

1. OVERVIEW

Subject Area	Disease Mechanisms and Processes 2
Degree	Bachelor's Degree in Nursing
School/Faculty	Biomedical and Health Sciences
Year	Second
ECTS	6 ECTS
Type	Core
Language(s)	Spanish
Delivery Mode	On campus
Semester	Semester 4

2. INTRODUCTION

"Disease Mechanisms and Processes 2" is a compulsory subject area within the curriculum of the Bachelor's Degree in Nursing of the Universidad Europea de Madrid. We will study the mechanisms and processes of disease linked to normal physiological functioning, including the pathophysiological changes that occur in the health/illness process throughout the different stages of life. Conditions brought on by a disturbance in the physiological balance will be studied from a clinical perspective, integrating relevant aspects of interprofessional relations.

3. SKILLS AND LEARNING OUTCOMES

Basic skills (CB, by the acronym in Spanish):

- CB1: Acquire advanced knowledge and demonstrate an understanding of theoretical and practical aspects, as well as the working methodology in your area of study, ensuring the highest level of knowledge possible.
- CB3: Be able to collect and interpret data and information to form conclusions, including, where necessary and relevant, reflection on social, scientific or ethical issues in your field of study.

General skills (CG, by the acronym in Spanish):

- CG2: Plan and provide nursing care directed at individuals, families or groups, geared towards effective results for health and assess their impact through clinical care practice guidelines, which describe the processes by which a health problem is diagnosed, treated or cared for.
- CG6: Base nursing interventions on scientific evidence and available resources.
- CG17: Perform physiotherapeutic interventions based on comprehensive healthcare, which requires multidisciplinary cooperation, process integration and continuity of care.

Cross-curricular skills (CT, by the acronym in Spanish):

- CT2: Manage information, resources and technologies independently to achieve your learning objectives.
- CT3: Contribute actively in work teams, assuming shared responsibilities.
- CT4: Apply effective communication strategies in professional practice.

Specific skills (CE, by the acronym in Spanish):

- CE7: Understand the pathophysiological processes and risk factors that determine health and disease status at different stages of the life cycle.

European skills:

- CUE1: Independently diagnose the necessary nursing care using theory and medical knowledge, and plan, organise and administer nursing care when treating patients on the basis of the knowledge and skills acquired in accordance with point 6(a), (b) and (c), in order to improve professional practice.
- CUE2: Collaborate effectively with other actors in the health sector, including taking part in practical training for health workers based on the knowledge and skills acquired in accordance with paragraph 6(d) and (e).

Learning outcomes (RA, by the acronym in Spanish):

- RA1. Describe the pathophysiological processes and risk factors that determine health and disease status at different stages of the life cycle.
- RA2. Identify the manifestations of pathophysiological processes that determine health and disease status at different stages of the life cycle.
- RA3. Identify the potential complications of pathophysiological processes that determine health and disease status at different stages of the life cycle.
- RA4. Explain how diagnostic tests and therapeutic procedures relate to pathophysiological processes.
- RA5. Discuss the clinical status of a patient with nursing professionals and other professionals in the interdisciplinary team.
- RA6. Implement strategies to search for, analyse, understand and evaluate relevant information, related to the pathophysiological processes studied in this subject area.

The following table shows how the skills developed in the subject area relate to the intended learning outcomes:

Skills	Learning outcomes
CB1, CG2, CE7	RA1. Describe the pathophysiological processes and risk factors that determine health and disease status at different stages of the life cycle. RA2. Identify the manifestations of pathophysiological processes that determine health and disease status at different stages of the life cycle. RA3. Identify the potential complications of pathophysiological processes that determine health and disease status at different stages of the life cycle.
CB3, CG2	RA4. Explain how diagnostic tests and therapeutic procedures relate to pathophysiological processes.

CB1, CG2, CG17, CT3, CT4 CUE1, CUE2	RA5. Discuss the clinical status of a patient with nursing professionals and other professionals in the interdisciplinary team.
CB3, CG6, CT2	RA6. Implement strategies to search for, analyse, understand and evaluate relevant information, related to the pathophysiological processes studied in this subject area.

4. CONTENTS

The subject is organised into five learning units, which in turn are divided into themes:

Unit 1. Pathophysiology of Endocrine Disorders

- 1.1. Pituitary disorders
- 1.2. Thyroid disorders
- 1.3. Adrenal gland disorders
- 1.4. Pancreatic disorders
- 1.5. Gonadal disorders

Unit 2. Pathophysiology of Neurological Disorders

- 2.1. Pain
- 2.2. Headaches
- 2.3. Infections of the central nervous system
- 2.4. Chronic neurological and/or neurodegenerative disorders
- 2.5. Traumatic brain injury

Unit 3. Pathophysiology of Musculoskeletal Disorders

- 3.1. Traumatic and structural injuries
- 3.2. Bone infections
- 3.3. Metabolic disorders
- 3.4. Rheumatic diseases

Unit 4. Pathophysiology of Haematological Disorders

- 4.1. Erythrocyte disorders
- 4.2. Haemostatic disorders
- 4.3. White blood cell disorders
- 4.4. Haematopoietic stem cell transplantation

Unit 5. Pathophysiology of Cancer Disorders: General Principles of Cancer

- 5.1. Cancer biology
- 5.2. Oncogenesis
- 5.3. Clinic
- 5.4. Special oncology

5. TEACHING-LEARNING METHODS

The types of teaching-learning methods are as follows:

- Lecture
- Case studies
- Collaborative learning

6. LEARNING ACTIVITIES

The types of learning activities, plus the amount of time spent on each activity, are as follows:

On campus:

Learning activity	Number of hours
Lectures	49 h
Asynchronous lectures	10 h
Reports and written work	10 h
Case studies	3 h
Problem-solving	9 h
Group tutorials	2 h
Searching resources and choosing information sources	10 h
Oral presentations	3 h
On-campus knowledge tests	4 h
Independent working	50 h
TOTAL	150 h

7. ASSESSMENT

The assessment systems, plus their weighting in the final grade for the subject area, are as follows:

On campus:

Assessment system	Weighting
Objective knowledge test	50%
Reports and written work: Clinical case study	30%
Oral presentation	10%
Reports and written work: Interprofessional activity	10%

On the Virtual Campus, when you open the subject area, you can check the guide with the details of your assessment activities, including the deadlines and assessment procedure for each.

8. BIBLIOGRAPHY

The works of reference for following up this subject area are:

- Porth C, Gaspard K.J., Noble K.A., Araiza Martínez M.E., Tovas Sosa M.A., Véliz Salazar L. (2019). *Fisiopatología: alteraciones de la salud, conceptos básicos*. 3ª ed. Barcelona, España: Wolters Kluwer-Lippincott Williams & Wilkins.

The recommended bibliography is indicated below:

- Barrachina Bellés L. (2003). *Enfermería médico-quirúrgica: generalidades*. 1ª ed. Barcelona, España: Masson.
- Burke, K. y LeMone, P. (2009). *Enfermería Medicoquirúrgica volumen I*. 4ª ed. Madrid, España: Pearson.
- Burke, K. y LeMone, P. (2009). *Enfermería Medicoquirúrgica volumen II*. 4ª ed. Madrid, España: Pearson.
- Chocarro González L y Venturini Medina, C. (2006). *Procedimientos y cuidados de enfermería médico- quirúrgica*. Madrid, España: Elsevier.
- Dafnis, E. , Raymond, J., Zelman, M. , Mulvihill, M.L. y Holdaway, P. (2018). *Fisiopatología*. 8ª ed. Madrid, España: Pearson.
- Guyton A.C., Hall J.E. (2011). *Tratado de fisiología médica*. 12ª ed. Madrid, España: Elsevier.
- Kasper D.L., Harrison T.R., Blengio Pinto J.R. (2009). *Harrison principios de medicina interna*. 17ª ed. México: McGraw-Hill Interamericana.
- Lewis S.M., Heitkemper M.M., Dirksen S.R. (2009). *Enfermería Medicoquirúrgica: valoración y cuidados de problemas clínicos*. Madrid, España: Elsevier.
- Lorenzo M.A., Simon F, Gómez F, Hernández B. (2015). *Fisiopatología General*. Barcelona, España: Altamar.
- Pastrana Delgado, J., García de Casasola, G. (2013). *Fisiopatología y patología general básicas para ciencias de la salud*. Madrid, España: Elsevier.
- Porth C. (2008). *Fisiopatología: salud-enfermedad, un enfoque conceptual*. Buenos Aires; Madrid: Panamericana.
- Silbernagl S, Lang F. (2010). *Fisiopatología: texto y Atlas*. 3ª rev y ampl ed. Madrid, España: Panamericana.
- Swearingen P.L. y Ross D.G. (2008). *Manual de enfermería médico-quirúrgica: intervenciones enfermeras y tratamientos interdisciplinarios*. Madrid, España: Harcourt.
- Uribe Olivares, R.A. (2018). *Fisiopatología. La ciencia del porqué y el cómo*. Madrid, España: Elsevier.