



Simulation of production systems

Through the use of discrete event simulation, you will learn to support improvements of industrial processes involving complex changes. In this course you will develop skills in discrete event simulation to meet the needs of the manufacturing industry.

You will acquire knowledge about principles and techniques for simulation and system modelling. Based on a real case, the course will help you to improve production and logistics flow with discrete event simulation.

During the course we will cover the impact of modelling accuracy and establish the relationship between the system elements. We will execute a simulation project, analyse different scenarios and work on the communication of simulation results.

YOU WILL LEARN TO

- Develop a simulation model based on a real-world problem by using conceptual modelling.
- Build simulation models for a production system where you apply data collection, analysis, detailed model design and modelling strategies.
- Develop simulation models for production systems by using a systems perspective, applying simulation concepts and understanding the relation between system elements.
- Experiment with variation and changes in simulation models by analysing scenarios, documenting activities and applying this knowledge on a case study.

TEACHER

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Ioanna Aslanidou holds a PhD from the University of Oxford for her research on experimental analysis and modelling of turbine aerodynamics and heat transfer. She is an assistant professor in energy engineering at MDH. Her research focus is on modelling, control, and optimization of industrial processes and the application of artificial intelligence methods in energy-intensive processes.

DETAILS

STUDY PERIOD: Aug 31, 2020 – Nov 8, 2020

STUDY PACE: 33% (approx. 13 hours/week)

CREDITS: 5

For more information about the course and how to apply, visit

mdh.se/en/malardalen-university/education/further-training/smart-production

ENTRY REQUIREMENTS

40 credits in Engineering/Technology and at least two years' experience in full-time employment in a relevant area within industry. Since the course is given in English, you need knowledge of the English language. If you do not have the formal academic qualifications required, you can have your eligibility evaluated based on knowledge acquired in other ways, such as work experience, other studies etc.

PREMIUM

This course is part of the Premium project, which is co-funded by the Knowledge Foundation. Learn more about Premium at mdh.se/premium

MÅLARDALEN UNIVERSITY

Mälardalen University (MDH) is one of Sweden's largest HEIs, with 16 000 students reading courses and programmes in Business, Health, Engineering and Education. At MDH, research is conducted within all areas of education. MDH's close cooperation with the private and public sectors enables us to help people feel better and the earth to last longer.

**GET AHEAD.
STAY AHEAD.**