

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

2-year second cycle programme, full-time

Academic year: 2023/2024

Specialization: Optics

## First year, semester 1

Course name/group of courses	Course code	Type of course	Option A		Option B		Verification of learning outcomes
			Number of hours	Number of ECTS points	Number of hours	Number of ECTS points	
Physics Laboratory, 2nd Level A1 or Physics Laboratory, 2nd Level A2	1100-4PLA1 or 1100-4PLA2	lab	45	5	45	5	grade
Courses selected from the list Statistical physics	1100-4SPA or 1100-4SPB	lecture	45	7	45	7	written or oral exam
		exercises	45		45		
Intellectual property and entrepreneurship or Intellectual property and entrepreneurship with team project (Option A or Option B)	1100-4IPE or 1100-4AF16	lecture	30	2	30	5	written exam
		project	0	0	75		project
Courses selected from the list Numerical analysis			30	3	30	3	written exam or grade
Courses selected from the list Topics in contemporary physics - electives (Option A or/ Option B)			60	6	30	3	written exam or grade
Selected specialization courses			60	6	60	6	written exam
<b>In total</b>			<b>315</b>	<b>29</b>	<b>360</b>	<b>29</b>	

## First year, semester 2

Course name/group of courses	Course code	Type of course	Number of hours	Number of ECTS points	Verification of learning outcomes
Introduction to Philosophy	1100-IP	seminar	30	3	grade
Courses selected from the list Numerical analysis			30	3	written exam or grade
Proseminar: Optics	1100-4PO	seminar	30	3	grade
Optics Laboratory I	1100-4OL	lab	180	16	grade
Selected specialization courses			60	6	written exam
<b>In total</b>			<b>330</b>	<b>31</b>	

## Second year, semester 3

Course name/group of courses	Course code	Type of course	Option A*		Option B		Verification of learning outcomes
			Number of hours	Number of ECTS points	Number of hours	Number of ECTS points	
Team project**	1100-TP or 1100-ZPS2	project	75	5	0	0	grade
Selected specialization courses			60	6	60	6	written exam or grade
Optics Laboratory II	1100-5OL2	lab	210	19	210	19	grade
Optics Seminar	1100-4sOS	seminar	30	2	30	2	grade
<b>In total</b>			<b>375</b>	<b>32</b>	<b>300</b>	<b>27</b>	

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

## Second year, semester 4

Course name/group of courses	Course code	Type of course	Number of hours	Number of ECTS points	Verification of learning outcomes
Work placement	1100-WP	internship	80	4	grade
Proseminar Challenges of the modern times	1100-PCMT	seminar	20	2	grade
Optics Seminar	1100-4sOS	seminar	30	2	grade
OGUN (General University Courses)*			30	6	written exam or grade
Optics Laboratory III	1100-5OL3	workshop	210	19	pass/fail (no grade)
<b>In total</b>			<b>370</b>	<b>33</b>	

\* 5 ECTS points should be obtained from general courses unrelated to physical sciences, i.e. humanities and social sciences

In total	Option A		Option B	
	Number of hours	Number of ECTS points	Number of hours	Number of ECTS points
1 year	645	60	690	60
2 year	745	65	670	60
1 and 2 year	1390	125	1360	120