

Academic Year/course: 2022/23

29314 - "Head and Neck Morphology; Stomatognathic System Physiology"

Syllabus Information

Academic Year: 2022/23

Subject: 29314 - "Head and Neck Morphology; Stomatognathic System Physiology"

Faculty / School: 229 - Facultad de Ciencias de la Salud y del Deporte

Degree: 442 - Degree in Odontology

ECTS: 6.0

Year: 2

Semester: First semester

Subject Type: Basic Education

Module:

1. General information

1.1. Aims of the course

The subject and its expected results respond to the following approaches and objectives:

The general objective of the course is to train our students in the knowledge of the anatomy of the head and neck, of the healthy human body, attending both to its characteristics by elements and systems in order to their joint integration; as well as the physiological processes that take place in the stomatognathic apparatus of the healthy human being, and how these are integrated, to explain the mechanisms of the coordinated and regulated functioning of the mentioned apparatus.

These aims respond to the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/>), so that the acquisition of the learning outcomes of the subject provides training and competence to contribute to some extent to their achievement:

- Goal 3: Good health and well-being
- Goal 4: Quality education
- Goal 5: Gender equality

1.2. Context and importance of this course in the degree

This subject is key for the future understanding of the pathophysiological processes of the disease in the stomatognathic apparatus and for understanding and executing the appropriate therapeutic procedures.

1.3. Recommendations to take this course

Recommendations for taking this subject:

It is recommended, for the achievement of the competences of the subject, the prior acquisition of the competences of the subjects of Human Anatomy, Biochemistry, Cell Biology and Human Physiology.

2. Learning goals

3. Assessment (1st and 2nd call)

3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

Regarding the evaluation of the Head and Neck Morphology Module:

There are two possibilities of assessment: continuous or global assessment. To complete the continuous assessment of that module, there are some indispensable requirements: to pass both parts (theoretical and practical) with a minimum score of 5

out of 10; and to receive positive feedback from the teacher on the individual notebook. That Module's assessment tasks are:

- 1.- Theoretical part (60% of the grade): exam with multiple-choice questions and development and reasoning questions.
- 2.- Practical part (40% of the grade):
 - Activities during the practical sessions if continuous assessment / or final competency test if global assessment (15%)
 - Group work and oral presentation if continuous assessment / or individual final defense if global assessment (10%)
 - Individual notebook about dental morphology in both assessment options (15%)

The student must pass both the theoretical and practical parts with a score of 5 out of 10 to pass the Head and Neck Morphology Module. The score for the theoretical and practical parts will only be averaged if each of them has been passed. An oral defense may be required for in any of the assessment tests in order to verify its originality.

Regarding the evaluation of the Physiology part of the stomatognathic apparatus:

- 1.- Final exam (80% of the grade):
 - 25 multiple choice test questions in which the effect of chance will be subtracted (50%)
 - 4 open-ended questions (50%)
 - The student can take a partial exam that will be eliminatory. The questions will include questions taught in the classroom, of a theoretical nature, as well as practical ones studied in the laboratory.
- 2.- Evaluation of the practices (10% of the mark)
- 3.- Assessment of the Physiology Work (10% of the grade)
- 4.- To pass the physiology part, it is a "sine qua non" requirement to pass the final or partial exam, the practicals and the work.

Regarding the final grade of the subject:

Based on the tests described above and through their weighted averages and their proportionality according to the contents in physiology and morphology, the overall grade of the subject will be obtained.

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, practice sessions, tutorials, and autonomous work and study. The learning process designed for this course follows an orderly step-wise process, so that the course starts with the study of basic and integration concepts which are mainly worked through **lectures**, then it introduces the student to develop skills involving procedural, integration and understanding skills of the applications of the course to be worked through various activities in small groups in **practical sessions**.

To better track the learning process students will be encouraged to use the **tutoring/office hours** through various systems and methods: conventional tutoring or more specific assistance related to practical work.

Communications, announcements, and supplementary materials will be provided via Moodle in the **Anillo Digital Docente** (intranet ADD).

4.2. Learning tasks

This course is organized as follows:

- **Lectures** (4 ECTS, 40 hours). basic concepts of the course are shown, directing students towards the acquisition of skills and learning outcomes. Audiovisual support material will be used and students can find it in Moodle. During these activities, students will be encouraged to be participatory and dynamic.
- **Practice sessions** (2 ECTS, 20 hours) Six two-hour sessions
 - a) Anatomy practices: Head, Neck, masticatory apparatus, teeth.
 - b) Laboratory sessions: students will have the opportunity to perform functional examinations of the main physiological processes related to the program.

All students will be informed about the risks that may have the realization of the practices of this course, and if dangerous products are handled; what to do in case of accident. To perform them it is compulsory to sign a commitment to comply with lab standards and safety. It is the student's responsibility to be aware of all such issues and act in an extremely cautious manner to avoid any potential causes for accidents in the laboratory. For more information, see the information for students of the Occupational Health and Safety Unit: <http://uprl.unizar.es/estudiantes.html>

Before each session, students will have available the protocol of the practice. At the end of it, students

submit to the teacher a laboratory assignment with answers to questions about the practice performed and the results obtained. Along with the degree of participation and teamwork done, this assignment will grade this part of the course.

- **Tutorials:** both individual and grouped, for guidance in the teaching-learning of the course.
- **Autonomous work and study:** From all other activities, students should be responsible for creating diagrams and structured work programs.

4.3. Syllabus

This course will address the following topics:

Topics related to Anatomy:

- 1- Bone structures of the head and craniofacial Pits and mucous membranes.
- 2- Clinical anatomy of the temporomandibular joint
- 3- Neuromuscular systems head and neck
- 4- Salivary glands and visceral structures of the head and neck
- 5- Sensory nerves / Cranial nerves
- 6- Neurovascular bundle head and neck
- 7- Topographic anatomy of head and neck
- 8- Dental Morphology

Topics related to the physiology of the stomatognathic apparatus:

- 1.- Introduction and global vision of the physiology of the stomatognathic apparatus. Oral mucosa.
- 2.- Saliva. Salivation control.
- 3.- Mastication and dynamic occlusion.
- 4.- Temporomandibular joint physiology.
- 5.- Deglutition.
- 6.- Speech, fonation, and language articulation.
- 7.- Sensory functions: taste and smell.
- 8.- Sensory functions: proprioceptive sensitivity, mechanosensation (somatesthesia and Touch)
- 9.- Sensory functions: temperature sensation.
- 10.- Sensory functions: nociception, orofacial pain.
- 11.- primary teeth vs permanent teeth.
- 12.- Tooth physiology: enamel and dentin-pulp complex.
- 13.- Periodontium: cementum, periodontal ligament, alveolar bone.
- 14.- Periodontium: gingiva.
- 15.- Bone physiology and phosphocalcic metabolism.
- 16.- Immune system in the stomatognathic apparatus.

4.4. Course planning and calendar

The theoretical lectures will begin the first day of class assigned to the theoretical teaching of the course. Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the Faculty of Health and Sports Sciences website and Moodle.

4.5. Bibliography and recommended resources

To consult the bibliography and recommended resources, you must access the *Recommended Bibliography* link:
<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=29314>