

Preliminary Course syllabus (3 April, 2012)

## **Industrial product realisation, 5 Higher education credits (Hec)**

Industriell produktframtagning, 5 Högskolepoäng (Hp)

**Education cycle** Third cycle education

**Disciplinary domain**

**Subject group**

**Specialised in**

**Main field of study** Industrial product realization

**Syllabus valid from** XXXXX

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### **Learning outcomes**

On completion of the course the student should:

- Be able to describe the structure and contents of the product realisation process
- Be able to account for the importance of adopting a holistic view of the product realisation process' and its relevance for the competitiveness of manufacturing companies
- Be aware of and have understanding about models, methods, tools, and techniques that can be used in the product realisation process
- Be aware of and have understanding about the sustainability concept and its relationship to the product realisation process
- Understand and be able to position his/her own research and/or the research area's research to JTH's other research areas and the product realisation process
- Have insights about the value of research collaboration with other areas and researchers

### **Contents**

The course provides insights and understanding about the product realisation process, including its structure, contents and value for manufacturing companies. Moreover, the course enables the participants to relate his/her own research to the product realisation process.



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The course includes following parts:

- Structure and contents of the product realisation process: product development and production
- Product realisation models, methods, tools, and techniques
- Integration between and product development and production
- Design for Manufacturing and Assembly (DFMA)
- Product realisation and sustainability
- JTH's research areas

### **Pedagogic approaches**

The course includes lectures and seminars. The course taught in Swedish or English according to the needs of the participants.

### **Prerequisites**

Admitted to third cycle program or equivalent.

### **Examination and grades**

The course grade is Pass or Fail. Examination is individual and the grad Pass requires active participation and oral presentations at seminars as well as completion of written assignments.

### **Course literature**

Ulrich, K., Eppinger, S. (2007) *Product Design and Development*. Fourth edition (International edition), McGraw-Hill.

Bellgran, M., Säfsten, K. (2010) *Production development: Design and operation of production systems*. Springer

Additional readings to be announced during the course.

## Appendix: Additional course information

### Structure and schedule

Date	Time	Place	Activity	Teacher/Research area leader
18 April	9-12	E3105d (Leonardo)	Course introduction	GJ, FE
	13-15		Research area presentation: Industrial production	GJ
	15-17		Research area presentation: Materials and manufacturing	AJ
2 May	9-12	E3105d (Leonardo)	Book seminar: Product development	GJ, FE
	13-15		Research area presentation: Product development	FE/NS
	15-17		Research area presentation: Building and lightning	PJ
16 May	9-12	E3105d (Leonardo)	Book seminar: Production	GJ, FE
	13-15		Research area presentation: Information engineering	US
30 May	13-16	E1105	Article seminar: Integration/DFMA; sustainability	GJ, FE
13 June	9-15	E1105	Final seminar: Presentation of own research in relation to the Product realization process	GJ, FE

### Course responsible and examiner

Glenn Johansson, Associate professor, JTH

### Teachers (and research area leaders)

Glenn Johansson (GJ), Associate professor, JTH

Fredrik Elgh (FE), Associate professor, JTH

### Research area leaders

Anders Jarfors (AJ), Professor, JTH

Niclas Strömberg (NS), Professor, JTH

Ulf Seigerroth (US), Associate professor, JTH

Peter Johansson (PJ), Assistant professor, JTH