



COURSE SYLLABUS

Production development, 5 credits

Produktionsutveckling, 5 högskolepoäng

Course Code: FTPRU38	Education Cycle: Third-cycle level
Confirmed by: Dean Jun 7, 2018	Research subject: Production Systems
Valid From: Aug 1, 2018	
Version: 1	

Intended Learning Outcomes (ILO)

On completion of the course, the doctoral student must:

Knowledge and understanding

- Demonstrate Knowledge of production development as a part of the product realisation process
- Demonstrate comprehension of how manufacturing strategies can be aligned with production development and different production system abilities
- Demonstrate comprehension of past, present and future production systems paradigms

Skills and abilities

- Demonstrate ability to selecting and applying models, methods, tools, and techniques that can be used in production development

Judgement and approach

- Demonstrate an ability to account for a system perspective on production system and its relevance for the production development and the competitiveness of manufacturing companies
- Demonstrate understanding of how to explain and determine different abilities of a production system that is suitable for different production situations

Contents

The course includes different production system aspects, production development and abilities suitable for various production situations in a global and volatile environment. Future and present production concepts are studied. The course enables the participants to relate his/her own research to the production development area.

The course includes the following elements:

- Production development as a part of a product realization process
- Fundamentals in system theory to support a system perspective on production systems
- Manufacturing strategies related to production development
- Production development in a global perspective
- Production system paradigms
- Production development models, methods, tools, and techniques
- Various production system abilities needed in a volatile environment

Type of instruction

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

Prerequisites

Admitted to third-cycle programme or equivalent.

Examination and grades

The course is graded Fail (U) or Pass (G).

Compulsory seminars, 3 hec

Assignments, 2 hec

Course evaluation

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

Course literature

Production development

Hubka, V., W.E Eder. 1984. Theory of technical systems: A total concept theory for engineering design. Chapter 2 and 3.

Porras, J.I. Robertson. 1992. Handbook of Industrial and Organizational Psychology. Chapter 12.

Wu, B. (2002) A unified framework of production system design. Industrial management and data systems, 101(9), pp. 446-469.

Bruch, J and Bellgran, M. (2012) Creating a competitive edge when designing production systems - facilitating the sharing of design information. International journal of services Sciences, 4(3/4), pp. 257-275.

The literature list for the course will be updated at the latest one month before the course starts.