SYLLABUS

Embedded Intelligence at the Edge 7.5 credits D7065E

Inbyggd intelligens

Course syllabus admitted: Autumn 2023 Sp 1 - Present

DECISION DATE
2023-02-16

Luleå University of Technology 971 87 Luleå, Sweden
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LULEÅ TEKNISKA UNIVERSITET

Embedded Intelligence at the Edge 7.5 credits D7065E

Inbyggd intelligens

Second cycle, D7065E

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	G U 3 4 5	Datateknik	Computer Technology

Main field of study

Computer Science and Engineering

Entry requirements

15 credits in completed course in programming e.g. Introductory course in programming (D0009E) 7.5 credits and Object-oriented Programming and Design (D0010E) 7.5 credits.

Good knowledge of English, equivalent to English 6.

Selection

The selection is based on 30-285 credits

Course Aim

After completing the course, the student shall have a basic understanding of SoS and edge computation.
Based on SoS understanding, the student shall be able to create an edge SoS architecture with AI content using UML/SysML tools.

Contents

Architecture concept for edge computation and edge AI.
Fundamental Properties of Systems of Systems.
SoS edge architecture, microsystems and microservices, model-based technology, integration of distributed application solutions

Realization

Each course occasion´s language and form is stated and appear on the course page on Luleå University of Technology's website.
7-10 lecturers, 2 labs.

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.
Test - oral exam and assignment.
Written report with individual oral presentation of edge AI computational architecture model built in UML/SysML.

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.

Course offered by

Department of Computer Science, Electrical and Space Engineering

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Report with oral exam and assignment	G U 3 4 5	7.5	Mandatory	A23	

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 Robert Brännström, HUL at the Department of Computer Science, Electrical and Space Engineering 2023-02-16

Syllabus established

by Robert Brännström, HUL at the Department of Computer Science, Electrical and Space Engineerin 2023-02-16