

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

2-year second cycle programme, full-time

Academic year: **2020/2021**

Specialization: **Physics of Condensed Matter and Semiconductor Nanostructures**

First year, semester 1

	Course name/ group of courses	Type of course	Number of hours		Verification of effects related to the course	Total number of ECTS points
1	Physics Laboratory, 2nd Level A1 or Physics Laboratory, 2nd Level A2	laboratory class	45	45	grade	5
2	Courses selected from the list Statistical physics	lecture exercises	45 45	90	exam: written or oral	7
3	Intellectual property and entrepreneurship or Intellectual property and entrepreneurship with team project	lecture/lecture and project	30/105	30/105	written exam/project	2/5
4	Introduction to solid state physics	lecture exercises	30 30	60	written exam	6
5	Selected specialization seminar	seminar	30	30	grade	2

First year, semester 2

	Course name/ group of courses	Type of course	Number of hours		Verification of effects related to the course	Total number of ECTS points
1	Introduction to Philosophy	lecture	30	30	grade	3
2	Low-dimensional systems	lecture exercises	30 30	60	written or oral exam	6
3	Magnetism and superconductivity	lecture	30	30	written or oral exam	3
4	Experimental methods in semiconductor physics	lecture	30	30	written or oral exam	3
5	Physics Laboratory, 3rd Level	laboratory	120	120	grade	12
6	Selected specialization seminar	seminar	30	30	grade	2

Other courses to be completed in the 1st and/or 2nd semester

	Course name/ group of courses	Type of course	Number of hours		Verification of effects related to the course	Total number of ECTS points
1	Courses selected from the list Numerical analysis		60	60	written exam or grade	6
2	General courses (OGUN)*		30	30	written exam or grade	3
	In total		min.645	min.645		60

*in total 6 ECTS required within the duration of the programme, including 5 ECTS points unrelated to physical sciences, i.e. humanities and social sciences;

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Academic year: **2020/2021**

Specialization: **Physics of Condensed Matter and Semiconductor Nanostructures**

Second year, semester 1

	Course name/ group of courses	Type of course	Number of hours		Verification of effects related to the course	Total number of ECTS points
1	Optical properties of semiconductors	lecture	30	60	written or oral exam	6
		exercise	30			
2	Bose-Einstein condensation and superfluidity	lecture	30	30	written or oral exam	3
3	Selected specialization seminar	seminar	30	30	grade	2
4	Proseminar Physics of Condensed Matter and Semiconductor Nanostructures	seminar	30	30	grade	3
5	Laboratory in condensed matter physics I	workshop	120	120	grade	10

Second year, semester 2

	Course name/ group of courses	Type of course	Number of hours		Verification of effects related to the course	Total number of ECTS points
1	Proseminar Challenges of the modern times	seminar	20	20	grade	2
2	Diluted magnetic semiconductors	lecture	30	30	written or oral exam	3
3	Selected specialization seminar	seminar	30	30	grade	2
4	Laboratory in condensed matter physics II	workshop	210	210	pass/fail (no grade)	19

Other courses to be completed in the 1st and/or 2nd semester

	Course name/ group of courses	Type of course	Number of hours		Verification of effects related to the course	Total number of ECTS points
1	Team project **	project	75	75	grade	5
2	Work placement		80	80	pass/fail (no grade)	3
3	Selected specialization courses		30	30	written exam or grade	3
4	General courses (OGUN)*		30	30	written exam or grade	3
	In total		min. 700	min. 700		60/65

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** Team project can be completed as a separate course or within a course if the course coordinator requires team work