommodative system.

This subject is coordinated with the following subjects:
- Children's Optometry and Strabismus.
- Clinical Procedures in Optometry.
- Binocular Vision Dysfunctions.
- Advanced Clinical Procedures.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CE21. (ENG) Dissenyar, aplicar i controlar programes de teràpia visual.

Generical:
CG2. Carry out each stage of visual examinations effectively: medical history, selection and implementation of diagnostic tests, establishment of a prognosis, selection and execution of treatment and, if necessary, preparation of referral reports that establish levels of collaboration with other professionals, to ensure the best possible care for the patient.
CG3. Advise and guide patients and relatives during the entire treatment.
CG5. Give opinions and produce reports and expert reports when necessary.
CG6. Assess and incorporate the technological improvements necessary to properly carry out professional activities.

CG7. (ENG) Ser capaç de dur a terme activitats de planificació i gestió en un servei o una petita empresa en el camp de l'òptica-optometria

CG8. Plan and carry out research projects that contribute to the production of knowledge in the field of optometry and disseminate this scientific knowledge via the typical communication channels.
CG9. Expand and update one's professional abilities through continuing education.
CG13. Demonstrate and interpret methods for critical analysis and theory development and apply them to the field of optometry.
CG14. Demonstrate knowledge, skills and abilities in patient healthcare.
CG16. Participate effectively in both single-discipline and multidisciplinary work groups on projects related to optometry.

Transversal:
CT4. (ENG) Teamwork. The ability to work as a member of an interdisciplinary team, as just another member or in a leadership role, who can contribute to developing projects pragmatically and with a sense of responsibility and make commitments that take into account the resources that are available.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

a) Be able to planificate a vision therapy for binocular, accommodative, ocular motility and refractive amblyopia dysfunctions.
b) To know the basic materials and instrumentations in vision therapy
c) Be able to organize a vision therapy based on the diagnostics
d) To know the techniques of monocular stimulation in amblyopia and when is appropriate to do it
e) To know the scientific basis of vision therapy

STUDY LOAD

Type	Hours	Percentage
Hours medium group	15,0	20.00
Hours small group	15,0	20.00
Self study	45,0	60.00

Total learning time: 75 h

CONTENTS

Tema 2. Procedures and instrumentation

Description:
2.1. Fusional vergence
2.2. Accommodative system
2.3. Antisuppression
2.4. Ocular motility

Full-or-part-time: 2h
Theory classes: 2h

Tema 1. General concepts

Description:
1.1. Classification and prognosis
1.2. Neurophysiologic basis

Full-or-part-time: 1h 30m
Theory classes: 1h 30m

Tema 3. Binocular dysfunctions

Description:
3.1. Convergence insufficiency
3.2. Convergence excess
3.3. Divergence excess
3.4. Divergence insufficiency
3.5. Basic exphoria and esophoria
3.6. Vertical phoria

Full-or-part-time: 8h
Theory classes: 6h
Practical classes: 2h

Tema 4. Accommodative dysfunctions

Description:
4.1. Accommodative insufficiency
4.2. Accommodative excess
4.3. Accommodative infacility

Full-or-part-time: 8h
Theory classes: 6h
Practical classes: 2h

Tema 5. Eye movements disorders

Description:
5.1. Saccadic eye movements
5.2. Pursuit eye movements

Full-or-part-time: 3h
Theory classes: 2h
Practical classes: 1h

Tema 6. Refractive amblyopia

Description:
6.1. Optometric management
6.2. Vision therapy

Full-or-part-time: 7h 30m
Theory classes: 6h
Practical classes: 1h 30m

ACTIVITIES

Activity 1. Material and procedures used in vision therapy

Specific objectives:
B7: Vision Development and Ageing (22) the special examination needs of patients with learning and other disabilities
B8: Refraction: Knowledge and Practical: An understanding of the special examination needs of patients with learning and other disabilities.

Related competencies :
CG2. Carry out each stage of visual examinations effectively: medical history, selection and implementation of diagnostic tests, establishment of a prognosis, selection and execution of treatment and, if necessary, preparation of referral reports that establish levels of collaboration with other professionals, to ensure the best possible care for the patient.
CE21. (ENG) Dissenyar, aplicar i controlar programes de teràpia visual.

Full-or-part-time: 2h
Guided activities: 2h

Activity 3. Ocular motily exercises

Related competencies :
CG9. Expand and update one's professional abilities through continuing education.
CG14. Demonstrate knowledge, skills and abilities in patient healthcare.
CG3. Advise and guide patients and relatives during the entire treatment.
CG16. Participate effectively in both single-discipline and multidisciplinary work groups on projects related to optometry.

CG13. Demonstrate and interpret methods for critical analysis and theory development and apply them to the field of optometry.
CG6. Assess and incorporate the technological improvements necessary to properly carry out professional activities.

CG2. Carry out each stage of visual examinations effectively: medical history, selection and implementation of diagnostic tests, establishment of a prognosis, selection and execution of treatment and, if necessary, preparation of referral reports that establish levels of collaboration with other professionals, to ensure the best possible care for the patient.
CE21. (ENG) Dissenyar, aplicar i controlar programes de teràpia visual.

Full-or-part-time: 2h
Theory classes: 2h

Practices in the Laboratory

Full-or-part-time: 6h
Practical classes: 6h

Partial Exam

Related competencies :
CG2. Carry out each stage of visual examinations effectively: medical history, selection and implementation of diagnostic tests, establishment of a prognosis, selection and execution of treatment and, if necessary, preparation of referral reports that establish levels of collaboration with other professionals, to ensure the best possible care for the patient.
CE21. (ENG) Dissenyar, aplicar i controlar programes de teràpia visual.

Full-or-part-time: 1h 30m
Theory classes: 1h 30m

Final Exam

Related competencies :
CG14. Demonstrate knowledge, skills and abilities in patient healthcare.
CG13. Demonstrate and interpret methods for critical analysis and theory development and apply them to the field of optometry.
CE21. (ENG) Dissenyar, aplicar i controlar programes de teràpia visual.

Full-or-part-time: 1h 30m
Theory classes: 1h 30m

European Diploma

Description:
B(7) The special examination needs of patients with learning and other disabilities (1 ECTS)
B(8) An understanding of the special examination needs of patients with learning and other disabilities (1 ECTS)

Related competencies :
CG7. (ENG) Ser capaç de dur a terme activitats de planificació i gestió en un servei o una petita empresa en el camp de l'òptica-optometria

CG14. Demonstrate knowledge, skills and abilities in patient healthcare.
CG16. Participate effectively in both single-discipline and multidisciplinary work groups on projects related to optometry.

Full-or-part-time: 5h
Theory classes: 5h

GRADING SYSTEM

Parcial (15%)
Final (20%)
Activitats (25%)
Casos (40%)

BIBLIOGRAPHY

Basic:
- Griffin, John R; Grisham, J. David. Binocular anomalies: diagnosis and vision therapy. 4th ed. Boston: Butterworth-Heineman, cop. 2002. ISBN 978-0750673693.
- Argilés Sans, Marc. Moviments oculars, atenció visual i procés lector [on line]. Barcelona: Iniciativa Digital Politècnica, 2020 [Consultation: 24/02/2023]. Available on: http://hdl.handle.net/2117/187818. ISBN 9788498808315.
- Scheiman, Mitchell; Wick, Bruce. Clinical management of binocular vision: heterophoric, accommodative, and eye movement disorders [on line]. 3rd ed. Philadelphia: J.B. Lippincott Co, 2008 [Consultation: 24/02/2023]. Available on: https://oce-ovid-com.recursos.biblioteca.upc.edu/book?SerialCode=02148837. ISBN 9781496399731.
- Borràs García, M. Rosa. Visión binocular: diagnóstico y tratamiento [on line]. Barcelona: Edicions UPC, 1996 [Consultation: 24/02/2023]. Available on: http://hdl.handle.net/2099.3/36218. ISBN 9788483011591.
- Press, Leonard J. Applied concepts in vision therapy: with accompanying disk. St. Louis [etc.]: Mosby, cop. 1997. ISBN 978-0815167297.