UNIVERSITY OF BORÅS

Technologies of Digital Libraries 2
Teknik för digitala bibliotek 2
7.5 credits

Ladok Code: C3LTD2
Version: 5.1
Established by: Committee for Education in Librarianship, Information, and IT 2020-05-26
Valid from: Autumn 2020

Education Cycle: Second cycle
Main Field of Study (Progressive Specialisation): Informatics (A1N), Library and Information Science (A1N), Information Architecture (A1N)
Disciplinary Domain: Natural sciences
Prerequisites: Technologies of Digital Libraries 1 (C3LTD1) at pass level
Subject Area: Informatics/Computer and Systems Sciences
Grading Scale: Seven-degree grading scale (A-F)

Content

The course will help the student to develop an understanding of and gain experience in how digital resources and services can be developed through the integration of data from external sources such as APIs (Application Programming Interfaces) and linked data. The course includes creation of, structuring of, and give access to relational databases. In addition, the course includes programming and access to and manipulation of data from external sources.

Learning Outcomes

After passing the course the student should be able to, concerning

Knowledge and understanding
1.1 Define and describe central concepts for relational databases.
1.2 Explain central techniques for relational databases.
1.3 Demonstrate an understanding for technical standards for linked and open data.

Competence and skills
2.1 Utilise SQL to insert, update and search in a relational database.
2.2 Utilise JavaScript with NodeJS to access and manipulate data from an external source.

Judgement and approach
3.1 Analyse and reflect upon possibilities and constraints as well as advantages and disadvantages regarding open and linked data for digital libraries.

Forms of Teaching

Tuition is conducted through lectures, exercises and tutoring

The language of instruction is English.

Forms of Examination

The course is examined through:

- Assignment 1: Data structuring and serialisation
Learning outcomes: 1.1, 1.2, 1.3, 3.1
Credits: 1.5
Grading scale: U-G (= Fail-Pass)

- Assignment 2: Extract data from external source
Learning outcomes: 1.3, 2.2, 3.1
Credits: 3
Grading scale: U-G (= Fail-Pass)

- Assignment 3: Relational databases
Learning outcomes: 1.1, 1.2, 2.1, 3.1
Credits: 3
Grading scale: A-F

To acquire E on the entire course the grade E/G is required on all tasks. A higher grade on the entire course is thereafter determined by the grade on Assignment 3.

In the event of changes in course plans students who wish to complete courses can be examined on the basis of the most recent version of the course plan. For courses that are no longer running, students who wish to complete such courses can read all or part of an equivalent course.

If the student has received a decision/recommendation regarding special pedagogical support from the University of Borås due to disability or special needs, the examiner has the right to make accommodations when it comes to examination. The examiner must, based on the objectives of the course syllabus, determine whether the examination can be adapted in accordance with the decision/recommendation.

Student rights and obligations at examination are in accordance with guidelines and rules for
the University of Borås.

Literature and Other Teaching Materials

The course literature is in English.

Van Hooland, S & Verborgh, R. (2014). Linked Data for Libraries, Archives and Museums: How to clean, link and publish your metadata. London: Facet Publishing (chosen parts, approx. 70 p.)

Nixon, R. (2018). Learning PHP, MySQL & JavaScript: with JQuery, CSS & HTML5 (5th ed.). Sebastopol, CA: O'Reilly. (chosen parts, approx. 300 pages)

Wexler, J. (2019). Get programming with Node.js. Shelter Island, NY: Manning Publications. (chosen parts, approx. 300 pages)

Reference materials and scientific papers totalling approximately 100 pages.

Student Influence and Evaluation

The course is evaluated in accordance with the current guidelines for course evaluations at the University of Borås, where students' views should be sought. The course evaluation report will be published and disseminated to participating and prospective students in accordance with the current guidelines, and forms the basis for future development of courses and training programs. The course coordinator is responsible for that the evaluation is performed according to current guidelines.

Miscellaneous

The course is a part of Master's programme: Library and Information Science, Digital Library and Information Services.