

Degree Project

Code: 102990
ECTS Credits: 12

Degree	Type	Year	Semester
2500892 Physiotherapy	OB	4	0

Contact

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Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Teachers

Raul Torres Claramunt
Anna Guillen Sola
Eva de Cardona Recasens
Diego Agustin Rodriguez
Monique Messaggi Sartor
Roser Coll Fernandez

External teachers

Felip Orient López

Prerequisites

- Completion of at least two thirds of the total credits of the degree program
- Completion of the core subject Scientific Methodology and Biostatistics
- Sufficient comprehension of written English to read and discuss articles in scientific journals

Objectives and Contextualisation

The goal of the course is for the student to develop, carry out, report and formally defend a scientific project based on specific content and skills acquired during the degree program.

Competences

- Clearly and effectively communicate orally and in writing with all users of the healthcare system, and with other professionals.
- Constantly renew one's professional knowledge, competences and skills.

- Develop critical thinking and reasoning and communicate ideas effectively, both in the mother tongue and in other languages.
- Develop independent learning strategies
- Display a strategic and flexible attitude to learning.
- Display critical reasoning skills.
- Express ideas fluently, coherently and correctly, both orally and in writing.
- Generate innovative and competitive proposals for research and professional activities.
- Manage information systems.
- Organise and plan.
- Participate in drawing up physiotherapy protocols on the basis of scientific evidence, and promote professional activities that facilitate physiotherapy research.
- Respect diversity in ideas, people and situations
- Show initiative and an entrepreneurial spirit.

Learning Outcomes

1. Analyse physiotherapy methods, protocols and treatments and ensure they keep pace with new developments in science.
2. Develop critical thinking and reasoning and communicate ideas effectively, both in the mother tongue and in other languages.
3. Develop independent learning strategies
4. Develop independent learning strategies to ensure the continuity of the learning process.
5. Display a strategic and flexible attitude to learning.
6. Display critical reasoning skills.
7. Display familiarity with new developments in physiotherapy techniques and tools.
8. Establish lines of research in the field of the profession's competences.
9. Express ideas fluently, coherently and correctly, both orally and in writing.
10. Generate innovative and competitive proposals for research and professional activities.
11. Manage information systems.
12. Organise and plan.
13. Present a research paper before a specialist audience.
14. Respect diversity in ideas, people and situations.
15. Show initiative and an entrepreneurial spirit.
16. Write the paper in accordance with scientific methodology.

Content

The Final Degree Project will consist of one of the following:

- A Full Proposal for a Scientific Research Project, aimed to provide evidence to fill knowledge gaps in the field of Physiotherapy.
- A Systematic Review of Literature, aimed to identify, assess, select and synthesize the relevant studies providing good-quality scientific evidence on interventions, assessment systems, technology and other subjects related to Physiotherapy.
- A Research Study within the current research lines of clinical departments and/or research groups that are collaborating in the Degree Program. If necessary (see * below), an outside UAB supervisor may be proposed.

Methodology

General information

- Students will develop their Final Degree Projects with the guidance of a supervisor, working either individually or in groups.

- The Final Degree Project will be discussed in front of a minimum of two members of an academic committee; this committee will evaluate the content of the project as well as the students' ability to report and defend their projects.
- The Final Degree Project will be evaluated in terms of each individual's learning achievements.
- Given the self-directed nature and goals of this course, specific seminars will be convened according to students' needs and interests.

Development of the course

a) Research areas

The project should deal with interventions, techniques, technologies or other specific content acquired during the degree program. There are three key research areas in which the project may take place:

- Musculoskeletal system: diseases, sport injuries, exercise physiology
- Nervous system: neurologic disease, peripheral neuropathies
- Cardiac and pulmonary rehabilitation

Other research areas such as urinary incontinence, lymphoedema, aging, or chronicity, among others, can also be considered.

During the month of October, after the completion of theory classes, students will inform the course coordinator of their Final Degree Project format and content, including the following elements:

- Research area (at this stage, selection of two preferred areas is highly recommended)
- Individual or group project (in the case of a group project, all group members must be identified and presented as a proposed team)
- Type of project: full research proposal, systematic review, or research study*
- Proposed supervisor (in the case of UAB supervisors not belonging to the instructional team for this course)

(*) The feasibility of carrying out a research study within a period of 6 months is low. If the student is part of (or has contacted) a research group that would make it possible to complete the study (including design, fieldwork, data analysis, results), the student should inform the course coordinator and provide a letter of agreement from the department or centre where the investigation will be carried out and supervised.

b) Assignment of supervisors

- Each student is assigned a supervisor from among the research professors who will guide the students through the process of drawing up the project proposal, particularly advising on content and methodological issues.
- A co-supervisor may be named when additional guidance on specific issues of the project is required.

c) Supervision sessions

- Students will meet with their supervisors, individually or in their groups, at least 3 times on scheduled dates.
- The student may request an appointment with the corresponding supervisor or make informal consultations by e-mail.

d) Timeline

- Informative session prior to the course enrolment: April or May of the preceding academic year (optional)
- Expression of interest of research area: During the week after the theoretical course
- Assignment of supervisors: During the first week of November
- Deadline for delivery of the written project: 31 May at 23:59h
- Project discussion in front of an academic committee: Between 7-22 June
- Review: During the week after the last committee

e) Tutorial formats

- Face-to-face meeting
- Electronic mail
- Videoconference
- Other: webinars, social networking, discussion forums, blogs...

The supervisor and the student will agree the form in which tutorial sessions will be undertaken according to the type of project (research project proposal, systematic review, research study), complexity of the research, and individual needs (sport programs, ERASMUS...)

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Specialized seminars (SEM)	12	0.48	
Theory (TE)	12	0.48	
Type: Supervised			
Tutorials	66	2.64	3, 16, 9, 12, 13, 6, 14, 15, 5
Type: Autonomous			
Drawing-up of student-specific works / Scientific reading / Relevant reports	188	7.52	1, 7, 4, 3, 2, 8, 9, 11, 12, 13, 6

Assessment

According to current norms, the qualification of the Final Degree Project is individual, even if it has been developed as a group project; the evaluation will culminate with the defence of the project in front of an academic committee. Final qualification will be calculated as follows: 70% from the written project, 20% from the presentation and discussion in front of the committee, and 10% from the supervisor report.

The specific criteria are as follows:

a) Written project (70%):

- Extent to which specific recommendations for each type of project have been followed (see bibliography):
 - Research Project Proposal (SPIRIT, *Standard Protocol Items: Recommendations for Interventional Trials*¹)
 - Systematic Review (PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses^{2,3})
 - Research Study (CONSORT^{4,5} for clinical trials, STROBE⁶ for observational studies, STARD⁷ for diagnostic accuracy studies)
- Ability to synthesize and report the results of research in an appropriate manner
- Literature search and selection of quality research studies: sources (indexed journals with impact factor, guidelines, scientific documents), publication year, citation styles...
- Complexity of the research

b) Project defence (20%):

- Communication skills

- Clarity of presentation in the time allotted
- Ability to demonstrate knowledge and understanding of the research
- Ability to discuss and properly answer queries and comments of the committee members

c) Supervisor report (10%):

- Motivation
- Dedication to the project
- Initiative

Other considerations

- The supervisor will report favourably if at least 3 meetings (face-to-face, telephone or online tutorials) have been properly scheduled and conducted.
- Projects written in English will be positively evaluated.
- Failure to attend and participate in the theory classes and specific seminars (e.g., biomedical database and bibliometry seminars) will be negatively evaluated.
- An academic committee composed of at least two UAB teachers and/or doctors (not related with the student and/or the research process) will examine and evaluate the project.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Qualification of activities of a practical nature (final project defence in front of an academic committee + supervisor report)	30%	2	0.08	7, 3, 2, 16, 9, 13, 6, 14, 15, 5
Qualification of the written project	70%	20	0.8	1, 7, 4, 3, 16, 8, 9, 10, 11, 12, 13

Bibliography

1. Chan A-W, Tetzlaff JM, Gøtzsche PC, Altman DG, Mann H, Berlin JA, et al. SPIRIT 2013 explanation and elaboration: guidance for protocols of clinical trials. *BMJ*. 2013 Jan; 346:e7586.
2. Moher D, Liberati A, Tetzlaff J, Altman DG, PRISMA Group. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: the PRIMA Statement. *PLoS Medicine*. 2009 Jul; 6(7): e1000097.
3. Urrutia G, Bonfill X. Declaración PRISMA: Una propuesta para mejorar la publicación de revisiones sistemáticas y metaanálisis. *Med Clin*, 2010; 135(11): 507-511.
4. Turner L, Shamseer L, Altman DG, Weeks L, Peters J, Kober T, et al. Consolidated standards of reporting trials (CONSORT) and the completeness of reporting of randomised controlled trials (RCTs) published in medical journals. *Cochrane Database Syst Rev*. 2012; 11(11).
5. Boutron I, Altman DG, Moher D, Schulz KF, Ravaud P; CONSORT NPT Group. CONSORT Statement for Randomized Trials of Nonpharmacologic Treatments: A 2017 Update and a CONSORT Extension for Nonpharmacological Trial Abstracts. *Ann Intern Med*. 2017 Jun 20. doi: 10.7326/M17-0046.
6. von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandenbroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *Lancet*. 2007; 370(9596):1453-7.
7. Bossuyt PM, Reitsma JB, Bruns DE, et al. STARD 2015: An updated list of essential items for reporting diagnostic accuracy studies. *Clin Chem*. 2015; 61:1446-1452.