SYLLABUS

Thesis in Data Science 15 credits D7059E

Examensarbete - Data Science

Course syllabus admitted: Autumn 2023 Sp 1 - Present

DECISION DATE
2020-11-10

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Thesis in Data Science 15 credits D7059E

Examensarbete - Data Science

Second cycle, D7059E

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	U G VG	Systemvetenskap	Informatics/Computer and Systems Sciences

Main field of study

Information Systems Sciences

Entry requirements

The course assumes a minimum of 30 ECTS from the MSc program in Data Science, such as Business Intelligence D7044E, Advanced Data Mining D7043E, Text Mining , Data Visualization D7055E , Data Science Programming D7054E, och Predictive Analytics D7056E.

Selection

The selection is based on 30-285 credits

Course Aim

The aim of the course is for the student to practice, develop and show their ability to, in an adequate way, apply theory and method in order to solve unstructured problems relevant to professional activities in Systems Science with a specialization in Data Science.
Upon completion of the course the student shall be able to:

- Develop and formulate a relevant research problem from a selected subject in the area of Systems Science.
- Utilize scientific studies and judge their relevance for the selected problem
- Manage different, and differences between, theoretical areas.
- Carry out a well-motivated and relevant selection of theoretical foundation for the study.
- Select and motivate specific research methods for the study with a demonstrated understanding of the impact on the final results of the study.
- Collect relevant information for the study with a connection to selected theory and method
- In a relevant way present the collected information in written format
- Based on selected theory and method and in scientifically correct way analyze and draw conclusions concerning the selected research problem
- Evaluate the scientific and practical relevance of the results
- Perform written communication in a linguistically and scientifically correct manner
- Orally communicate the results of the study both to scholars in the area as well as to individuals without specific knowledge in the area
- Defend the results
- Critically evaluate other studies in a constructive and scientific manner.

Contents

The thesis consists of an autonomously written essay on dealing with issues in the field of investigation / evaluation with the scientific approach and critical approach. The work shall mean a subject in-depth in evaluation and investigation in a data science perspective. The work is presented both in writing and orally. The course also includes critically reviewing and opposing other degree projects.

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Realization

Each course occasion´s language and form is stated and appear on the course page on Luleå University of Technology's website.
The work should be carried out independently, but with support from tutoring and seminars. The work should be presented in writing and defended orally at a seminar. Opposition includes presentation of the work being opposed. The thesis is presented and discussed at project seminars.

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

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. Participation in seminars

Opposition

Oral presentation

Written report

In the written report the student shall demonstrate the ability to:

- Develop and formulate a relevant research problem from a selected subject in the area of digital preservation.
- Utilize scientific studies and judge their relevance for selected problem
- Manage different, and differences between, theoretical areas at an advanced level
- Demonstrate a well-motivated and relevant selection of theoretical foundation for the study.
- Select and motivate specific research methods for the study with a demonstrated understanding of impact on final result of the study.
- Collect relevant information for the study with a clear connection to selected theory and method
- In a relevant way present the collected information in written format.
- Based on the selected theory and methods and in scientifically correct way analyze and draw conclusions concerning the selected research problem.
- Evaluate the scientific and practical relevance of the results.
- Perform written communication in a linguistically and scientifically correct manner

In the oral presentation and opposition the student shall demonstrate the ability to:

- Orally communicate the results of the study both to scholars in the area as well as to individuals without specific knowledge in the area.
- Defend the results

In the opposition the student shall demonstrate the ability to:

- Critically evaluate other studies in a constructive and scientific manner.

To pass the course the student shall participate in compulsory meetings and a total of four compulsory seminars, one for presentation and defence, one as opponent and two other seminars as decided by the supervisor. To pass the course further requires e-publishing of the thesis in accordance with the rules of LTU and that the thesis is completed no later then 12 calendar months after the course has formally ended. The student can however only utilize further supervision 6 calendar months after the course has formally ended.

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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, 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
0001	Written report	U G VG	12	Mandatory	S21	Yes
0002	Opposition	U G#	1	Mandatory	S21	
0003	Oral presentation	U G#	1	Mandatory	S21	
0004	Seminars	U G#	1	Mandatory	S21	

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.

Syllabus established

by Jonny Johansson 2020-11-10

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