

WYDZIAŁ FIZYKI UW

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

Profile: general academic

2-year second cycle programme, full-time

Academic year: 2026/2027

Specialization: **Computer Modeling of Physical Phenomena**

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 (graded [#])
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 graded
Elective course from the Advanced Quantum Mechanics list		lecture	30	6	30	6	written exam
		exercises	30		30		
Electives from the Topics in contemporary physics list			30	3	30	3	written exam or graded
Specialist seminar		seminar	30	2	30	2	graded
In total			315	28	390	31	

[#] 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.

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 classes	30	3	30	3	graded
Subject to choose from the Numerical analysis list			30	3	30	3	written exam or graded
Electives from the Topics in contemporary physics list			120	12	90	9	written exam or graded
Workshop on computer modeling	1100-4WCM	workshop	105	9	105	9	graded
Specialist seminar		seminar	30	2	30	2	graded
OGUN (General University Courses)*			30	3	30	3	written exam or graded
In total			345	32	315	29	

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

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	
Team project**	1100-ZPS2	project	75	5	0	0	graded
Electives from the Topics in contemporary physics list			90	9	90	9	written exam or graded
Specialist seminar		seminar	60	4	60	4	graded
Workshop in advanced computer modeling I	1100-5WACM1	workshop	135	13	135	13	graded
OGUN (General University Courses)*			30	3	30	3	written exam or graded
In total			390	34	315	29	

** 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.

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

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

Second year, semester 4					
Course title	Course code	Type of course	Number of hours	Number of ECTS points	Learning outcomes assessment
Work placement***	1100-WP	internship	80	4	written report (graded)
Proseminar Challenges of the modern times	1100-PCMT	seminar	20	2	graded
Proseminar Theoretical physics	1100-5sTP	seminar	30	3	graded
Workshop in advanced computer modeling II	1100-5WACM2	workshop	225	22	submission of a master's thesis accepted by the supervisor
In total			355	31	

*** Work placements are passed based on a written substantive report in which the student presents the scope of tasks performed during the internships. The report is confirmed by a representative of the internship organizer. The report is reviewed by the internship supervisor or assistant internship supervisor, who propose an assessment for the internship.

In total	Option A		Option B	
	Number of hours	Number of ECTS points	Number of hours	Number of ECTS points
1 year	660	60	705	60
2 year	745	65	670	60
1 and 2 year	1405	125	1375	120

Comments:

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

*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.

*** Work placements are passed based on a written substantive report in which the student presents the scope of tasks performed during the internships. The report is confirmed by a representative of the internship organizer. The report is reviewed by the internship supervisor or assistant internship supervisor, who propose an assessment for the internship.

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.