

## 26828 - Audiometry and Auditory Prostheses

### Información del Plan Docente

<b>Academic Year</b>	2016/17
<b>Academic center</b>	100 - Facultad de Ciencias
<b>Degree</b>	297 - Degree in Optics and Optometry
<b>ECTS</b>	6.0
<b>Course</b>	
<b>Period</b>	Second semester
<b>Subject Type</b>	Optional
<b>Module</b>	---

### **1.Basic info**

#### **1.1.Recommendations to take this course**

#### **1.2.Activities and key dates for the course**

### **2.Initiation**

#### **2.1.Learning outcomes that define the subject**

#### **2.2.Introduction**

### **3.Context and competences**

#### **3.1.Goals**

#### **3.2.Context and meaning of the subject in the degree**

#### **3.3.Competences**

#### **3.4.Importance of learning outcomes**

### **4.Evaluation**

### **5.Activities and resources**

#### **5.1.General methodological presentation**

The learning system that has been designed for this subject is based in the following points :

The matter is structured in 30 one-hour sessions (3ECTS) given in large groups, and 30 one-hour sessions given in small groups.

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Additionally the teachings of this area will include the non-presential load of work corresponding to the total of ECTS credits of the subject (90hours aproximately).

The teaching sessions content will be based in the teachers recommended bibliography, which will be adapted to the student's knowledge level.

### 5.2.Learning activities

Classroom teaching. Large group classes

Classroom teaching. Short group classes

1: Otoscopy, videotoscopy

2: impedanciometry

3: Earmold impression

4: Ton eliminar and supraliminal Audiometry

5: Vocal Audiometry

6: Hearing Aidss Types, Hearing Aids selection in order to hearingloss and hearing Aids accessories

7: Free field audiometry

8: Hearing Aids and solutions for children

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9: Earmolds modifications . Daily care and troubleshooting common hearing aids problema..

### 5.3.Program

Class 1: Auditory sense

Class 2: Sound. Soundwaves

Class 3: Volume, tone and timbre of the sound

Class 4: Reflection, refraction, and diffraction of sound

Class 5: Interference, Doppler effect, resonance ,distortion

Class 6: Audiométricunit :the octave

Class 7: The decibel

Class 8: Audiograms

Class 9: The Pinna

Class 10.The External Auditory Cannal

Class 11: The Eardrum

Class 12: Outer Ear Patology

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Class 13: Middle Ear Anatomy

Class 14: The mastoid. Eustachean Tube.

Class 15: Middle Ear Patology.

Class 16: The inner Ear. The semicircular Canals.

Class 17: The Cochlea.

Class 18: Cochlear duct: The Corti organ

Class 19: The outer hair cells

Class 20: The inner hair cells and transduction

Class 21: Auditory Pathway Brainsistem.. Brodmann Areas and Olivocochlear Rasmussen SYSTEM.

Class 22: Acoustic otoemissions, Auditory Brain Responses and Stady-state multifrequency auditory evoked potentials

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Class 23: Tone luminal Audiometry

Class24: Enmascaramiento audiométrico

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Class 25: Vocal Audiometry, Impedanciometry

Class26: Tinnitus

Class 27: Hearing aids 1

Class 28: Hearing Aids 2

Class 29: Cochlear Implants

Class 30: Children Hearingloss

### 5.4.Planning and scheduling

### 5.5.Bibliography and recomended resources

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|-----------|--|
| <b>BB</b> | Gil-Carcedo García, Luis María. Otología / Gil-Carcedo García, Luis María, Vallejo Valdezate, Luis Ángel, Gil-Carcedo Sañudo, Elisa . - 3ª ed. Buenos Aires ; Madrid [etc.] : Médica Panamericana, D.L. 2011                                   |
| <b>BB</b> | Portmann, Michel. Audiometría clínica : con atlas de gráficas audiométricas / por Michel Portmann, Claudine Portmann ; versión castellana del doctor José María Torres de Gassó . - 3a ed. rev. y puesta al día Barcelona : Toray-Masson, 1979 |
| <b>BB</b> | Salesa Batlle, Enrique. Tratado de audiología / Enrique Salesa Batlle, Enrique Perelló Scherdel, Alfredo Bonavida Estupiñá . [1ª ed.] Barcelona [etc.] : Masson, D. L. 2005  |
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práctica / Gonzalo de Sebastián, con la  
colaboración de José J. Badaracco, David  
G. Postan . - 5ª ed. Madrid [etc.] : Médica  
Panamericana, 1999