

Subject card

Subject name and code	Computed Systems of Diagnostic Imaging and Picture Communication in Medicine, PG_00179270						
Field of study	Informatyczne systemy obrazowania i wymiany obrazów w medycynie						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2025/2026		
Education level	Bachelor'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	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		3.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Anna Synak				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0	0.0	30
	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	30		0.0		0.0	30
Subject objectives	Course objectives: A. To familiarize students with selected IT systems used in medicine, such as: Radiology Information System (RIS) for managing the performance of diagnostic examinations Picture Archiving and Communication System (PACS) for archiving and transmitting images from diagnostic devices Hospital Information System (HIS) enabling comprehensive management of patient information, documentation, and treatment processes. B. To discuss the use of distributed systems in order to improve, for example, the performance of systems related to imaging diagnostics. C. To introduce the prospects for applying artificial intelligence in modern medical imaging diagnostics.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	FIZMEDL3_W32	The student knows and understands advanced issues related to selected methods used in medical information systems and medical imaging diagnostics.	[SW4] test/egzamin - ustny lub pisemny
	[FIZMEDL3_K01] knows the limitations of his own knowledge and understands the need for further education	The student is aware of the limitations of their own knowledge and skills in the field of medical IT systems and understands the need for continuous learning and updating of knowledge, especially in the area of modern technologies, medical imaging diagnostics, and applications of artificial intelligence in medicine.	[SK4] test/egzamin - ustny lub pisemny
Subject contents	Historical overview of systems dedicated to medical imaging diagnostics The RIS/HIS system and its role in the flow of diagnostic information Modern PACS systems Distributed systems and the role of teleradiology AI in modern medical imaging diagnostics		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	oral exam	51.0%	100.0%
Recommended reading	Basic literature	Materiały własne. Publikacje: https://pubmed.ncbi.nlm.nih.gov/30225824/ Mona Alhajeri, Syed Ghulam Sarwar Shah ,Limitations in and Solutions for PACS System: an Exploratory Study of PACS Professionals' Perspectives https://pubmed.ncbi.nlm.nih.gov/22212425/ Bahar Mansoori , Karen K Erhard, Jeffrey L Sunshine, Picture Archiving in an integrated health system https://pubmed.ncbi.nlm.nih.gov/18293569/ George C Kagadis , Paul Nagy, Steve Langer, Michael Flynn, George Stathakopoulos, Applications of informatics	
	Supplementary literature	e-zasoby: https://www.dicomstandard.org/ https://pl.wikipedia.org/wiki/System_archiwizacji_obrazu_i_komunikacji https://www.gehealthcare.com/products/healthcare-it/pacs-and-ai-orchestration? https://www.siemens-healthineers.com/pl/medical-imaging/digital-transformation-of-radiology https://medical.sectra.com/solutionarea/radiology-imaging/	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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