

Field of study: *Physics (Studies in English)*

Profile: general academic

2-year second cycle programme, full-time

Academic year: 2024/2025

Specialization: Particle Physics

First year, semester 1

| Course title | Course code | Form of classes | Option A | | Option B | | Learning outcomes assessment |
|--|-------------------------|-----------------|-----------------|-----------------------|-----------------|-----------------------|--------------------------------------|
| | | | Number of hours | Number of ECTS points | Number of hours | Number of ECTS points | |
| Physics Laboratory, 2nd Level A | 1100-4PLA | lab | 45 | 5 | 45 | 5 | written report (grade [#]) |
| Elective course from the Statistical physics list | 1100-4SPA or 1100-4SPB | lecture | 45 | 7 | 45 | 7 | written or oral exam |
| | | exercises | 45 | | 45 | | |
| Intellectual property and entrepreneurship (Option A) or Intellectual property and entrepreneurship with team project (Option B) | 1100-4IPE or 1100-4AF16 | lecture | 30 | 2 | 30 | 5 | written exam |
| | | project | 0 | 0 | 75 | | project |
| Subject to choose from the Numerical analysis list | | | 30 | 3 | 30 | 3 | written exam or grade |
| Elective course from the Advanced Quantum Mechanics list | | lecture | 30 | 6 | 30 | 6 | written or oral exam |
| | | exercises | 30 | | 30 | | |
| Modern Experimental Particle Physics I | 1100-4MEPP1 | lecture | 30 | 4 | 30 | 4 | written exam |
| Specialist seminar | | seminar | 30 | 2 | 30 | 2 | grade |
| In total | | | 315 | 29 | 390 | 32 | |

First year, semester 2

| Course title | Course code | Form of classes | Option A | | Option B | | Learning outcomes assessment |
|--|-------------|-----------------|-----------------|-----------------------|-----------------|-----------------------|------------------------------|
| | | | Number of hours | Number of ECTS points | Number of hours | Number of ECTS points | |
| Introduction to Philosophy | 1100-IP | seminar | 30 | 3 | 30 | 3 | grade |
| Subject to choose from the Numerical analysis list | | | 30 | 3 | 30 | 3 | written exam or grade |
| Specialization laboratory I, Particle Physics | 1100-SLPP | lab | 100 | 10 | 100 | 10 | written reports (grade) |
| Specialist seminar | | seminar | 30 | 2 | 30 | 2 | grade |
| Modern Experimental Particle Physics II | 1100-4MEPP2 | lecture | 30 | 4 | 30 | 4 | written exam |
| Computing in Experimental Particle Physics | | workshop | 30 | 3 | 30 | 3 | grade |
| Specialist lecture | | lecture | 30 | 2 | 30 | 2 | written exam or grade |
| General University Courses (OGUN)* | | | 40 | 4 | 10 | 1 | written exam or grade |
| In total | | | 320 | 31 | 290 | 28 | |

Second year, semester 3

| Course title | Course code | Form of classes | Option A*** | | Option B | | Learning outcomes assessment |
|--------------|-------------|-----------------|-----------------|-----------------------|-----------------|-----------------------|------------------------------|
| | | | Number of hours | Number of ECTS points | Number of hours | Number of ECTS points | |

| | | | | | | | |
|------------------------------------|----------------------|------------|------------|-----------|------------|-----------|-------------------------------|
| Work placement | | internship | 80 | 4 | 80 | 4 | written report (grade) |
| Team project** | 1100-TP or 1100-ZPS2 | project | 75 | 5 | 0 | 0 | grade |
| Particle physics laboratory I | | | 210 | 19 | 210 | 19 | grade |
| Specialist seminar | | seminar | 30 | 2 | 30 | 2 | grade |
| OGUN (General University Courses)* | | | 20 | 2 | 70 | 7 | written or oral exam or grade |
| In total | | | 415 | 32 | 390 | 32 | |

| Second year, semester 4 | | | | | |
|---|-------------|-----------------|-----------------|-----------------------|--|
| Course title | Course code | Form of classes | Number of hours | Number of ECTS points | Learning outcomes assessment |
| Proseminar Challenges of the modern times | 1100-PCMT | seminar | 20 | 2 | grade |
| Proseminar Particle Physics | | seminar | 30 | 3 | grade |
| Specialist lecture | | lecture | 30 | 2 | written exam or grade |
| Specialist seminar | | seminar | 30 | 2 | grade |
| Particle physics laboratory II | | lab | 210 | 19 | submission of a master's thesis accepted by the supervisor |
| In total | | | 320 | 28 | |

| In total | Option A | | Option B | |
|---------------------|-----------------|-----------------------|-----------------|-----------------------|
| | Number of hours | Number of ECTS points | Number of hours | Number of ECTS points |
| 1 year | 635 | 60 | 710 | 63 |
| 2 year | 735 | 60 | 710 | 60 |
| 1 and 2 year | 1370 | 120 | 1420 | 120 |

Comments:

* The completion of 5 ECTS from subjects in the fields of humanities or social sciences is required as part of the study program.

** A team project can be completed within a dedicated course or as part of other courses in the study program, provided that the organization of the subject's classes involves teamwork.

*** Option A is obligatory for those students who did not complete a team project during the first year

Passing with a grade means that the grade is awarded based on one or more written assessments conducted during the course of the didactic classes or based on one or more written assignments carried out during the period of didactic classes, following the subject's syllabus.