

Elective Course: IT security

Title	Elective Course: IT security
Semester	E2023
Master programme in	Computer Science / Digital Transformation
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

Registration	<p>You register for activities through stads selvbetjening during the announced registration period, which you can see on the Study administration homepage.</p> <p>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.</p>
Number of participants	
ECTS	5
Responsible for the activity	Niels Jørgensen (nielsj@ruc.dk)
Head of study	Henrik Bulskov (bulskov@ruc.dk)
Teachers	<ul style="list-style-type: none">• Mika Yasuoka Jensen• Pavlos Chatzipolakis• Niels Jørgensen
Study administration	IMT Registration & Exams (imt-exams@ruc.dk)
Exam code(s)	U60594

ACADEMIC CONTENT

Overall objective	The purpose of elective courses is to give the student opportunities to specialize within a specific subject area, where the student acquires
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	knowledge, skills and competences in order to translate theories, methods and solutions ideas into their own practice.
Detailed description of content	<p>The course is case-based. Each lecture discusses a security attack or breach. Cases include the NotPetya attack, attacks on private health care data in Denmark, surveillance of citizens, attacks on VR systems, and many others.</p> <p>Cases are selected to support the students' understanding of:</p> <ul style="list-style-type: none"> • security and privacy goals, including confidentiality, integrity and privacy • types of security and privacy attacks, including denial of service attacks, viruses, worms and social engineering • technical means to attain the goals, including encryption and digital signatures • organizational means to attain the goals, including implementation in a company of standards and regulations (for example ISO 27000 and GDPR) • how can society at large protect itself, how can citizens protect themselves, and how can a security policy relate to and involve citizens?
Course material and Reading list	The main literature will be research and other articles. In addition we will probably use a textbook. We will make the title available on the moodle page of the course.
Overall plan and expected work effort	The course will have a total workload of 135 hours with 40 hours of lectures and exercises, 70 hours of preparation over a 10-11 week course period, and finally 25 hours for the exam and preparation before the course.
Format	
Evaluation and feedback	<p>Evaluation form to be filled out (anonymously) plus open discussion on the last course day.</p> <p>There will be feedback on exercises that students are asked to do during the course.</p>
Programme	
ASSESSMENT	
Overall learning outcomes	<p>After completing this course, students will be able to:</p> <ul style="list-style-type: none"> • demonstrate knowledge within a defined subject area. • demonstrate an overall overview and understanding of the general principles behind the field's theory, methods and technological solutions. • choose and apply appropriate methods and techniques relevant to the field to analyse, design and implement solutions • work with it-related problems within their field, both individually and in groups. • be proficient in new approaches within the subject area in a critical and systematic way and thereby independently take responsibility for their own professional development.

Form of examination	<p>Individual oral exam based on a written product</p> <p>The character limit of the written product is maximum 48,000 characters, including spaces. The character limits include the cover, table of contents, bibliography, figures and other illustrations, but exclude any appendices.</p> <p>Time allowed for exam including time used for assessment: 20 minutes. The assessment is an overall assessment of the written product(s) and the subsequent oral examination.</p> <p>Permitted support and preparation materials for the oral exam: All.</p> <p>Assessment: 7-point grading scale. Moderation: Internal co-assessor.</p>
Form of Re-examination	Samme som ordinær eksamen / same form as ordinary exam
Type of examination in special cases	
Examination and assessment criteria	
Exam code(s)	Exam code(s) : U60594

Course days:

Hold: 1

IT-security (COMP)

time 14-09-2023 08:15 til
14-09-2023 12:00

location 10.1-025 - teorirum (32)

Teacher Niels Jørgensen (nielsj@ruc.dk)

IT-security (COMP)

time 21-09-2023 08:15 til
21-09-2023 12:00

location 10.1-025 - teorirum (32)

Teacher Niels Jørgensen (nielsj@ruc.dk)

IT-security (COMP)

time 28-09-2023 08:15 til
28-09-2023 12:00

location 10.1-025 - teorirum (32)

Teacher Niels Jørgensen (nielsj@ruc.dk)

IT-security (COMP)

time 05-10-2023 08:15 til
05-10-2023 12:00

location 10.1-025 - teorirum (32)

Teacher Niels Jørgensen (nielsj@ruc.dk)

IT-security (COMP)

time 12-10-2023 08:15 til
12-10-2023 12:00

location 10.1-025 - teorirum (32)

Teacher Niels Jørgensen (nielsj@ruc.dk)

IT-security (COMP)

time 19-10-2023 08:15 til
19-10-2023 12:00

location 10.1-025 - teorirum (32)

Teacher Niels Jørgensen (nielsj@ruc.dk)

IT-security (COMP)

time 26-10-2023 08:15 til
26-10-2023 12:00

location 10.1-025 - teorirum (32)

Teacher Niels Jørgensen (nielsj@ruc.dk)

IT-security (COMP)

time 02-11-2023 08:15 til
02-11-2023 12:00

location 10.1-025 - teorirum (32)

Teacher Niels Jørgensen (nielsj@ruc.dk)

IT-security (COMP)

time 09-11-2023 08:15 til
09-11-2023 12:00

location 10.1-025 - teorirum (32)

Teacher Niels Jørgensen (nielsj@ruc.dk)

IT-security (COMP)

time 16-11-2023 08:15 til
16-11-2023 12:00

location 10.1-025 - teorirum (32)

Teacher Niels Jørgensen (nielsj@ruc.dk)

IT-security - Hand-in (COMP)

time 24-11-2023 16:00 til
24-11-2023 16:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

IT-security - Oral examination (COMP)

time 22-01-2024 08:15 til
23-01-2024 18:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

IT-security - Reexam hand-in (COMP)

time	15-02-2024 10:00 til 15-02-2024 10:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt

IT-security - Oral reexamination (COMP)

time	22-02-2024 08:15 til 22-02-2024 18:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt