Course guide

370021 - PROCEDAVAN - Advanced Clinical Procedures

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: 2022  ECTS Credits: 3.0  Languages: Catalan, Spanish, English

LECTURER

Coordinating lecturer: Ondategui Parra, Juan Carlos https://futur.upc.edu/JuanCarlosOndateguiParra
Others: Díaz Cortés, Ana Isabel

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CE18. Describe and apply the procedures and indications of clinical examination methods and complementary diagnostic techniques. Demonstrate knowledge of current eye surgery techniques and develop the capacity to carry out eye tests, including during pre- and postoperative examinations. Identify and apply new technologies in the field of optometric clinical practice.
CE20. Measure, interpret and treat refractive errors. Describe the sensory and oculomotor mechanisms of binocular vision. Identify the principles of and measure, interpret and treat accommodative and binocular vision anomalies. Demonstrate skills in communication, recording data and writing clinical histories. Demonstrate skills in the interpretation and clinical judgement of results of vision tests, to establish the most suitable diagnosis and treatment. Demonstrate skills in instrumental assessment tests of visual function and eye health. Carry out a complete medical history. Identify, apply and interpret instrumental tests relating to visual health problems. Demonstrate the clinical skills required for the examination and treatment of patients. Examine, diagnose and treat visual anomalies with an emphasis on differential diagnosis. Describe the nature and organisation of types of clinical care. Describe the protocols that are applied to patients.

Generical:
CG4. Critically reflect on the clinical, scientific, ethical and social issues involved in the professional practice of optometry, understand the scientific foundations of optics and optometry and critically evaluate terminology, clinical trials and research methods related to optics and optometry.
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.
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.
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:
CT7. Foreign language. Demonstrate knowledge of a foreign language, preferably English, at an oral and written level that is consistent with graduates' future needs.
TEACHING METHODOLOGY

MD1 - Participatory lecture class of theoretical and practical content
MD3 - Practical class of resolution, with the participation of the students, of practical cases and / or exercises related to the contents of the subject
MD4 - Laboratory practices
MD5 - Reading of didactic material, texts and articles related to the contents of the subject

LEARNING OBJECTIVES OF THE SUBJECT

5. Knowledge of the current techniques of eye surgery and competence to perform the eye tests of the pre and post surgical examination.
12. Competence to identify and manage situations that require interprofessional referral / collaboration.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours medium group</td>
<td>15,0</td>
<td>20.00</td>
</tr>
<tr>
<td>Hours small group</td>
<td>15,0</td>
<td>20.00</td>
</tr>
<tr>
<td>Self study</td>
<td>45,0</td>
<td>60.00</td>
</tr>
</tbody>
</table>

Total learning time: 75 h

CONTENTS

**Corneal ocular measurements and ocular aberrometry**

**Description:**
1. Corneal topography
   1.1 Corneal topographic description
   1.2 Management of topographic information.
   1.3 Interpretation of records
2. Ocular aberrometry
   1.1 Description of ocular aberrometry.
   1.2 Information management instrument.
   1.3 Interpretation of records

**Full-or-part-time:** 9h
Laboratory classes: 5h
Self study : 4h

**title english**

**Description:**
1. Computerized perimetry
   1.1 Description of visual field
   1.2 Information management of the instrument.
   1.3 Interpretation of records

**Full-or-part-time:** 8h
Practical classes: 3h
Self study : 5h
**Fundus examination**

**Description:**
1. Indirect ophthalmoscopy
   1.1 Panoptic
   1.2 Biomicroscope
   1.3 Indirect ophthalmoscope
2. Optical Coherence Tomography (OCT)
   2.1 Optic Nerve
   2.2 Retina
   2.3 Macular

**Full-or-part-time:** 15h
Practical classes: 6h
Self study: 9h

**Other complementary tests**

**Description:**
1. Contact tonometry
   1.1 Description of intraocular pressure.
   1.2 Information management of the instrument.
   1.3 Interpretation of records
2. Biometrics
   1.1 Description of intraocular parameters
   1.2 Information management of the instrument.
   1.3 Interpretation of records

**Full-or-part-time:** 4h
Practical classes: 2h
Self study: 2h

**ACTIVITIES**

**Corneal Topography Seminar**

**Description:**
Corneal topography record interpretation seminar: reliability indices, scales, topographic records and standard criteria for corneal alterations. It is accompanied by a specific assessable activity.

**Full-or-part-time:** 8h 30m
Laboratory classes: 3h 30m
Self study: 5h

**Computerized Perimetry Seminar**

**Description:**
Seminar on the interpretation of computerized perimetry records: strategies, reliability indices, global field indices, meshes, maps and standard criteria of visual field alterations. It is accompanied by a specific assessable activity.

**Full-or-part-time:** 8h 30m
Laboratory classes: 3h 30m
Self study: 5h
Seminar on the interpretation of fundus records, both retinography and OCT: reliability indices, topographic records and standard criteria of retinal, optic nerve and macular alterations. It is accompanied by a specific assessable activity.

**Full-or-part-time**: 10h
Laboratory classes: 5h
Self study: 5h

**Ocular Biometer Seminar**

Description:
Ocular biometer record information management seminar. It is accompanied by a specific assessable activity.

**Full-or-part-time**: 4h
Laboratory classes: 1h
Self study: 3h

**Practicum in clinical subjects**

Description:
Mandatory non-scoring activity. Carry out clinical tests with the different complementary test instruments in real patients, in the environment of clinical subject practices. The student must make the selection of the necessary specifications for the requested test, adjust the patient, select the minimum quality measures stipulated and interpret the results of the record obtained. As well as the saving of data in the clinical databases.

**Fina written test**

Description:
Individual resolution of different clinical cases related to the different contents of the subject.

**Full-or-part-time**: 8h
Practical classes: 2h
Self study: 6h

**GRADING SYSTEM**

Continuous evaluation, with the following evidence:
1. Corneal Topography Activity: 20%
2. Computer Perimetry Activity: 20%
3. Exploration Activity Eye fund: 20%
4. Biometrics Activity: 10%
5. Written test: 30%

The transversal competence is evaluated with the final note of the subject.
The competences of the European diploma are evaluated with the final mark of the subject.
EXAMINATION RULES.

In the event of a partial or total copy in any of the evaluations of the subject, the provisions of the General Academic Regulations of the UPC will be applied:

"Irregular actions that may lead to a significant variation in the grade of one or more students constitute a fraudulent conduct of an assessment act. This action involves the descriptive and numerical grade of 0 of the assessment act and the subject, without prejudice to the disciplinary process that may arise as a result of the acts performed.

If the student considers the decision to be incorrect, he or she may file a complaint with the principal or the dean of the school and, if the answer is not satisfactory, he or she may lodge an appeal with the principal.

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BIBLIOGRAPHY

Basic: