UNIVERSITY OF BORÅS

Manufacturing Simulation
Produktionssimulering

7.5 credits
7.5 högskolepoäng

Ladok Code: TM081B
Version: 3.0
Established by: The Teaching Committee 2013-02-22
Valid from: Spring 2013

Education Cycle: First cycle
Main Field of Study (Progressive Specialisation): Mechanical Engineering (G2F)
Disciplinary Domain: Technology
Prerequisites: The student shall meet the entry requirements for the degree of Bachelor of Science
Subject Area: Mechanical Engineering
Grading Scale: U, 3, 4 or 5

Content

- Basic flow simulation modelling
- Random numbers
- Modelling methods
- Modelling complex systems
- Various statistical distributions (Poisson, exponential)
- Basic queue theory
- Single server systems
- Parallel server systems
- Attributes
- Batch/bulk arrival
- Prioritisation rules
- Modelling AGVs and conveyor belts
- Statistical analyses of results from runs

Learning Outcomes

Upon completion of the course, the student shall be able to:

- gather the data necessary to build a model
- model the system at an appropriate level using flow simulation software (e.g. Auto-mod)
- analyse simulation runs with reference to the question that the model is intended to answer.

Forms of Teaching

Forms of Examination

The course will be examined through the following examination elements:

Learning outcomes:

Credits: 2
Gradingscale: Fail (U) or Pass (G)

Learning outcomes:
Credits: 4
Gradingscale: U, 3, 4 or 5

Learning outcomes:
Credits: 1.5
Gradingscale: Fail (U) or Pass (G)

Student rights and obligations at examination are in accordance with guidelines and rules for the University of Borås.

Literature and Other Teaching Materials

Student Influence and Evaluation

The head of department and teacher responsible for the course are responsible for ensuring that students are invited systematically and regularly to put forward their views on the course. The results of the evaluations will be reported back to the students and will form the basis for the future structure of the course.

Miscellaneous