

Subject card

Subject name and code	Study Visits, PG_00182205						
Field of study	Medical Physics						
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		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		3.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Justyna Strankowska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	45.0	45
	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	45		0.0		30.0	75
Subject objectives	The objective of these study visits is to introduce Medical physics students to the practical aspects of working in various healthcare and research facilities. They are designed to enable students to: • Understand the specifics of a medical physicist's work in both clinical and research environments. • Directly observe modern equipment and technology in a real-world setting. • Network with practicing specialists, which can help them choose a career path and potentially secure internships or jobs. • Verify the theoretical knowledge gained during their studies against real-world professional problems and challenges. • Understand the entire lifecycle of medical equipment, from the design and production phase, through clinical implementation, to daily use and maintenance. • Identify potential career paths within the industry.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[FIZMEDMU2_K02] Is ready to create, adhere to and develop patterns of good conduct, including the principles of professional ethics and intellectual honesty in one's own activities and in the work environment; is aware of ethical issues in the context of research integrity and in the work of a medical physicist.	The student is prepared to: Identify ethical dilemmas and issues related to modern medical technologies (e.g., ethics in diagnostic imaging or radiotherapy). Discuss the responsibilities of a medical physicist concerning research and clinical integrity, based on observations from study visits.	[SK1] oral statement/conversation/discussion
	[FIZMEDMU2_K06] Is ready to think and act in an entrepreneurial manner.	The student is prepared to: Recognize opportunities for innovation and development in the fields of diagnostics and radiotherapy, such as improving existing techniques or creating new solutions. Identify potential market gaps and formulate project concepts that can streamline processes in medical facilities. Assess the economic effectiveness of various medical technologies when considering their implementation in a facility.	[SK1] oral statement/conversation/discussion
	[FIZMEDMU2_U06] Can effectively communicate on specialised topics in the field of physics and medical physics with diverse audiences (specialists and non-specialists), skillfully justifying his/her position.	Explains the principles of operation of modern medical equipment (e.g., linear accelerators) and diagnostic/therapeutic processes (e.g., MR spectroscopy, brachytherapy) in a way that is understandable to various audiences. Justifies the selection of specific treatment and diagnostic techniques within a clinical case, using appropriate specialized language when speaking with experts and simple language when communicating with patients or laypeople. Formulates questions for specialists (e.g., medical physicists or radiologists) regarding clinical processes, demonstrating a thorough understanding of the presented material.	[SU1] oral statement/conversation/discussion
	[FIZMEDMU2_U08] Can determine directions for further improvement of knowledge and skills (including self-education) within the scope of the chosen specialisation and beyond, and guide others in this area, e.g. through popularisation.	Identifies areas where modern diagnostic and radiotherapy techniques require further research and development, justifying their stance based on observations from study visits. Indicates specific professional and research pathways in medical physics (e.g., in diffusion imaging or radiotherapy planning), defining their personal interests. Popularizes knowledge about advanced medical techniques among non-specialists.	[SU1] oral statement/conversation/discussion
	[FIZMEDMU2_U10] He can lead a debate.	Leads a discussion on technologies used in diagnostic imaging (MR, CT, PET/CT) and radiotherapy, formulating clear arguments and answering questions. Compares and evaluates various medical imaging and radiotherapy techniques, presenting their advantages and disadvantages in a clinical context.	[SU1] oral statement/conversation/discussion

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Subject contents	The study visit program includes: Modern Diagnostic Imaging Techniques: This involves observing the operation of equipment such as Magnetic Resonance Imaging (MRI), Computed Tomography (CT), PET/CT, and SPECT/CT. Students will learn the principles of image formation and reconstruction in various modalities, including advanced techniques like spectroscopy and diffusion imaging. Radiotherapy: Students will gain an understanding of the entire oncological treatment process, from treatment planning using Treatment Planning Systems (TPS) to its execution with modern linear accelerators and techniques like IMRT, VMAT, and brachytherapy. Dosimetry and Quality Assurance: This covers the practical aspects of equipment calibration, performing quality assurance (QA) tests on diagnostic and therapeutic equipment, and assessing the radiation doses received by patients and staff. Legal and Ethical Aspects of the Profession: Students will become familiar with radiological safety procedures and the medical physicist's responsibilities concerning supervision and documentation. The Role of the Medical Physicist: This section provides an opportunity to verify theory against practice by directly observing a medical physicist's daily duties within an interdisciplinary team, including in a research and development (R&D) and industrial context (medical equipment manufacturing).									
Prerequisites and co-requisites										
Assessment methods and criteria	<table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Debate</td><td>51.0%</td><td>50.0%</td></tr><tr><td>Raport</td><td>51.0%</td><td>50.0%</td></tr></table>	Subject passing criteria	Passing threshold	Percentage of the final grade	Debate	51.0%	50.0%	Raport	51.0%	50.0%
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Supplementary literature	not applicable									
eResources addresses										
Example issues/ example questions/ tasks being completed	not applicable									
Work placement	Not applicable									

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