COURSE DATA

DATA SUBJECT

Code: 44771
Name: Basic regulation and control mechanisms
Cycle: Master's Degree
ECTS Credits: 3
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
2231 - Master's Degree in Biomedical Engineering	Facultat de Medicina i Odontologia	1	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2231 - Master's Degree in Biomedical Engineering	Bridging courses	ELECTIVES

COORDINATION

CALVO SAIZ CONRADO JAVIER

SUMMARY

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

DESCRIPTION OF CONTENTS

1.

2.

3.

4.

5.

6.

7.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	20,00
Laboratory	10,00
Total hours	**30,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	5,00
Individual or group project	20,00
Independent study and work	25,00
Preparation of lessons	15,00
Preparation for assessment activities	35,00
Resolution of case studies	20,00
Total hours	**120,00**

TEACHING METHODOLOGY

EVALUATION

REFERENCES

- Libros de texto: Khoo MC Physiological Control Systems. IEEE Press Wiley & Sons Inc. New Jersey. 2000. Boron, WF and Boulpaep EL. Medical Physiology, 2nd Ed. (2012) Saunders, Elsevier, Philadelphia, PA, USA Fernández J., Galindo G. Automatic control sistems in biomedical engineering. Springer Int. Publishing AG 2018 Wood AW. Physiology, biophysics and biomedical engineering. CRC Press. A Taylor and Francis Group. Boca Raton, FL. 2012. BERNE R, LEVY M. Fisiología (4ª ed.). Elsevier-Mosby, 2009. Cobelli C, Carson E. Introduction to Modeling in Physiology and Medicine. Academi Press. 2008. Hall, JE. Guyton and Hall. Textbook of Medical Physiology. 13ª ed. Elsevier. Philadelphia. 2016 Iglesias P. And Ingalis B. Control theory and systems biology. MIT Press. 2010.

- TRESGUERRES JAF. Fisiología Humana (3ª ed.). Mc Graw Hill-Interamericana, 2005. CARDINALLI DP. Neurociencia Aplicada. Panamericana, 2007. POCOCK G, RICHARDS CD. Fisiología humana. La base de la Medicina (2ª ed.). Masson, 2005. Villar R, López C, Cussó F. Fundamentos físicos de los procesos biológicos. ECU Ed.