Production Engineering - Continuing Course

Programme course

6 credits

Produktionsteknik, fk

TMPT03

Valid from: 2017 Spring semester

Determined by
Board of Studies for Mechanical Engineering and Design

Date determined
2017-01-25

Offered for the last time
Autumn semester 2024

Replaced by
TMPR05

Main field of study
Mechanical Engineering

Course level
First cycle

Advancement level
G2F

Course offered for
- Mechanical Engineering, B Sc in Engineering
- Design and Product Development
- Mechanical Engineering, M Sc in Engineering

Entry requirements
Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites
Production Engineering basic course, Engineering Materials, Solid Mechanics.

Intended learning outcomes
The aim of this course is to give the student knowledge about new materials, such as plastics and composites for example. They will obtain knowledge about the structure of materials, how they are produced and what choices there are to manufacture them in an economical way. The student shall also obtain knowledge about casting, materials, equipment and processes. Methods for verification of manufacturing results are also addressed. Finally the course contains an element where the student shall make an investigation of a method or process and present this in a technical report as well as a verbal presentation.

Course content
The lectures contains information about the materials, their structural design, how they are produced and the possibility to manufacture them into parts. The course also contains information about verification of the results. The casting theory will be aimed at casting materials and methods, melting and dimensional accuracy. The course also contains laboratory work concerning Water-Jet cutting, verification in coordinate measuring machine and casting using a moulding box of sand.

Teaching and working methods

The educational subjects will be reviewed during lectures. Laboratory work aims at illustrating theory in practice.

Examination

UPG3	Project work	1 credits	U, G
LAB1	Laboratory work	1 credits	U, G
TEN1	Written examination	4 credits	U, 3, 4, 5

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Institutionen för ekonomisk och industriell utveckling

Director of Studies or equivalent

Mats Björkman

Examiner

Peter Bjurstam

Course website and other links

http://www.iei.liu.se/indprod/grundutbildning?l=sv

Education components

Preliminary scheduled hours: 48 h
Recommended self-study hours: 112 h

Course literature

Additional literature

Books

Modern Produktionsteknik del1
Advance Publishing Incorporated, *Non-Traditional Machining Handbook*

Compendia

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.