

Content Management and Digital Library

I. Course code: 0700033

Class hours: 32

Credits: 2

II. Suitable specialty: Computer Science and Technology

III. Prerequisites: Foundation of Computer Science

IV. Course goals:

Organizations need to manage an increasingly complex body of licensed, born digital and digitized content and make it accessible to users. Information services and libraries are now offering both print and electronic content. Digital libraries, made up primarily of digitized content, have become an important part of the information landscape.

The course provides an overview of digital libraries encompassing both technical and management aspects. Students will be introduced to ways to think strategically about the challenges in digital libraries. There is also a strong focus on learning to apply project management principles. This is blended with a grounding in technical and practical skills, such as designing websites and digitization of content, including: content management, types of digital content, factors in the creation and organization of digital libraries, searching, using, and archiving large digital libraries.

V. Teaching method:

Classroom lectures, Classroom discussion, Group project practice.

VI. Contents of teaching:

Classroom teaching: 36 class hours

1. Background 2 class hours
 - 1) State of the Art - Digital Library
 - 2) Difference between traditional library and digital library
 - 3) Steps of creating digital library
 - 4) Examples of digital library
2. Metadata 3 class hours
 - 1) Definition of metadata and why metadata
 - 2) Types of metadata
 - 3) Metadata standards, Dublin Core
3. Interoperation of digital library 2 class hours
 - 1) Definition of interoperation in digital library
 - 2) Interoperation protocols
 - 3) Case study-open archive initiative
 - 4) implementation and evaluation of interoperation
4. Personalize service and Recommender systems 5 class hours
 - 1) Personalize service in digital library

- 2) User modeling in digital library
 - 3) What are recommender systems for?
 - 4) Collaborative Filtering and Content-based Filtering
 - 5) Knowledge-Based Recommendations
 - 6) Hybridization Strategies
 - 7) Evaluation techniques
5. Semantic digital library 3 class hours
- 1) Semantic web and ontologies
 - 2) Semantically enriched documents
 - 3) Navigation in concept structures and document spaces
 - 4) Schema and ontology creation and mapping
 - 5) Tasks: learning, sense making
6. Digital Rights Management 2 class hours
- 1) What Does DRM Really Mean?
 - 2) DRM Techniques, Watermarking
 - 3) Digital Rights Requirements in Academia
 - 4) Lifecycle of Digital Rights Management
7. Group Practice teaching : 15 class hours
- 1) Group project design and discussion 8 class hours
 - 2) Presentation and evaluation of group research or project 7 class hours

VII. Examination and grading:

The score uses a hundred-mark system. Total Score 100%:

- 1) Classroom Performance 10%
- 2) Weekly Summaries 10%
- 3) Homework 30%
- 4) Final Exam /Team Project 50%.

VIII. Textbook and reference:

- [1] Digital: Personal Collections in the Digital Era 7, 2011
- [2] Concept-Based Information Retrieval: Personalized and Contextual Search in the Context of Digital Libraries. 7. 2012
- [3] Semantic Digital Libraries by Sebastian Ryszard Kruk and Bill McDaniel 2011
- [4] E-Librarian Service: User-Friendly Semantic Search in Digital Libraries by Serge Linckels and Christoph Meinel (Apr 12, 2011)
- [5] Information Access through Search Engines and Digital Libraries (The Information Retrieval Series) 11. 2010
- [6] Understanding the Semantic Web: Bibliographic Data and Metadata (Library Technology Reports) 1. 2010
- [7] Semantic Web Technologies and Social Searching for Librarians 4. 2012
- [8] Advanced Topics in Information Retrieval (The Information Retrieval Series) 6. 2011
- [9] Digital Rights Management: The Librarian's Guide (Medical Library Association Books Series) by Catherine A. Lemmer (Editor), Carla P. Wale (Editor) 2016

