SYLLABUS

Simulation of Production Systems 7.5 credits T0012T

Simulering av produktionssystem

Course syllabus admitted: Autumn 2023 Sp 1 - Present

DECISION DATE
2021-02-17

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LULEÅ TEKNISKA UNIVERSITET

Simulation of Production Systems 7.5 credits T0012T

Simulering av produktionssystem

First cycle, T0012T

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	U G#	Produktionsteknik	Mechanical Engineering

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 Basic knowledge and knowledge about manufacturing systems, automation or system technologie. Good knowledge in English, equivalent to English 6.

Selection

The selection is based on 1-165 credits.

Course Aim

After completion of the course the student shall be able to:

1. Knowledge and understanding

- describe the properties and basic structure of discrete event simulation,
- describe how discrete event simulation can be applied for development of production systems,
- describe tools and methods for analyses of results from a simulation study,

2. Skill and ability

- apply discrete event simulation for analyses of production systems,
- apply methods for effective and successful performance of simulation project, from goal setting to result presentation,
- interpret and analyse simulation results,
- plan, interpret, analyse and present results from practical simulation experiments,
- present, written and oral, results from simulation studies including recommendations,

3. Valuation and attitude

- reflect and valuate own contributes in laboratory and project work.

Contents

Software and techniques for simulation of manufacturing systems. - Running simulation projects. - Concept modelleing. - Obtaining good quality in-data. - Experiment and result analyses. - Result presentation. - Problems when using discrete event simulation. The practical project will give direct experience of a significant simulation problem taken, from industry.

Realization

Each course occasion´s language and form is stated and appear on the course page on Luleå University of Technology's website.
Lectures and seminars (1/3) laboratories group project (2/3).

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 gives grade based on the written exam, successful completion of the lab.\'s, exercises and project. This includes both written and oral presentation of the project and a written and oral critique of the work of another group.

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.

Overlap

The course T0012T is equal to T7018T, T0027T, MPR041

Course offered by

Department of Engineering Sciences and Mathematics

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Written exam	U G#	1.5	Mandatory	A07	
0002	Project work	U G#	6	Mandatory	A07	

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 Head Faculty Programme Director Niklas Lehto 2021-02-17

Syllabus established

The syllabus was established by the Department of Applied Physics and Mechanical Engineering 2007-02-28, and remains valid from autumn 2007.