UNIVERSITY OF BORÅS

Modelling
Modellering
7.5 credits
7.5 högskolepoäng

Ladok Code: C3KMD1
Version: 4.0
Established by: Committee for Education in Librarianship, Information, and IT 2019-02-05
Valid from: Autumn 2019

Education Cycle: First cycle
Main Field of Study (Progressive Specialisation): Information Architecture (G1N)
Disciplinary Domain: Natural sciences 50%, Social sciences 50%
Prerequisites: General entry requirements for university studies.
Subject Area: Informatics/Computer and Systems Sciences
Grading Scale: Seven-degree grading scale (A-F)

Content

The course covers methods for the creation of models for specific situations, scenarios, and systems that support the process of planning, designing, and implementing web applications. Systems and scenario models will be accomplished using the visual modelling language Unified Modelling Language (UML). The course will present object-oriented analysis and design as well as the systems development for the analysis and design of IT systems. The course will cover the following:

- Introduction to object-oriented modelling
- Class diagrams
- Sequence diagrams
- Use diagrams and use case diagrams
- Activity diagrams

Learning Outcomes

After completing the course, the student shall have the skills to, concerning:

Knowledge and understanding
1.1 Using the principles of object-oriented analysis and design, demonstrate an understanding of diagrams, including class and use case diagrams.

Competence and skills
2.1 Identify the actors and use cases for a web application and create use case diagrams.
2.2 Generate different types of UML diagrams for modelling of a situation, a scenario, or a web application and explain the underlying information architecture.
2.3 Execute an object-oriented analysis using UML in order to create diagrams such as class and sequence diagrams.
2.4 Analyse system demands and, from this analysis, create models in UML.
2.5 Choose and implement chosen parts of Rational Unified Process for a given situation.

Judgement and approach
3.1 Critically determine the pros and cons of using UML as a common platform for planning, modelling, and developing a web development project.
3.2 Demonstrate the ability to evaluate and interpret information for given scenarios and problems of UML diagram creation.

Forms of Teaching

The teaching format includes lectures, practical exercises, and practical workshops.

The language of instruction is English.

Forms of Examination

The course is graded through the following examinations:

- Written assignment: Group assignment
Teaching goals: 1.1, 2.1, 2.2, 2.3, 2.4, 2.5, 3.2
College credits: 2.5
Grading scale: Pass or fail

- Written assignment: Project work
Teaching goals: 1.1, 2.1, 2.2, 2.4, 3.1, 3.2
College credits: 5.0
Grading scale: Seven-degree grading scale (A-F)

For the grade E on the entire course the grade Pass (G) is required on *Written assignment: Group assignment* together with the grade E on *Written assignment: Project work.* A higher grade on the entire course is thereafter determined by the grade on *Written assignment: Project work.*

When the course plan is changed, students who wish to finish the course must do so according to the new plan's content and assignment requirements. If the course no longer is offered on a regular basis, students who wish to complete the course must take all or part of another, 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

Course literature is in English.

Kappel, G., Huemer, C., Scholz, M., & Seidl, M. (2015). UML @ Classroom: an introduction to object-oriented modeling. Berlin: Springer International Publishing. (206 pages)

Additional student-found material (approximately 150 pages)

Student Influence and Evaluation

The course is evaluated in accordance with current guidelines for course evaluations at the University of Borås in which students' views are to be gathered. The course evaluation report is published and returned to participating and prospective students in accordance with the above-mentioned guidelines, and will be taken into consideration in the future development of courses and education programmes. Course coordinators are responsible for ensuring that the evaluations are conducted as described above.

Miscellaneous

The course is part of the degree programme Web Content Manager and Designer, 180 credits, and Web Content Manager and Designer, distance education, 180 credits, as well as being offered as a freestanding course.