

1. Field of study	Physics
2. Faculty	Faculty of Science and Technology
3. Academic year of entry	2019/2020 (winter term), 2020/2021 (winter term)
4. Level of qualifications/degree	second-cycle studies
5. Degree profile	general academic
6. Mode of study	full-time
7. ISCED code	0533 (Physics)
8. Connection between the field of study and university development strategy, including the university mission	
9. Number of semesters	4
10. Degree	magister (Master's Degree)
11. Specializations	Experimental Physics Nanophysics and Mesoscopic Materials - Modelling and Applications Theoretical Physics – Programme in English
12. The semester from which the specializations starts	1
13. Percentage share of scientific or artistic disciplines in education (along with the indication of the leading discipline)	<ul style="list-style-type: none"> • <i>[leading discipline]</i> physical sciences (natural sciences): 100%
14. Percentage of the ECTS credits for each of the scientific or artistic disciplines to which the learning outcomes are related to the total number of ECTS credits (along with the indication of the leading discipline)	Experimental Physics: <ul style="list-style-type: none"> • <i>[leading discipline]</i> physical sciences (natural sciences): 100% Nanophysics and Mesoscopic Materials - Modelling and Applications: <ul style="list-style-type: none"> • <i>[leading discipline]</i> physical sciences (natural sciences): 100% Theoretical Physics – Programme in English: <ul style="list-style-type: none"> • <i>[leading discipline]</i> physical sciences (natural sciences): 100%
15. Number of ECTS credits required to achieve the qualification equivalent to the level of study	Experimental Physics: 120, Nanophysics and Mesoscopic Materials - Modelling and Applications: 120, Theoretical Physics – Programme in English: 120
16. Percentage of the ECTS credits for optional modules in relation to the total number of ECTS credits	Experimental Physics: 77%, Nanophysics and Mesoscopic Materials - Modelling and Applications: 39%, Theoretical Physics – Programme in English: 73%
17. Total number of ECTS credits that a student must obtain in the modules taught	Experimental Physics: 120, Nanophysics and Mesoscopic Materials - Modelling and Applications: 90, Theoretical Physics – Programme in English: 120
18. Number of ECTS credits that a student must obtain in modules	Experimental Physics: 5, Nanophysics and Mesoscopic Materials - Modelling and Applications: 5,

	assigned to disciplines within the humanities or social sciences (not less than 5 ECTS) - in the case of fields of study assigned to disciplines within the fields other than, respectively, humanities or social sciences	Theoretical Physics – Programme in English: 5
19.	Graduation requirements for a particular specialization	<u>Experimental Physics</u> <u>Nanophysics and Mesoscopic Materials - Modelling and Applications</u> <u>Theoretical Physics – Programme in English</u>
20.	Organization of the process of obtaining a degree	
21.	Internships (hours and conditions) in the case of practical programmes and in general university programme - if such requires internship	
22.	Total number of ECTS credits that a student must obtain in internships	Experimental Physics: 0, Nanophysics and Mesoscopic Materials - Modelling and Applications: 30, Theoretical Physics – Programme in English: 0
23.	Number of ECTS credits - higher than 50% of the total number of credits - that a student must obtain: <ul style="list-style-type: none"> in general university programmes within a module connected with research carried out in the scientific or artistic disciplines to develop his/her knowledge and research skills; in practical programmes within a module to develop practical skills 	Experimental Physics: 66, Nanophysics and Mesoscopic Materials - Modelling and Applications: 109, Theoretical Physics – Programme in English: 67
24.	General description of the programme	
25.	General description of the specialization	<u>Experimental Physics</u> <u>Nanophysics and Mesoscopic Materials - Modelling and Applications</u> Polish-French studies in the specialization entitled nanophysics and mesoscopic materials – modelling and applications are conducted in the so-called European Master mode, together with the University du Maine in Le Mans, France. Graduates are awarded MA titles/ diplomas from both universities – Polish and French one. Graduates from the speciality "nanophysics and mesoscopic materials –

modelling and applications” are educated extensively about physical processes occurring in nano- or mezosopic objects, have professional knowledge of solid state physics, modern materials having industrial applications. The didactic activities are provided by staff from the both universities, that have documented achievements in that – relatively new – domain of physics. The students that speciality have internship in the modern labs of the French partner, where they are familiar with the method of determination of properties photoelectronic materials, nanoparticles of the metals, carbon nanotubes, as well as the thin layers. A graduate with such education is a much demanded specialist on the labour market. Graduates should find employment in modern technological companies in Poland and in Europe.

Theoretical Physics – Programme in English

Graduates of level II who have specialized in theoretical physics shall possess extensive and cohesive knowledge of theoretical physics, proficiency in using sophisticated mathematic methods, as well as advanced computer methods, including also digital simulations. MA theses can be prepared in classical topics related to the theory of solids, field theory, theory of elementary particles, or astrophysics, as well as nanophysics or quantum information science. An additional advantage possessed by graduates of theoretical physics taught in English (curriculum identical with that for the same specialty taught in Polish) will be the very good command of English. It shall make the use of professional literature published in English easier, it shall also simplify preparation of scientific publications and presentations for international conferences. Due to that, graduates will stand better chances of continuing their studies at foreign universities, or finding attractive employment, also in areas not directly connected with physics.