

Degree programme	Type	Course
Physiotherapy	OB	4

Contact lecturer

Name : Bernat Planas Pascual

Email : bernat.planas@uab.cat

Teaching staff

Carina Salgueiro Francisco

Virginia Fernandez Piñar

Group languages

You can consult this information at the [end](#) of the document.

Prerequisites

- Have successfully completed at least two-thirds of the credits required in the degree programme.
- Have successfully completed the course Scientific Methodology and Biostatistics.
- Students are recommended to have a level of English that enables them to critically read and discuss scientific articles.

Objectives

- Formulate a research problem or question by identifying its different components.
- Conduct a literature review of the scientific evidence related to the research problem.
- Write the background or theoretical framework that provides the scientific basis for the research question.
- Formulate the research hypothesis and objectives.
- Justify the usefulness, relevance, and applicability of the research findings.
- Define the most appropriate methodology to address the stated research objectives.
- Consider the potential ethical issues associated with the project.
- Develop a work plan, including a timeline, that ensures the feasibility of the project.
- Communicate fluently, coherently, and in accordance with academic standards, both orally and in writing, using inclusive and non-sexist language.

Learning outcomes

1. Establish lines of research in the field of the profession's competences.
2. Analyse physiotherapy methods, protocols and treatments and ensure they keep pace with new developments in science.

3. Display familiarity with new developments in physiotherapy techniques and tools.
4. Develop independent learning strategies to ensure the continuity of the learning process.
5. Present a research paper before a specialist audience.
6. Write the paper in accordance with scientific methodology.
7. Organise and plan.
8. Express ideas fluently, coherently and correctly, both orally and in writing.
9. Manage information systems.
10. Display critical reasoning skills.
11. Show initiative and an entrepreneurial spirit.
12. Display a strategic and flexible attitude to learning.
13. Identify situations in which a change or improvement is needed.
14. Analyse a situation and identify its points for improvement.
15. Propose new methods or well-founded alternative solutions.
16. Weigh up the risks and opportunities of suggestions for improvement: one's own and those of others.
17. Propose new ways to measure success or failure when implementing innovative proposals or ideas.
18. Identify the social, economic and environmental implications of academic and professional activities within one's own area of knowledge.
19. Propose viable projects and actions to boost social, economic and environmental benefits.
20. Propose ways to evaluate projects and actions for improving sustainability.
21. Explain the explicit or implicit code of practice of one's own area of knowledge.
22. Critically analyse the principles, values and procedures that govern the exercise of the profession.
23. Consider how gender stereotypes and roles impinge on the exercise of the profession.
24. Propose projects and actions that incorporate the gender perspective.
25. Communicate using language that is not sexist.
26. Identify the principal forms of sex- or gender-based inequality present in society.
27. Weigh up the impact of any long- or short-term difficulty, harm or discrimination that could be caused to certain persons or groups by the actions or projects.
28. Propose projects and actions in accordance with the principles of ethical responsibility and respect for fundamental rights, diversity and democratic values.
29. Analyse the indicators of sustainability of academic and professional activities in the areas of knowledge, integrating social, economic and environmental dimensions.

Contents

Students must individually prepare a Research Proposal aimed at generating scientific evidence to address gaps in knowledge within the field of Physiotherapy. The proposal must include the sections listed below, adapted from the Standard Protocol Items: Recommendations for Interventional Trials (SPIRIT) guidelines. Where the study design is not a clinical trial, appropriate methodological adaptations will be accepted.

0. Title

1. Abstract in two languages (Catalan or Spanish, and English), including 4-6 keywords.

2. Introduction

- 2.1. Background and rationale
- 2.2. Hypothesis and objectives
- 2.3. Study design

3. Methods

3.1. Participants, interventions and outcome measures

- Study setting
- Eligibility criteria
- Interventions
- Outcome measures

- Participant timeline
- Sample size
- Recruitment

3.2. Allocation of interventions (for controlled trials only)

- Allocation
- Blinding

3.3. Data collection, management and analysis

- Data collection methods
- Data management
- Statistical methods

3.4. Monitoring

- Data monitoring
- Adverse events and harms
- Auditing

4. Ethics and dissemination

- 4.1. Research ethics approval
- 4.2. Protocol amendments
- 4.3. Informed consent
- 4.4. Confidentiality
- 4.5. Declaration of interests
- 4.6. Access to data
- 4.7. Ancillary and post-trial care
- 4.8. Dissemination policy

5. Study limitations and strategies to minimise potential sources of bias

6. Clinical relevance and applicability of the research

7. References

8. Appendices

- 8.1. Informed consent form
- 8.2. Research work plan and timeline
- 8.3. Budget
- 8.4. Physiotherapy intervention protocol used in the study
- 8.5. Other (optional)

Learning activities and methodology

Title	Hours	ECTS	Learning outcomes
Tutorials	81	3.24	4, 6, 7, 8, 10, 13, 14, 15, 16, 28
Theory (TE)	9	0.36	2, 3, 10, 18, 21, 22, 23, 26
Drawing-up of student-specific works / Scientific reading / Relevant reports	188	7.52	1, 2, 3, 4, 6, 9, 10, 11, 12, 17, 19, 20

General information

- Students will develop their Final Degree Projects individually with the guidance of a supervisor.
- 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.

Some final project proposals may be linked to service learning projects (ApS). These social commitment projects allow the student to train through participation in a project aimed at resolving a real need in a community and thus improving the living conditions of people or the quality of the environment.

During September, professors of the Department will facilitate their proposals of areas of interest in physical therapy research. Students will have to submit an application indicating the order of preference of all the proposals (in the case of groups, the student with the highest grade within the group will submit the application).

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. The assignment will be done automatically according to students' preferences and the academic record. A co-supervisor may be named when additional guidance on specific issues of the project is required.

c) Supervision follow-up

- Face-to-face or telematics tutoring sessions are mandatory. The supervisor and the student will agree on the form in which tutorial sessions will be undertaken according to the type of project, complexity of the research, and individual needs (sport and/or exchange programs).
- Students will meet with their supervisors, individually or in their groups, at least 3 times on scheduled dates. In the case of groups, tutoring sessions can not be longer than two hours.
- The tutor and the students will agree on the dates of tutoring between the dates proposed in the calendar of the subject.
- Students are required to submit 4 written documents with the content specified for each of them. The tutor will continuously evaluate the work done by the student. The student will submit a preliminary draft of the deliveries to the tutor with sufficient time for being reviewed and returned. The number of tutorials/corrections of the drafts will depend on the learning needs of the student. On the scheduled dates, the student will make the final delivery, which will be the one that is evaluated.
- The student may request an appointment with the corresponding supervisor or make informal consultations by e-mail.

d) Oral presentation:

During June, the students will present and defend their work orally in front of a tribunal formed by professors.

e) Final documentation to be delivered:

- A final report of the work (Final Project): one single file (pdf) will be attached in the delivery section of Moodle before 23:59 h of May 31st.
- Presentation file in Powerpoint or pdf formats.

Annotation: within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continuous assessment activities

Title	Weight	Hours	ECTS	Learning outcomes
Qualification of activities of a practical nature (final project defence in front of an academic committee)	60%	2	0.08	5, 8, 10, 21, 22, 25, 28
Qualification of the written project	40%	20	0.8	1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29

In accordance with UAB regulations, assessment of the Bachelor's Thesis (Final Degree Project, TFG) is individual and concludes with the submission and public oral defence of the thesis before an assessment committee.

The final grade is based on two assessment components:

- Written thesis (assessment of the progress reviews by the supervisor): 40% of the final grade.
- Oral presentation and defence before the assessment committee: 60% of the final grade.

The written thesis will be assessed by the supervisor through the different progress reviews scheduled throughout the development of the project. Each progress review carries the same weight in the assessment of the written thesis.

The oral presentation and defence will be assessed according to the corresponding rubric, taking into account the following aspects:

- Quality of the visual presentation materials.
- Quality of the oral presentation.
- Appropriate use of verbal and non-verbal communication.
- Ability to demonstrate understanding of and defend the research project.
- The oral defence must not exceed 15 minutes.

Conditions for calculating the final grade

The first progress review must receive a minimum mark of 5/10. If the mark is below 5, the student will have 15 calendar days to revise the work and resubmit the first progress review. In this case, the maximum mark that can be awarded will be 5/10 (Pass).

The final grade will be calculated as the weighted average of the two assessment components.

Example:

- Written thesis (40%): 7.0
- Oral presentation and defence (60%): 8.0

Final grade:

$$7 \times 0.4 + 8 \times 0.6 = 7.6 \text{ (Good)}$$

Definition of "Not Assessable"

A student will be recorded as Not Assessable if they:

- Do not attend the first mandatory meeting with their supervisor.
- Fail to submit any of the required progress reviews.
- Fail to submit the final version of the Bachelor's Thesis by the established deadline.
- Fail to attend the oral defence without a duly justified reason.

Assessment misconduct

Any irregularity during an assessment activity (academic fraud, plagiarism, or the improper use of generative artificial intelligence tools, unless such use is expressly authorised in this course guide) that may lead to a significant alteration of the assessment outcome will result in a grade of 0 for that assessment activity.

Since passing both the written thesis and the oral defence is a mandatory requirement to pass the Bachelor's Thesis, any such misconduct in either assessment component will result in failing the course.

If multiple assessment irregularities occur during the Bachelor's Thesis assessment process, the final course grade will be 0. Furthermore, the University may initiate disciplinary proceedings where appropriate.

Note on the responsible use of Artificial Intelligence (AI)

The use of generative AI tools (such as ChatGPT or similar applications) may be permitted as support in the preparation of the Bachelor's Thesis, provided they are used ethically, critically, and transparently. They may be used, for example, to clarify specific questions, improve writing, or refine the language of the manuscript, but never as a substitute for the student's own intellectual work.

Any substantial contribution generated using AI must be clearly acknowledged in the thesis, whether in an acknowledgements section, the methodology, or by means of a footnote, as appropriate. Any use of AI that does not comply with these conditions will be considered improper use and will be subject to the assessment misconduct regulations described above. In case of doubt, students are encouraged to consult their supervisor in advance.

Bibliography

- Chan AW, 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;346.
- Moher D, Liberati A, Tetzlaff J, Altman DG; PRISMA Group. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS Med*. 2009;6(7).
- Urrútia G, Bonfill X. Declaración PRISMA: una propuesta para mejorar la publicación de revisiones sistemáticas y metaanálisis. *Med Clin (Barc)*. 2010;135(11):507-511.
- 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).
- 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 nonpharmacologic trial abstracts. *Ann Intern Med*. 2017;167(1):40-47.
- von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandenbroucke JP; STROBE Initiative. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *Lancet*. 2007;370(9596):1453-1457.
- Bossuyt PM, Reitsma JB, Bruns DE, Gatsonis CA, Glasziou PP, Irwig L, et al. STARD 2015: an updated list of essential items for reporting diagnostic accuracy studies. *Clin Chem*.

2015;61(12):1446-1452.

- Elliott-Sale KJ, Minahan CL, de Jonge XAKJ, Ackerman KE, Sipilä S, Constantini NW, et al. Methodological considerations for studies in sport and exercise science with women as participants: a working guide for standards of practice for research on women. Sports Med. 2021;51(5):843-861.
- Simera I, Moher D, Hoey J, Schulz KF, Altman DG. A catalogue of reporting guidelines for health research. Eur J Clin Invest. 2010;40(1):35-53.

Students are encouraged to consult the reporting guidelines available through the EQUATOR Network (Enhancing the QUALity and Transparency Of Health Research) and select the guideline that best matches the methodological design of their project (e.g., SPIRIT, CONSORT, PRISMA, STROBE, STARD, CARE, COREQ, or SRQR).

Software

- Reference Management: Mendeley, Endnote, Reference Manager
- Database and Statistics: Excel, SPSS, R, Stata

Course groups and languages

The information provided is provisional until November 30. After this date, you will be able to consult the language of each group through this [link](#). To access the information, you will need to enter the course CODE

Type of teaching	Group	Language	Semester	Shift
(TFG) Treball de fi de grau	1	Catalan/Spanish	annual	afternoon
(TE) Theory	301	Catalan	annual	afternoon