

Complex IT Systems – Practice

Title	Complex IT Systems – Practice
Semester	E2024
Master programme in	Computer Science
Type of activity	Course
Teaching language	English
Study regulation	Read about the Master Programme and find the Study Regulations at ruc.dk

REGISTRATION AND STUDY ADMINISTRATIVE

You register for activities through [stads selvbetjening](#) during the announced registration period, which you can see on the [Study administration homepage](#).

Registration When registering for courses, please be aware of the potential conflicts and overlaps between course and exam time and dates. The planning of course activities at Roskilde University is based on the recommended study programmes, which should not overlap. However, if you choose optional courses and/or study plans that goes beyond the recommended study programmes, an overlap of lectures or exam dates may occur depending on which courses you choose.

Number of participants

ECTS 15

Responsible for the activity Troels Andreasen (troels@ruc.dk)

Head of study Henrik Bulskov (bulskov@ruc.dk)

Teachers

Study administration IMT Registration & Exams (imt-exams@ruc.dk)

Exam code(s) U60057

ACADEMIC CONTENT

Overall objective	Construction of complex IT systems and management of complex IT projects.
Detailed description of content	<p>Construction of complex IT systems and management of complex IT projects. This activity will be dominated by three pre-defined and connected subprojects that combine into a whole. Problems and challenges are related to issues covered in the three corresponding sections of the Complex IT systems – Theory course. The subprojects are defined by a set of specific requirements where the intention is to develop competence and skills in specific theoretical and practical areas. The goal is that the student, based on knowledge about relevant theory, will obtain skills to develop applications in a distributed environment, and the approach is, by the three subprojects, to develop a modern complex and distributed web application.</p>
Course material and Reading list	Syllabus will be available on Moodle.
Overall plan and expected work effort	<p>The course will cover full-stack development of a larger complex IT-system. Starting with storage, where data model and data representation as well as functionality handled by the persistence layer should be created. Hereafter, the backend of the system must be designed and implemented supporting a frontend and using the storage layer. Finally, a frontend will be designed and created to provide a user interface to the system, based on the functionality provided by the backend.</p>
	The course will have a total workload of 412 hours.
	The activity's major teaching and learning activities are fleshed out'
	<ul style="list-style-type: none"> • Minor workshops on specific practical problems • Status meetings with teachers to report on the process and get insight in requirements • On campus work supported by teaching assistants
Format	
Evaluation and feedback	Evaluation form to be filled out (anonymously) plus open discussion on the last course day.

Programme
ASSESSMENT

After completing this activity, students will be able to:

Overall
learning
outcomes

- construct complex IT solutions individually and in software development teams and acquire new knowledge about new technologies and their application possibilities.
- demonstrate knowledge and understanding of methods for the analysis, design, and implementation of IT systems.
- assemble larger distributed systems, with data storage, backends and frontends.
- use appropriate state-of-the-art programming languages, libraries, development tools and equipment.
- demonstrate insight into the tools and libraries offered in modern development environments and usage of future-proof technologies.

Group portfolio and oral exam.

Permitted group size: 2-6 students. Examples of written products are exercise responses, talking points for presentations, written feedback, reflections, written assignments. The preparation of the products may be subject to time limits.

Form of
examination

The character limit of the portfolio is:

For 2 students: maximum 48.000 characters, including spaces.

For 3 students: maximum 48.000 characters, including spaces.

For 4 students: maximum 48.000 characters, including spaces.

For 5 students: maximum 48.000 characters, including spaces.

For 6 students: maximum 48.000 characters, including spaces.

The character limits include the cover, table of contents, 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.

The assessment is individual and based on the student's individual performance.

The assessment is an overall assessment of the written product(s) and the subsequent oral examination..

Permitted support and preparation materials at the oral exam: All.

Assessment: 7-point grading scale.

Moderation: Internal co-assessor.

Form of Re-examination

Samme som ordinær eksamen / same form as ordinary exam

Type of examination in special cases

Examination and assessment criteria

The exam is based on the documentation of the three different parts of the complex IT-system designed and implemented during the course as well as the source code and a demonstration of the software created.

Exam code(s) Exam code(s) : U60057

Course days:

Hold: 1

Study- and semesterstart - 1st semester - Computer Science (COMP)

time 02-09-2024 12:00 til
02-09-2024 18:00

location 25.2-035 - auditorie 25 (145)

Complex IT Systems - Practice (COMP)

time 03-09-2024 09:00 til
03-09-2024 17:00

location 40.3-25 - undervisningslokale (50)

Teacher Troels Andreasen (troels@ruc.dk)

Complex IT Systems - Practice (COMP)

time 05-09-2024 13:00 til
05-09-2024 17:00
location 46.3-042 - teorirum 46.3 (90)
Teacher Troels Andreasen (troels@ruc.dk)

Complex IT Systems - Practice (COMP)

time 11-09-2024 08:15 til
11-09-2024 16:00
location 46.3-042 - teorirum 46.3 (90)
Teacher Troels Andreasen (troels@ruc.dk)

Complex IT Systems - Practice (COMP)

time 13-09-2024 08:15 til
13-09-2024 12:00
location 03.1-s21 - auditorie b (80)
Teacher Troels Andreasen (troels@ruc.dk)

Complex IT Systems - Practice (COMP)

time 18-09-2024 08:15 til
18-09-2024 16:00
location 46.3-042 - teorirum 46.3 (90)
Teacher Troels Andreasen (troels@ruc.dk)

Complex IT Systems - Practice (COMP)

time 20-09-2024 08:15 til
20-09-2024 12:00
location 45.2-051 - teorirum 45.2 (90)
Teacher Troels Andreasen (troels@ruc.dk)

Complex IT Systems - Practice (COMP)

time 25-09-2024 08:15 til
25-09-2024 16:00
location 45.2-051 - teorirum 45.2 (90)
Teacher Troels Andreasen (troels@ruc.dk)

Complex IT Systems - Practice (COMP)

time 27-09-2024 08:15 til
27-09-2024 12:00

location 45.2-051 - teorirum 45.2 (90)

Teacher Troels Andreasen (troels@ruc.dk)

Complex IT Systems - Practice (COMP)

time 02-10-2024 08:15 til
02-10-2024 16:00

location 45.2-051 - teorirum 45.2 (90)

Teacher Troels Andreasen (troels@ruc.dk)

Complex IT Systems - Practice (COMP)

time 04-10-2024 08:15 til
04-10-2024 12:00

location 45.2-051 - teorirum 45.2 (90)

Teacher Henrik Bulskov (bulskov@ruc.dk)

Complex IT Systems - Practice (COMP)

time 09-10-2024 08:15 til
09-10-2024 16:00

location 45.2-051 - teorirum 45.2 (90)

Teacher Henrik Bulskov (bulskov@ruc.dk)

Complex IT Systems - Practice (COMP)

time 11-10-2024 08:15 til
11-10-2024 12:00

location 22.1-009 - undervisningslokale (72)

Teacher Henrik Bulskov (bulskov@ruc.dk)

Complex IT Systems - Practice (COMP)

time 16-10-2024 08:15 til
16-10-2024 16:00

location 45.2-051 - teorirum 45.2 (90)

Teacher Henrik Bulskov (bulskov@ruc.dk)

Complex IT Systems - Practice (COMP)

time 18-10-2024 08:15 til
18-10-2024 12:00

location 45.2-051 - teorirum 45.2 (90)

Teacher Henrik Bulskov (bulskov@ruc.dk)

Complex IT Systems - Practice (COMP)

time 23-10-2024 08:15 til
23-10-2024 16:00

location 45.2-051 - teorirum 45.2 (90)

Teacher Henrik Bulskov (bulskov@ruc.dk)

Complex IT Systems - Practice (COMP)

time 25-10-2024 08:15 til
25-10-2024 12:00

location 45.2-051 - teorirum 45.2 (90)

Teacher Henrik Bulskov (bulskov@ruc.dk)

Complex IT Systems - Practice (COMP)

time 30-10-2024 08:15 til
30-10-2024 16:00

location 45.2-051 - teorirum 45.2 (90)

Teacher Henrik Bulskov (bulskov@ruc.dk)

Complex IT Systems - Practice (COMP)

time 01-11-2024 08:15 til
01-11-2024 12:00

location 45.2-051 - teorirum 45.2 (90)

Teacher Henrik Bulskov (bulskov@ruc.dk)

Complex IT Systems - Practice (COMP)

time 06-11-2024 08:15 til
06-11-2024 16:00

location 45.2-051 - teorirum 45.2 (90)

Teacher Henrik Bulskov (bulskov@ruc.dk)

Complex IT Systems - Practice (COMP)

time 08-11-2024 08:15 til
08-11-2024 12:00
location 45.2-051 - teorirum 45.2 (90)
Teacher Niels Jørgensen (nielsj@ruc.dk)

Complex IT Systems - Practice (COMP)

time 11-11-2024 08:15 til
11-11-2024 16:00
location 46.3-042 - teorirum 46.3 (90)
Teacher Niels Jørgensen (nielsj@ruc.dk)

Complex IT Systems - Practice (COMP)

time 13-11-2024 08:15 til
13-11-2024 12:00
location 45.2-051 - teorirum 45.2 (90)
Teacher Niels Jørgensen (nielsj@ruc.dk)

Complex IT Systems - Practice (COMP)

time 15-11-2024 08:15 til
15-11-2024 12:00
location 45.2-051 - teorirum 45.2 (90)
Teacher Morten Rhiger (mir@ruc.dk)

Complex IT Systems - Practice (COMP)

time 20-11-2024 08:15 til
20-11-2024 16:00
location 45.2-051 - teorirum 45.2 (90)
Teacher Morten Rhiger (mir@ruc.dk)

Complex IT Systems - Practice (COMP)

time 22-11-2024 08:15 til
22-11-2024 12:00
location 45.2-051 - teorirum 45.2 (90)
Teacher Morten Rhiger (mir@ruc.dk)

Complex IT Systems - Practice (COMP)

time 27-11-2024 08:15 til
27-11-2024 16:00
location 45.2-051 - teorirum 45.2 (90)
Teacher Morten Rhiger (mir@ruc.dk)

Complex IT Systems - Practice (COMP)

time 29-11-2024 08:15 til
29-11-2024 12:00
location 46.2-042 - teorirum 46.2 (90)
Teacher Morten Rhiger (mir@ruc.dk)

Complex IT Systems - Practice (COMP)

time 04-12-2024 08:15 til
04-12-2024 16:00
location 45.2-051 - teorirum 45.2 (90)
Teacher Morten Rhiger (mir@ruc.dk)

Complex IT Systems - Practice (COMP)

time 06-12-2024 08:15 til
06-12-2024 12:00
location 45.2-051 - teorirum 45.2 (90)
Teacher Morten Rhiger (mir@ruc.dk)

Complex IT Systems - Practice (COMP)

time 11-12-2024 08:15 til
11-12-2024 16:00
location 45.2-051 - teorirum 45.2 (90)
Teacher Morten Rhiger (mir@ruc.dk)

Complex IT Systems - Practice (COMP)

time 13-12-2024 08:15 til
13-12-2024 12:00
location 45.2-051 - teorirum 45.2 (90)
Teacher Morten Rhiger (mir@ruc.dk)

Complex IT Systems - Practice - Hand-in written exam (COMP)

time 18-12-2024 10:00 til
18-12-2024 10:00
forberedelsesnorm ikke valgt
forberedelsesnorm D-VIP ikke valgt

Complex IT Systems - Practice - Oral exam (COMP)

time 08-01-2025 08:15 til
09-01-2025 18:00
forberedelsesnorm ikke valgt
forberedelsesnorm D-VIP ikke valgt

Complex IT Systems - Practice - Hand-in reexam (COMP)

time 03-02-2025 10:00 til
03-02-2025 10:00
forberedelsesnorm ikke valgt
forberedelsesnorm D-VIP ikke valgt

Complex IT Systems - Practice - Oral reexam (COMP)

time 07-02-2025 08:15 til
07-02-2025 18:00
forberedelsesnorm ikke valgt
forberedelsesnorm D-VIP ikke valgt