## WYDZIAŁ FIZYKI UW

#### 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 Total Verification of number effects Course name/ group of courses Type of course Number of hours of related to the **ECTS** course points Physics Laboratory, 2nd Level A1 laboratory 45 or Physics Laboratory, 2nd Level class 45 grade 5 2 Courses selected from the list lecture 45 exam: written 90 7 Statistical physics 45 exercises or oral Intellectual property and lecture/lecture entrepreneurship or Intellectual written and project 30/105 30/105 2/5 property and entrepreneurship exam/project with team project Introduction to solid state physics lecture 30 60 written exam 6 exercises 30 Selected specialization seminar 30 30 2 seminar grade First year, semester 2 Total Verification of number effects Course name/ group of courses Type of course Number of hours of related to the **ECTS** course points Introduction to Philosophy lecture 30 30 3 grade Low-dimensional systems lecture 30 written or oral 60 6 exercises 30 exam 3 Magnetism and superconductivity lecture written or oral 30 30 3 exam 4 Experimental methods in lecture written or 30 3 30 semiconductor physics oral exam Physics Laboratory, 3rd Level 120 120 12 laboratory grade 6 | Selected specialization seminar 30 30 2 seminar grade Other courses to be completed in the 1<sup>st</sup> and/or 2<sup>nd</sup> semester Verification Total of effects number Course name/ group of courses Type of course Number of hours related to of ECTS the course points Courses selected from the list written exam 60 60 6 Numerical analysis or grade General courses (OGUN)\* written exam 2 30 30 3 or grade

min.645 min.645

60

In total

<sup>\*</sup>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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	Se	econd year, sen	nester 1				
	Course name/ group of courses	Type of course	Number of hours		Verification of effects related to the course	Total number of ECTS points	
		l .		ı			
1	Optical properties of semiconductors	lecture exercise	30 30	60	written or oral exam	6	
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	_	
3				30	exam	3	
1	Selected specialization seminar	seminar	30	30	exam grade	2	
4	Selected specialization seminar Laboratory in condensed matter physics II	seminar workshop					
4	Laboratory in condensed matter	workshop	30 210	30 210	grade pass/fail (no grade)	2	
4	Laboratory in condensed matter physics II	workshop	30 210 he 1 <sup>st</sup> ar	30 210	grade pass/fail (no grade)	2	
	Laboratory in condensed matter physics II  Other courses to be  Course name/ group of courses	workshop  completed in the state of course	30 210 he 1 <sup>st</sup> ar Numl ho	30 210 nd/or 2 <sup>nd</sup> ber of urs	grade pass/fail (no grade)  d semester Verification of effects related to the course	2 19 Total number of ECTS points	
1	Laboratory in condensed matter physics II  Other courses to be  Course name/ group of courses  Team project **	workshop  completed in the	30 210 he 1 <sup>st</sup> ar	30 210 nd/or 2 <sup>nd</sup> ber of	grade pass/fail (no grade)  d semester Verification of effects related to the course grade	2 19 Total number of ECTS	
1 2	Laboratory in condensed matter physics II  Other courses to be  Course name/ group of courses  Team project **  Work placement	workshop  completed in the state of course	30 210 he 1 <sup>st</sup> ar Numl ho	30 210 nd/or 2 <sup>nd</sup> ber of urs	grade pass/fail (no grade)  d semester Verification of effects related to the course  grade pass/fail (no grade)	2 19 Total number of ECTS points	
1 2 3	Laboratory in condensed matter physics II  Other courses to be  Course name/ group of courses  Team project ** Work placement  Selected specialization courses	workshop  completed in the state of course	30 210 he 1 <sup>st</sup> ar Numl ho	30 210 nd/or 2 <sup>nd</sup> ber of urs	grade pass/fail (no grade)  d semester Verification of effects related to the course  grade pass/fail (no grade) written exam or grade	2 19 Total number of ECTS points	
1 2	Laboratory in condensed matter physics II  Other courses to be  Course name/ group of courses  Team project **  Work placement	workshop  completed in the state of course	30 210 he 1 <sup>st</sup> ar Numl ho 75 80	30 210 nd/or 2 <sup>nd</sup> ber of urs 75 80	grade pass/fail (no grade)  d semester Verification of effects related to the course  grade pass/fail (no grade) written exam	2 19 Total number of ECTS points 5 3	

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<sup>\*\*</sup> Team project can be completed as a separate course or within a course if the course coordinator requires team work