

Project Portfolio - Computer Science

About the course

subject	Datalogi
activitytype	master project
Teaching language	English
Registration	Registration through STADS-Selvbetjening within the announced registration period, as you can see on the Studyadministration homepage. When registering for courses, please be aware of the potential conflicts between courses or exam dates on courses. The planning of course activities at Roskilde University is based on the recommended study programs which do not overlap. However, if you choose optional courses and/or study plans that goes beyond the recommended study programs, an overlap of lectures or exam dates may occur depending on which courses you choose.
Detailed description of content	Project group formation takes place during the third week of the semester
Project Process	Detailed description of content The project portfolio will be divided into three smaller subprojects with problems and challenges related to issues covered in three corresponding sections of the RAWDATA course. The project portfolio is defined by a set of specific requirements with the intention to develop competence and skills in specific theoretical and practical areas. The goal is that the student, based on knowledge of relevant theory, will obtain skills to the development of responsive applications in a distributed environment, and the approach is, during the project portfolio, to develop a modern complex distributed web application. The contents of the three sections are outlined below. Section 1: Databases In this section we will design the data used in the project. We will use a large data set in order to be able to create an environment with real life problems with respect to normalization, optimization and complexity. This section of the project will form the data model of the application to be developed in the project. In addition we will deal with functionality to search and manipulate data to be stored in and provided by the database system. Finally we will consider specific problems that relate to data analytics (Data Warehouse and OLAP), which will be a theme for the intended application. Section 2: Data communication and network with focus on web services This section is about the backend of the application, the web service interface to the data. By use of solid design principles, the backend is created within the .net framework and with c# as programming language. We will focus on how to create intuitive and maintainable restful interfaces to the underlying data model with good support for the frontend developers. Section 3: Development of responsive applications The main goal in this section is to create the frontend of the application by use of modern web development strategies. The foundation is html5, css3 and javascript, and the aim is responsive single-page applications that uses popular tools and frameworks currently used to form the mobile/web applications we use every day.
Expected work effort (ECTS-declaration)	Project work will have a total workload of 420 hours. 40 hours are spent on project formation and around 40 hours for the exam and preparation for the exam. During the project period, there are 15 hours of project formation workshops and internal evaluation and groups of 4 students can expect 15 hours of supervision during their project. Students working alone must expect a reduced number of supervisions.
Course material and Reading list	This corresponds to the curriculum for the RAWDATA course plus additional literature selected by the student groups in collaboration with the supervisor.
Evaluation- and feedback forms	Students receive feedback on drafts of subproject reports. On top of this, groups receive individual supervision with supervisors.
Head of studies/ academic coordinator	Mads Rosendahl (madsr@ruc.dk)

Administration of exams	IMT Studieadministration (imt-studieadministration@ruc.dk)
ECTS	15
Learning outcomes and assessment criteria	• In-depth knowledge and understanding of the theoretical, methodological and practical opportunities and problems that are associated with software development, using specific models from the core areas or elective subject. • Skills in describing and reflecting upon independently completed work wherein a complex research question is processed using relevant solution models. • Skills in defining and justifying a selected solution model and independently planning and completing the solution using relevant high-level scientific literature • Skills in Mastering concepts, theories and methods based on literature and being able to use these in an insightful manner to solve concrete computer science problems. • Competences in mastering computer science development situations that are complex and require new solution models.
Overall content	The students will develop their own practices portfolio in groups. The subjects chosen for this must be within the core areas. The core areas of Computer Science are: machine architecture and operating systems, distributed systems, databases and human to machine interactions.
Teaching and working methods	A project portfolio is a collection of works (texts, program code, data models, architecture) at various levels of abstraction that are associated with practical workshop-oriented or exercise work.
Type of activity	Project portfolio
Form of examination (p1)	Oral group exam for the participants in the project. The starting point for the oral exam is the students' project portfolio, consisting of a main report including a reflection document and selected products (optional), and additional products as annexes. The exam includes individual presentations on a topic of the students' own choice. The topic must be relevant to the issues highlighted in the project portfolio. Each individual presentation including questions may last up to 5 minutes. The individual presentation(s) are followed by a dialogue between the student(s) and the assessors about the project. There may be posed questions related to the subject area relating to the project portfolio's subject area. The assessment is an assessment of both the project portfolio and the oral performance. Permitted group size: 2-6 students. The character limits of the project are:: For 2 students: 4,800-48,000 characters, including spaces. For 3 students: 4,800-48,000 characters, including spaces. For 4 students: 4,800-48,000 characters, including spaces. For 5 students: 4,800-48,000 characters, including spaces. For 6 students: 4,800-48,000 characters, including spaces. The character limits include the cover, table of contents, summary, bibliography, figures and other illustrations, but exclude any appendices. Time allowed for exam including time used for assessment is for: 2 students: 60 minutes. 3 students: 75 minutes. 4 students: 90 minutes. 5 students: 105 minutes. 6 students: 120 minutes. Spelling and communication skills in the project report are part of the assessment. Permitted support and preparation materials at the oral exam: All. Assessment: 7-point grading scale. Moderation: Internal co-assessor.

Form of Re-examination
(p1)

Samme som ordinær eksamen

Exam code(s)

Exam code(s) : U40124

Course days:

Hold: 1

Project Portfolio - Project hand-in (DAT)

time 20-12-2021 10:00 til
20-12-2021 10:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

Project Portfolio - Oral examination period (DAT)

time 20-01-2022 08:15 til
31-01-2022 18:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

Project Portfolio - Oral reexamination period (DAT)

time 01-02-2022 08:15 til
28-02-2022 18:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt