University of Gdańsk

Subject card

Subject name and code	Research/Professional Project, PG_00165984		
Field of study	Quantum Information Technology		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2026/2027
Education level	Master's studies	Subject group	Obligatory subject group in the field of study Optional subject group
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	English
Semester of study	4	ECTS credits	10.0
Learning profile	academic	Assessment form	credit
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor		
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	195.0	0.0	0.0	195

E-learning hours included: 0.0

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	195	0.0	0.0	195

Subject objectives

The aim of the subject is to make the student part of the ongoing active research in the area of Quantum Information Technologies, to foster connections with other scientists, and to prepare the student to work as an independent reseracher in academia or industry.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[QITL3_W10] knows the general principles of creating and developing forms of individual entrepreneurship, using knowledge in the field of physics and other exact and natural sciences	Student knows regulations regarding copyright related to the results obtained within the research project	[SW2] presentation/project/paper/ report
	[QITL3_U12] can use a selected foreign language to the extent that allows for independent supplementation of education and communication with specialists in the same or related specialization	Student can present their reserach project to international specialists in the field	[SU2] presentation/project/paper/ report
	[QITL3_K07] is aware of responsibility for research tasks executed as team	The student can perform literature search related to the research project, calculations and writing, as well as participates in discussions about the research project with his collaborators, is aware about responsibility for timely and accurately addressing his/her tasks	[SK2] presentation/project/paper/ report
	[QITL3_K06] is aware of the risks of obtaining information from unverified sources, including those from the Internet	Student knows effective and reliable ways of conducting literature search and is aware about mechanisms related to misinformation, manipulation and fraud in science	[SK2] presentation/project/paper/ report
	[QITL3_K08] is able to formulate competent opinions on professional issues and opinions on certain issues that concern general audience	Student can present their research project to the general audience in a non-technical language, can explain challanges and opportunities offered by Quantum Information Technology, and can put the research in the wider context of scientific progress	[SK2] presentation/project/paper/ report
	[QITL3_U05] has the ability to synthesize methods and ideas from various areas of physics and other branches of science; is able to notice that distant phenomena are sometimes described by similar models	Student can relate the models used in the research project to other fields of science and technology, and can suggest ways the research project can benefit from taking inspiration from them, or how the results can be used in advancing other fields	[SU2] presentation/project/paper/ report
	[QITL3_W07] knows the principles safety rules to the extent that allows for independent work in the area corresponding to the chosen specialization	Student knows the rules of safety in the research environment where the research project is conducted	[SW2] presentation/project/paper/ report
	[QITL3_U09] can work independently and in a team	Student can perform literature search, calculations and writing, as well as participates in discussions about the reserach project with the collaborators	[SU2] presentation/project/paper/ report [SU8] observation of student's independent or team work
	[QITL3_U06] is able to adapt to related scientific disciplines the knowledge and theoretical methods and methodology of physics	Student can relate the methodology used in the research project to research in similar fields	[SU2] presentation/project/paper/ report
	[QITL3_U10] can popularize science within quantum information theory or related areas of physics	Student can present their reserach project using a non-technical language	[SU2] presentation/project/paper/ report
	[QITL3_K04] understands and appreciates the importance of intellectual honesty in one's own and other people's actions; is aware of ethical problems in the context of research integrity	Student understands and appreciates ethical way of conduct in reserach, publishing, patent and copyright laws	[SK1] oral statement/conversation/ discussion
	[QITL3_U08] is able to communicate effectively with both specialists and non-specialists regarding issues relevant to the studied area	Student is aware about ethical way of conduct in reserach, in parcticular in the research project	[SU2] presentation/project/paper/ report

	Course outcome	Subject outcome	Method of verification
	[QITL3_W09] knows and understands the basic concepts and principles of industrial property and copyright protection and the need to manage intellectual property resources; knows the rules for using patent information resources	Student is aware about patent laws relevant from the perspective of the research project	[SW2] presentation/project/paper/ report
	[QITL3_K03] can work individually and in a team; is aware of responsibility for jointly performed tasks	Student can work individually and in a group on a scientific project responsibility for timely and accurately addressing tasks within the research project	[SK2] presentation/project/paper/ report [SK8] observation of student's independent or team work
	[QITL3_K09] can think and act in an entrepreneurial way	Student can pinpoint to possible application of their results in technology and industry, is aware about patent procedures and copyright laws	[SK2] presentation/project/paper/ report
	[QITL3_U07] can present research results (experimental, theoretical or numerical) in written, oral, multimedia presentation or poster form	Student can present results of the reserach project though a talk or a poster	[SU2] presentation/project/paper/ report
Subject contents	Participation in research project: discussions, literature search, research planning, calculations, simmulations, writing scientific paper, preparing poster/oral presentations of the results		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	project report	51.0%	90.0%
	assesment of the team work and knowledge of safety rules	51.0%	10.0%
Recommended reading	Basic literature	Depending on the research project.	
	Supplementary literature	None.	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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