GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Digital Libraries, PG_00048259		
Field of study	Informatics		
Date of commencement of studies	February 2027	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	Optional subject group Specialty subject group Subject group related to scientific research in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Intelligent Interactive Systems -> Faculty of Electronics Telecommunications and Informatics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Magdalena Godlewska	
	Teachers	dr Magdalena Godlewska	

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	15.0	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	4.0	16.0	50

Subject objectives
1. To understand a class of Web information systems for collecting knowledge of human civilization. 2.To characterize design, deployment and exploitation problems of digital library systems. 3.To implement a practically simple digital library system.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U09] can carry out a critical analysis of the functioning of existing technical solutions and assess these solutions, as well as apply experience related to the maintenance of advanced technical systems, devices and facilities typical for the field of studies, gained in the professional engineering environment	Is able to evaluate IT solutions in the field of digital libraries from the point of view of economic, cultural, ethical and current technological limitations	[SU2] Assessment of ability to analyse information
[K7_W11] knows and understands, to an increased extent, the general principles of creation and development of forms of individual entrepreneurship and the economic, legal and other conditions of various types of activities related to the awarded qualification, including the principles of protection of industrial property and copyright law	Knows the legal and economic conditions for creating and maintaining digital libraries, including the principles of protecting copyright and property rights to the presented works.	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation
[K7_K02] is ready to provide critical evaluation of received content and to acknowledge the importance of knowledge in solving cognitive and practical problems	Knows basic standards for representing metadata and selected protocols for data exchange between digital libraries. Understands technical, legal, ethical and cultural aspects of curating, storing, organizing, distributing and sharing the digital content.	[SK4] Assessment of communication skills, including language correctness [SK5] Assessment of ability to solve problems that arise in practice
[K7_U03] can design, according to required specifications, and make a complex device, facility, system or carry out a process, specific to the field of study, using suitable methods, techniques, tools and materials, following engineering standards and norms, applying technologies specific to the field of study and experience gained in the professional engineering environment	Can desing and code the digital library software.	[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task

Subject contents

Course content – lecture
1. Digital collections: examples. 2. Basic functionality of digital libraries 3. Knowledge based society concepts 4. The Alexandrian principle 5. Legal aspects: copyright protection. 6. Cultural barriers, ethical issues 7. Digital library: a project or enterprise? 8. Sources of materials 9. Feasibility study of DL projects 10. Digitizing documents 11. Virtual libraries 12. Bibliographic organization 13. Library information units 14. Knowledge classification systems 15. Modes of access 16. Case study: the MEMORIAL project 17. Presenting documents and metadata 18. Searching: types of query 19. Browsing: lists, phrases, metadata 20. Document representation levels: character, text, page 21. Resource definition framework (RDF) 22. An XML query language 23. The use of bibliometrics (PageRank, HITS) 24. RSS syndication format 25. Challenges of new library media (email, IM, blogs, wiki)

Prerequisites and co-requisites

No requirements

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Exam	40.0%	35.0%
Project	50.0%	50.0%
Attendance/activity	40.0%	15.0%

Recommended reading

Basic literature	Witten, I.H., Bainbridge, D.: How to build a digital library, Morgan Kaufmann Publishers, 2003. Powers, S.: Practical RDF, OReilly & Associates, 2003. Hammersley, B.: Content Syndication with RSS, O"Reilly Media, Inc., 2003 Perl, http://pl.wikibooks.org/wiki/Perl JeromeDL/2.1/DeveloperGuide, http://wiki.corrib.org/index.php/ JeromeDL/2.1/DeveloperGuide Walmsley, P.: XQuery, O"Reilly Media, Inc., 2007
Supplementary literature	No requirements
eResources addresses	

Example issues/ example questions/ tasks being completed

1. Data acquisition (scanner).
2. Digital material processing (Adobe Photoshop)
3. Document content extraction (Abby Fine Reader)
4. OCR quality evaluation
5. Publication of digital library objects (Greenstone, DLibra)

Practical activites within the subject

Not applicable

Document generated electronically. Does not require a seal or signature.