



## KURSPLAN

# Production Development I - Strategy and System, 7,5

### högskolepoäng

*Production Development I - Strategy and System, 7.5 credits*

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<b>Kurskod:</b>	TP1R21	<b>Utbildningsnivå:</b>	Avancerad nivå
<b>Fastställd av:</b>	VD 2021-03-01	<b>Utbildningsområde:</b>	Tekniska området
<b>Gäller fr.o.m.:</b>	2021-08-01	<b>Ämnesgrupp:</b>	MT1
<b>Version:</b>	1	<b>Fördjupning:</b>	A1N
		<b>Huvudområde:</b>	Produktionssystem

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### Lärandemål

After a successful course, the student shall

Kunskap och förståelse

- demonstrate comprehension of main characteristics of the lean philosophy
- demonstrate comprehension of content and structure of a production system
- demonstrate comprehension of production system development approaches
- demonstrate comprehension of how production systems are realized and deployed through the whole life cycle

Färdighet och förmåga

- demonstrate skills of describing, defining, and comparing production systems based on changeability concepts
- demonstrate skills of evaluating various production system development approaches

Värderingsförmåga och förhållningssätt

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

### Innehåll

The course includes the following elements:

- Formulations and usage of operation strategies and how it affects the business in manufacturing companies
- Design of production systems supporting a proactive mindset
- Fundamentals of changeability and reconfigurability
- Changeable production system development
- Various technological choices' impact on the production system
- Realization of production systems
- Evaluation of production systems and its changeability

### Undervisningsformer

Lectures, seminars and exercises.

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 (or the equivalent). Proof of English proficiency is required.

### **Examination och betyg**

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

Poängregistrering av examinationen för kursen sker enligt följande system:

Examinationsmoment	Omfattning	Betyg
Tentamen <sup>I</sup>	4 hp	5/4/3/U
Övningar	2 hp	U/G
Seminarie	1,5 hp	U/G

<sup>I</sup> Bestämmer kursens slutbetyg vilket utfärdas först när samtliga moment godkänns.

### **Kurslitteratur**

The literature list for the course will be provided 8 weeks before the course starts.

Main literature:

- Y. Koren, "The global manufacturing revolution: Product-Process-Business Integration and Reconfigurable Systems", New Jersey: John Wiley & Sons Inc: Hoboken, 2010.

Additional literature:

- K. Säfsten and M. Bellgran, "Production Development", London: Springer, 2010.
- C, Rösiö et al. Agile and reconfigurable production: project method and design of production systems. Research Report (Electronic resource)