ML2200 Manufacturing Process, Intermediate Course 2 7.5 credits

Produktionsteknik, fortsättningskurs 2

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for ML2200 valid from Autumn 2008

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Specific prerequisites

Knowledge corresponding to HM1000 (Engineering Materials and Production 1), HM1003 (Engineering Materials and Production 2) and HM1016 (Manufacturing Process, Intermediate Course 1)

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After the course the student will be able to:

- Use and efficient use of modern production equipment,
- Participate in the investment process of new equipment and new production systems
- Applying different production philosophies, such as "Lean production, Just in time, DFA and DFM"
- Using the SMED method to reduce set-up times in production
- Apply the production technology, quality technology and logistics used in earlier courses
- Carry out calculation according to the LCC method for new investments
- Build and customize computer-based simulation models for production simulation according to existing production equipment
- Modify the simulation models to improve flows of the production
- Programme a cnc-controlled machining center
- Use an industrial robot and make changes in its programs

Course contents

- DFM and DFA.
- CNC technology and IRB technology with programming exercises.
- Automated manufacturing and assembly.
- Production philosophies, Lean production, SMED, JIT etc.
- Maintenance technique
- Exercises in processimulation
- Specification and acceptance testing of production equipment.
- Supplier assessments and quality requirements

Disposition

- Lectures
- Compulsory project work
- Compulsory attendance on company visits
- Compulsory attendance at exercises
- Compulsory assignments

Course literature

Goldratt E M (1998) Målet: En process av ständig förbättring; En roman. Akvidukt Bokförlag. **ISBN:**9789173326476

Hågeryd L, Björklund S & Lenner M (2006)Modern Produktionsteknik Del 2. Liber. ISBN:978-91-47-05226-4

Examination

- TEN1 - Written examination, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 3.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

- Individual written exam with grades A-E, corresponding to 4,0 ECTS credits
- Projct work (group) with oral and written exam with grades A-E, corresponding to 2,0 ECTS credits
- Final grade consist of the individual written exam and the prodject work

Other requirements for final grade

- Approved individual exercises (ÖVN1; 3,0 ECTS credits), P/F grading scale
- Approved individual written exam (TEN1; 4,5 ECTS credits), A-E grading scale

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.