



**Karolinska
Institutet**

Course syllabus for

Project Work in Translational Physiology and Pharmacology, 7.5 credits

Projektarbete inom translationell fysiologi och farmakologi, 7.5 hp

This course syllabus is valid from spring 2025.

Please note that the course syllabus is available in the following versions:

Spring2023 , Spring2025

Course code	4FF003
Course name	Project Work in Translational Physiology and Pharmacology
Credits	7.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Translational Physiology and Pharmacology
Level	AV - Second cycle
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Physiology and Pharmacology
Decided by	Education committee FyFa
Decision date	2021-11-22
Revised by	Education committee FyFa
Last revision	2024-09-06
Course syllabus valid from	Spring 2025

Specific entry requirements

A Bachelor's degree or a professional degree worth at least 180 credits in biomedicine, biotechnology, cellular and molecular biology, pharmaceuticals, health care, medicine, or the equivalent. Proficiency in English equivalent to the Swedish upper secondary school course English 6/English B.

Objectives

The aim of this course is that the student will receive a comprehensive understanding and practical experience in translational physiology and pharmacology. The course is designed to bridge the gap between basic scientific research and clinical/pharmacological applications. The course aims to equip the student with the skills to design, conduct, analyze, and communicate research.

After completing the course, the student should be able to:

- Apply theoretical knowledge of physiology and pharmacology in the design and execution of translational research projects.

- Discuss research methodologies, including experimental design, data collection, statistical analysis, and interpretation of results.
- Identify research questions, formulate hypotheses, and troubleshoot experimental issues.
- Communicate scientific findings to different target groups both orally and in writing.
- Promote the development of sustainable health solutions by aligning research projects with relevant Sustainable Development Goals.

Content

In this course the student will work with experimental design, data collection, and analysis within a laboratory setting. Key topics include mechanisms of disease, drug action and efficacy, and the translation of physiological research to clinical applications. Emphasis is placed on developing skills in critical thinking, scientific communication, and collaborative research.

Teaching methods

Lectures, seminars, journal clubs, laboratory activities with regular contact with teachers and course supervisors.

Examination

Individual written assignment Graded Fail/Pass/Pass with distinction.

Written assignment of project work. Graded Fail/Pass.

Oral presentation of project work: Graded Fail/Pass.

Written assignments should be submitted before the end of the course according to the specification in the schedule. To pass the course (the grade Pass or higher), at least passed on all components of the course is required. To pass the course with distinction, the grade Pass with distinction on the written individual written assignment is required.

Compulsory participation

Participation in seminars, journal clubs and lab activities are compulsory. The examiner assesses if, and how, absence from compulsory course elements can be made up for. Study results cannot be reported until the student has participated in compulsory course elements or compensated for any absence in accordance with instructions from the examiner. Absence from a compulsory course element could mean that the student can not retake the element until the next time the course is offered.

Limitation of number of tests or practical training sessions

The students that have not passed after regular examination session have the right to participate at further five examination sessions. If the student has carried out six failed examinations/tests, no additional examination or new course admission is approved.

Each occasion the student participates in the same test counts as an examination. Submission of a blank examination is regarded as an examination. In case a student is registered for an examination but does not attend, this is not regarded as an examination.

In the event of special circumstances, or if a student with a disability is in need of certain adjustments, the examiner may decide to depart from the syllabus' regulations on examination form, number of examination opportunities, possibility of completion or exemption from compulsory educational elements, etc. Content and intended learning outcomes as well as the level of expected skills, knowledge and abilities must not be altered, removed or lowered.

Other directives

The course is given in English, and the examinations are in English.

A course evaluation will be carried out in accordance with the guidelines established by the Board of

Higher Education.

Literature and other teaching aids

Mandatory literature

Study material and reference articles will be provided during the course.