COURSE DATA

DATA SUBJECT

Code: 34698
Name: Human physiology
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
1206 - Degree in Dentistry	Facultat de Medicina i Odontologia	1	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1206 - Degree in Dentistry	Physiology	BASIC

COORDINATION

SEGARRA IRLES GLORIA VTA

BORRAS BLASCO CONSUELO

SUMMARY

The subject describes the functioning of the different organs and systems of the healthy human body, which contribute to homeostatic balance, that is, to life.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

COMPETENCES / LEARNING OUTCOMES

1206 - Degree in Dentistry

Conocer los factores que regulan el flujo sanguíneo.

Conocer y evaluar la diuresis.

Describir el transporte de gases por la sangre y los factores que lo regulan.

Describir los mecanismos para evitar la extravación sanguínea.

Identificar los volúmenes y capacidades pulmonares.

Mecanismos de la digestión y absorción de alimentos.

Papel del sistema endocrino en la coordinación de las distintas funciones del organismo.

Transporte tubular en el riñon y eliminación de deshechos.

DESCRIPTION OF CONTENTS

1. General Physiology

Topic 1. Homeostasis. body fluids
Topic 2. Transport through membrane.
Topic 3. Action potential.
Topic 4. Conduction of the nerve impulse.
Topic 5. Synapse.

2. Nervous system

Topic 6. Organization of the Nervous System. Autonomic nervous system.

3. Physiology of the blood

Topic 7. Composition and functions of blood.
Topic 8. Blood groups.
Topic 9. Hemostasis.

4. Physiology of the cardiovascular system

Topic 10. Introduction to the cardiovascular system. Electrical activity of the heart.
Topic 11. mechanical activity of the heart. Cardiac output.
Topic 12. Arterial circulation. Blood pressure.
Topic 13. Capillary, venous and lymphatic circulation.
Topic 14. Regulation of blood flow. Regulation of blood pressure.

5. Physiology of the digestive system

Topic 15. Introduction to the digestive system. Motor functions of the digestive system.
Topic 16. Gastrointestinal secretions.
Topic 17. Digestion and absorption of food.

6. Physiology of the Renal system

Topic 18. General functions of the kidney.
Topic 19. Renal circulation and filtration.
Topic 20. Tubular functions.
Topic 21. Concentration and dilution of urine. Urination.

7. Physiology of the endocrine system

Topic 22. Introduction to the endocrine system.
Topic 23. Neuroendocrine integration.
Topic 24. Neurohypophysis. Adenohypophysis.
Topic 25. Adrenal cortex. Adrenal medulla.
Topic 26. Thyroid.
Topic 27. Phosphocalcic balance.
Topic 28. Endocrine pancreas.

8. Laboratory practices

1.-Energy expenditure of the organism.
2.-Conduction speed of the action potential.
3.-Spirometry.
4.-Study of blood functions.
5.-Recording of the electrocardiogram.
6.-Measurement of blood pressure. Auscultation.
7.-Study of the properties of the kidney.

9. Classroom practices / seminars

1.-Mechanics of ventilation. Pulmonary ventilation.
2.- Gas exchange. Transport of gases through the blood.
3.-Regulation of ventilation. Acid-base balance.
4.-Balance in food.
5.-Objectives of sustainable development in Health, presentation of NGOs, patient associations.
6.-Basic knowledge of Physiology.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	33,00
Laboratory	15,00
Classroom practices	12,00
Total hours	**60,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	0,00
Independent study and work	30,00
Preparation of lessons	36,00
Preparation for assessment activities	9,00
Resolution of case studies	15,00
Total hours	**90,00**

TEACHING METHODOLOGY

Theoretical classes will be taught in the classroom, consisting of 33 participatory lectures on the topics described above, as well as classroom practices/seminars and practical laboratory classes:

- Energy expenditure of the body
- Conduction velocity of the action potential
- Spirometry
- Study of blood functions
- Electrocardiogram recording
- Blood pressure measurement. Auscultation
- Study of kidney properties

The teaching will incorporate a gender perspective, respect for diversity, and the Sustainable Development Goals (SDGs) whenever possible.

EVALUATION

Attendance at practical activities is mandatory. A student is considered to meet this requirement if they have attended at least 80% of these activities and have adequately justified their inability to attend the remaining sessions due to a force majeure. Meeting this requirement is essential to pass the course.

A written exam with essay questions will be conducted on the theory classes, practicals, and/or seminars.

Final theoretical exam (80% of the final grade, 8 questions): Includes all theoretical material. Practicals

(20% of the final grade): Final practical exam: Questions from seminars and practicals (15%, 2 questions, conducted alongside the final theoretical exam). Academic performance demonstrating participation in theoretical classes, practicals, and seminars (5%).

To add the practical grade (20%), it is necessary to have passed the theoretical exam (obtaining a minimum of 5 points).

The course will be considered passed if a minimum of 5 points is obtained in the final grade.

Students are reminded of the importance of completing evaluation surveys for all course instructors.

REFERENCES

BÁSIQUES

- Fisiología Humana. Stuart Ira Fox. 2021. Editorial McGraw-Hill Interamericana. ISBN: 9786071515377.
- Tratado de Fisiología Médica. Guyton y Hall. 15ª Ed Elsevier-Mosby

RECURSOS e-Salut:

- ClinicalKey Student Medicina, Odontologia y Enfermería [https://uv-es.libguides.com/RecursosSalut]
- Acces Medicina [https://uv-es.libguides.com/Access_Medicina]
- Médica Panamericana [https://uv-es.libguides.com/Medica_Panamericana]
- Acces Medicine. McGraw Hill Medical. https://accessmedicina.mhmedical.com

COMPLEMENTÀRIES

- Fisiología. Costanzo L. 6ª Ed. Elsevier-Mosby