GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Digital Libraries, PG_00048259
Field of study	Informatics

Date of commencement of studies	February 2023	Academic year of realisation of subject	2022/2023
Education level	second-cycle studies	Subject group	Optional 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

Name and surname of lecturer (lecturers)	Subject supervisor	dr Magdalena Godlewska
	Teachers	dr Magdalena Godlewska

Lesson types and methods of instruction	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_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.	[SK5] Assessment of ability to solve problems that arise in practice [SK4] Assessment of communication skills, including language correctness
	[K7_U42] can solve engineering and research problems including design, assessment and maintenance of information systems and applications, using experimental methods and management techniques	Can characterize basic problems of developing, deploying and exploiting digital library systems.	[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information
	[K7_W09] Knows and understands, to an increased extent, the economic, legal and other conditions of various types of activities related to the given qualification, including the principles of protection of industrial property and copyright.	Can analyze user requirements for Web repositories providing information resources for the knowledge society.	[SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge
	[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.	[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment
	[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

Subject contents	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%
	Attendance/activity	40.0%	15.0%
	Project	50.0%	50.0%

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	Adresy na platformie eNauczanie: Biblioteki cyfrowe 2022/23 - Moodle ID: 24395 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=24395

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)
Work placement	Not applicable