

SYLLABUS

Security Architecture 7.5 credits A0001E

Säkerhetsarkitektur

Course syllabus admitted: Autumn 2023 Sp 1 - Present

**DECISION DATE
2021-02-25**

Security Architecture 7.5 credits A0001E

Säkerhetsarkitektur

First cycle, A0001E

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	U G VG *	Informationsteknik	Computer Technology

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language and At least 60 ECTS in the areas of Computer Science, Systems Science, Archival Science or Library and Information Science.

Good knowledge in English, equivalent to English 6.

Selection

The selection is based on 1-165 credits.

Course Aim

Upon completion of the course, the student will be able to:

- By the use of a Business Case's described (current) business activities, problems, and opportunities formulate and evaluate new security perspectives.
- Evaluate a future scenario with the help of a systematic methodology (e.g., SABSA) that follows standard practices.
- Assess that problems / business opportunities in a future scenario are met from a security perspective.
- Analyse future scenarios in terms of security with standardized approaches (e.g., ISO / NIST) and follow a systematic methodology with respect to security.

Contents

The course will apply an EA security architecture, which is a method for describing a current or future structure and behaviour of an organisation's processes, information systems, and personnel and organisational unit safety, so that they can address the organisation's core goals and strategic direction. Enterprise Architecture (EA) is one way to describe an organisation's structure and behaviour through architectures at different levels of organisation that include various components such as personnel, processes and information systems that support the processes. The concept of information systems includes applications, data and technical infrastructure. The course has a focus on service-oriented architectures.

Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

This course covers the basic concepts, standards, functions, and implementations of security architecture. The material covered includes different security architecture models from physical, logical, conceptual, and contextual perspectives, as well as the strategy, planning, and operation thereof. The course gives a narrow, but in-depth, focus on security architecture in terms of relationships between roles, entities, or organizations required to perform various business processes. Various scenarios and security concepts will be covered to help students apply the proper security architecture towards identifying and securing processes that businesses perform.

The student work throughout the course with a project assignment which covers step-by-step a systematic (methodical) approach to define a security architecture for an enterprise. The project assignment is supported by introductory lectures based on the underlying theories, and during the lessons, appropriate approaches and solutions are proposed and discussed. The individual, take-home examination takes place over distance.

Teaching is in English and on Internet for distance students or at campus for the students living here. IT support: Learning management system (Canvas), e-mail and phone.

Canvas Learning Management System is used for delivering course material, information and submissions. Knowledge is shared and created within the course through virtual meetings with teachers and other students for discussions, supervision, teamwork and seminars. For student on campus there will be meetings on campus.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. The course is examined as follows:

- Project report (group), 2.5hp (U, G#)
- Individual written take-home examination, 5hp (U, G, VG*)

In order for a student to get VG in the whole course, a VG grade must be accomplished in the individual written take-home examination, and achieved G on the project assignment.

For the G grade, a student should achieve the grade G in the individual written take-home exam and in the project assignment.

All included examination parts must be completed for the final grade on the course.

Grades are given according to the scale: U, G, VG.

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Remarks

Technical requirements: Access to PC with Windows XP, microphone, web cam and permission to install software. Internet connection, minimum 0,5 Mbps.

Course offered by

Department of Computer Science, Electrical and Space Engineering

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0004	Project	U G#	2.5	Mandatory	A16	
0006	Take-home examination	U G VG *	5	Mandatory	A17	

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Jonny Johansson, HUL – SRT 2021-02-25

Syllabus established

by Jonny Johansson, HUL SRT 2012-02-14