



KURSPLAN

Produktionsutveckling I, strategi och system, 9 högskolepoäng

Production Development I, Strategy and System, 9 credits

Kurskod:	TP1R28	Utbildningsnivå:	Avancerad nivå
Fastställd av:	VD 2018-04-06	Utbildningsområde:	Tekniska området
Gäller fr.o.m.:	2018-08-01	Ämnesgrupp:	MT1
Version:	1	Fördjupning:	A1N
		Huvudområde:	Produktionssystem

Lärandemål

After a successful course, the student shall

Kunskap och förståelse

- display knowledge of content in operations strategies
- display knowledge of how operations strategies are linked to different abilities and to overall business goals
- demonstrate comprehension of content of a production system
- demonstrate comprehension of the production system development process
- demonstrate comprehension of how production systems are realized and deployed

Färdighet och förmåga

- demonstrate skills of describing, defining and comparing production processes and flows
- demonstrate the ability to explain and evaluate various technological choices' impact on the production system

Värderingsförmåga och förhållningssätt

- demonstrate the ability to explain and determine which layout that is suitable for what production situation

Innehåll

The course covers what operations strategies are, how they are formulated, used and affect the business in manufacturing companies. The course further addresses and deals with the design of production systems and efficient production flows taking into account people, technology and organization. System view and different perspectives are essential starting points.

The course includes the following elements:

- Introduction to operations strategy
- Operations strategies and the need for and relevance of different production solutions
- Formation of operations strategies
- Introduction to changeable manufacturing concepts

- Introduction to Industry 4.0, digitalization and Cyber Physical Systems
- Design of production systems including systems and process perspective, sustainability, production philosophies, layout, workplace design and organizational solutions
- Various technological choices' impact on the production system
- Realization of production systems including organizing, procurement, industrialization and delivering the production system to the operating organization
- Evaluation of production systems

Undervisningsformer

Lectures, seminars, exercises and project work.

Undervisningen bedrivs på engelska.

Förkunskapskrav

The applicant must hold the minimum of a bachelor's degree (ie. the equivalent of 180 ECTS credits at an accredited university) with at least 90 credits within the major subject in Mechanical Engineering, Industrial Engineering and Management or Civil Engineering, and 15 credits in Mathematics. Proof of English proficiency is required (eller motsvarande kunskaper).

Examination och betyg

Kursen bedöms med betygen 5, 4, 3 eller Underkänd .

The grade is weighted from the results of the written examination and the project. The final grade will only be issued after satisfactory completion of all assessments.

Poängregistrering av examinationen för kursen sker enligt följande system:

Examinationsmoment	Omfattning	Betyg
Examination	4,5 hp	5/4/3/U
Övningar	1,5 hp	U/G
Seminarie	2 hp	U/G
Projekt	1 hp	5/4/3/U

Övrigt

Exemption from entry requirement allowed according to the selection groups of the program, where the course is included.

Kurslitteratur

The literature list for the course will be provided one month before the course starts.

Title: Production Development - design and operation of production systems

Author: Bellgran, M., Säfsten, K.

Publisher: Springer-Verlag, London.

ISBN: 978-1-84882-494-2