

37006 - ANATO2 - ANATOMY AND HISTOLOGY II OF THE VISUAL SYSTEM II

Coordinating unit: 370 - EUOOT - College of Optics and Optometry of Terrassa
Teaching unit: 731 - OO - Department of Optics and Optometry
Academic year: 2009
Degree: DIPLOMA IN OPTICS AND OPTOMETRY (Syllabus 2003). (Teaching unit Compulsory)
ECTS credits: 4 Teaching languages: Catalanian, Spanish

Lecturers

Coordinator: M. DOLORES MERINDANO ENCINA

Learning objectives of the subject

Study load

Total learning time: 77h	Laboratory classes:	12h	15.58%
	Other activities:	0h	0.00%
	Practical classes:	0h	0.00%
	Self study (distance learning):	35h	45.45%
	Theory classes:	30h	38.96%

37006 - ANATO2 - ANATOMY AND HISTOLOGY II OF THE VISUAL SYSTEM II

Content

OCULAR ANNEXES

Learning time: 46h

Theory classes: 17h

Laboratory classes: 8h

Self study (distance learning): 21h

Description:

Subject 1. Orbit. General characteristics of the bone tissue: flat bones. Macroscopic anatomy of the cranium: neurocranium and splanchnocranium. Macroscopic anatomy of the orbit. Orbit walls: round, nasal wall, temporal wall, orbit floor. Orbit fractures. Periorbit.

Subject 2. Extraocular muscles. General characteristics of the skeletal muscular tissue. Macroscopic anatomy of the extraocular muscles. Zinn's tendon: structure and function. Straight muscles: insertions and relations. Action of the straight muscles. Oblique muscles: insertions and relations. Action of the oblique muscles. Fascias and sheaths. Muscular alterations.

Subject 3. Eyelids. Macroscopic and microscopic anatomy of the eyelids: edges, angles and sides. Orbicular muscle, elevating muscle, tarsus, orbital septum. Eyelashes: histological structure, location and functions. Meiborn, Zeiss and Moll's palpebral glands: histological structure, location and functions. Anatomic alterations.

Subject 4. Conjunctiva. Macroscopic anatomy of the conjunctiva: palpebral conjunctiva, conjunctival fornix and bulbar conjunctiva. Microscopic anatomy: epithelium and conjunctival corium. Conjunctival glands: structure and functions. Anatomic alterations.

Subject 5. Lacrimal system. Macroscopic and microscopic anatomy of the main lacrimal gland. Basal tear, reflex tear and psychic tear. Lacrimal film: origin, composition and functions. Quantity and quality of the tear: observation methods. Lacrimal elimination vias: lacrimal points, lacrimal conducts, lacrimal sac, lacrimonasal conduct. Lacrimal film alterations.

37006 - ANATO2 - ANATOMY AND HISTOLOGY II OF THE VISUAL SYSTEM II

<p>PERIPHERAL NERVOUS SYSTEM AND VASCULARISATION</p>	<p>Learning time: 31h Theory classes: 13h Practical classes: 0h Laboratory classes: 4h Other activities: 0h Self study (distance learning): 14h</p>
<p>Description:</p> <p>Subject 6 Vascularisation of the annexes. Orbital branches: muscular arteries, front ciliary arteries, lacrimal artery. Extraocular branches: ethmoidal arteries. Supraorbital artery, palpebral artery.</p> <p>Subject 7 Nervous system: definition, structure and functions. Peripheral nervous system. Sensitive, motor and mixed nerves: definition, location and function of the cranial and spinal nerves. Peripheral ganglions: definition, location and function of the cerebral and spinal ganglions.</p> <p>Subject 8 Cranial nerves related with the sight organ: sensitive enervation Trigeminal nerve (V): origin, trajectory, functions and dysfunctions. Trigeminal branches: ophthalmic nerve, maxillary nerve and mandibular nerve.</p> <p>Subject 9 Cranial nerves related with the sight organ: Somatic motor enervation Oculomotor nerve (III): nuclei of origin, distribution, functions and dysfunctions. Trochlear nerve (IV cranial pair): nuclei of origin, distribution, functions and dysfunctions. Abducent nerves (VI cranial pair): nuclei of origin, distribution, functions and dysfunctions. Facial (VII cranial pair): nuclei of origin, distribution, functions and dysfunctions.</p> <p>Subject 10 Cranial nerves related with the sight vision: Vegetative motor enervation Vegetative vias: general characteristics. Parasympathetic nervous system (craniosacral): structure, location and functions. Sympathetic nervous system (thoracolumbar): structure, location and functions. Parasympathetic ocular nervous system: via of the common ocular motor (III), facial via (VII). Ciliary ganglions and pterygopalatine. Sympathetic ocular nervous system: main nerves and upper cervical ganglion. Cornea and palpebral reflexes: afferent and efferent vias.</p>	

37006 - ANATO2 - ANATOMY AND HISTOLOGY II OF THE VISUAL SYSTEM II

SYLLABUS OF PRACTICALS

Description:

Practical 1

Anatomic and histological study of the cranium and the orbit.

Practical 2

Anatomic and histological study of the extraocular muscles.

Practical 3

Anatomic, histological and biomicroscopic study of the eyelids and the conjunctiva.

Practical 4

Anatomic, histological and biomicroscopic study of the tear and the lacrimal vias.

Practical 5

Anatomic and histological study of the somatic peripheral nervous system.

Practical 6

Anatomic and histological study of the vegetative peripheral nervous system.

37006 - ANATO2 - ANATOMY AND HISTOLOGY II OF THE VISUAL SYSTEM II

Bibliography

Basic:

PURVES; AUGUSTINE; FITZPATRICK; HALL; LAMANTIA; McNAMARA; WILLIAMS. NEUROCIENCIA. 3A ED. MADRID: PANAMERICANA, 2007. ISBN 84-7903-989-2.

DUANE E. HAINES. PRINCIPIOS DE NEUROCIENCIA. 2ND ED. MADRID: ELSEVIER SCIENCE, 2004. ISBN 84-8174-656-8.

SOBOTTA, J. ATLAS DE ANATOMÍA HUMANA. VOL.1: CABEZA, CUELLO Y MIEMBRO SUPERIOR. 22A ED. MADRID: MÉDICA PANAMERICANA, 2006. ISBN 84-7903-632-X.

SCHUNKE, M.; SCHULTE, E.; SCHUMACHER, U. PROMETHEUS: TEXTO Y ATLAS DE ANATOMÍA. VOL.3: CABEZA Y NEUROCIENCIA. BUENOS AIRES: MÉDICA PANAMERICANA, 2007. ISBN 84-7903-980-9.

OYSTER, C.W. THE HUMAN EYE: STRUCTURE AND FUNCTION. SUNDERLAND: SINAUER, 1999. ISBN 0-87893-645-9.

RODRIGUEZ; SMITH-AGREDA. ANATOMÍA DE LOS ÓRGANOS DEL LENGUAJE, VISIÓN Y AUDICIÓN. 2A ED. MADRID: MÉDICA PANAMERICANA, 2003. ISBN 84-7903-868-3.

NETTER, F.H. SISTEMA NERVIOSO: ANATOMÍA Y FISIOLOGÍA. BARCELONA: MASSON, 2005. ISBN 84-458-0188-0.

WILSON-PAUWELS; AKESSON; STEWART; SPACEY. NERVIOS CRANEALES EN LA SALUD Y LA ENFERMEDAD. 2A ED. BUENOS AIRES: MÉDICA PANAMERICANA, 2003. ISBN 950-06-2438-9.

Complementary:

KAHLE, W. ATLAS DE ANATOMÍA. VOL.3: SISTEMA NERVIOSO Y ÓRGANOS DE LOS SENTIDOS. 7A ED. BARCELONA: OMEGA, 2003. ISBN 84-282-1195-7.

SNELL, R.S. ANATOMÍA CLÍNICA PARA ESTUDIANTES DE MEDICINA. MÉXICO: MCGRAW-HILL, 2002. ISBN 970-10-3590-9.

BRON, A.J.; TRIPATHI, R. C.; TRIPATHI, B. J. ANATOMY OF THE EYE AND ORBIT. 8TH ED. LONDON: CHAPMAN & HALL MEDICAL, 1997. ISBN 0-412-41010-9.

REMINGTON, L.A. CLINICAL ANATOMY OF THE VISUAL SYSTEM. 2ND ED. SANT LOUIS: ELSEVIER, 2005. ISBN 0-7506-7490-3.

WHEATER, P.R. WHEATER'S HISTOLOGÍA FUNCIONAL: TEXTO Y ATLAS EN COLOR. 4A ED. MADRID: HARTCOURT, 2000. ISBN 84-8174-499-9.

POSEL, P.; SCHULTE, E. ESQUEMAS DE ANATOMÍA: HISTOLOGÍA, EMBRIOLOGÍA. MADRID: MARBÁN, 2000. ISBN 84-7101-304-5.