

## **Simulation of Automated Production, 3 HE credits**

*Simulering av automatiserad produktion, 3 hp*

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Established: 2018-12-21

Established by:

Applies from: H19

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### **Learning outcomes**

The student should after the course be able to demonstrate:

- good understanding of discrete event simulation (DES) including events and how time advances,
- ability to independently construct DES models, starting from a specification,
- skills to verify and validate DES models and understanding of the specification, data collection and analysis for DES,
- the ability to model an automated production section and
- ability to carry out simulation experiments.

### **Entry requirements**

General entry requirements and approved result from the following course/courses:

RSM700-Robotic Simulation and

RBS700-Robotic Systems I or the equivalent.

### **Course contents**

The course begins consists of a lecture/s on the topic of discrete event simulation (DES) to simulate production flows. There is a course book as reading material for the course and the content in this book is related to the course examinations, which can be different written and oral exams and laboratory exercises. A large part of the course consists of simulation laboratory exercises to be completed in a computer classroom or by connecting to the software on distance mode. The simulation exercises are built up to become more and more advanced and the final exercise is to build a larger simulation model a realistic size case. This pedagogical approach supports aspects of Work Integrated Learning (WIL) in the sense that the students work on practical DES exercises and advance their modelling and simulation skills towards real sized problems, which is beneficial for potential future student projects and future work tasks within discrete event simulation of production flows.

### **Other regulations**

Course grading: F/Fx/E/D/C/B/A - Insufficient, Insufficient- more work required before the credit can be awarded, Sufficient, Satisfactory, Good, Very Good, Excellent

Course language: The teaching is conducted in English.

General rules pertaining to examination at University West are available at [www.hv.se](http://www.hv.se).

If the student has a decision/recommendation on special support due to disability, the examiner has the right to examine the student in a customized examination form.

### **Cycle**

Second cycle

### **Progressive specialization**

A1F - second cycle, has second-cycle course/s as entry requirements

### **Main field of study**

Automation, Mechanical Engineering, Production Technology