



KURSPLAN

Agil produktionsutveckling, 5 högskolepoäng

Agile Production Development, 5 credits

Kurskod:	TAPR20	Utbildningsnivå:	Avancerad nivå
Fastställd av:	VD 2020-03-01	Utbildningsområde:	Tekniska området
Gäller fr.o.m.:	2020-08-01	Ämnesgrupp:	MT1
Version:	1	Fördjupning:	A1N
		Huvudområde:	Produktionssystem

Lärandemål

After a successful course, the student shall

Kunskap och förståelse

- demonstrate a basic comprehension of the traditional and agile iterative project methodology, applied in a manufacturing environment
- display knowledge of agile principles for concept development and evaluation
- demonstrate comprehension of the importance of cross-functional collaboration and teamwork within an industrialization project

Färdighet och förmåga

- demonstrate the ability to apply innovative methods and agile approaches in practical project work to manage changes and deviations
- demonstrate the ability to develop and evaluate new concepts for development of current and/or new production systems
- demonstrate the ability to communicate and discuss feasible alternatives in a team in order to make a common decision for the best alternative
- demonstrate skills of setting up an agile project for company conditions that support interaction among staff, processes and technology

Värderingsförmåga och förhållningssätt

- demonstrate an understanding of the role of production development and its interfaces in a cross-disciplinary production development project
- demonstrate the ability to create a suitable process, team and propose appropriate methods for efficient execution for delivering the project on time within budget
- demonstrate the ability to discuss and communicate with other project stakeholders from a production perspective

Innehåll

The course gives students the required knowledge and skills for efficient cross-disciplinary production development work. Assignments are based on theory and industrial needs, that will

be further developed in practical cases selected in close collaboration with their respectively companies.

The course will be divided into 4 key modules, in which each module will have three generic steps including; (1) Current situation and challenges in the company, (2) Applicable theory, and (3) Approaches to Improves the way of working based on (1) and (2).

The students will be trained in agile planning methods/principles and an iterative way of working in a structured manner. The aim is to meet challenges/deviations in production development projects by implementing agile feedback-loops and innovative methods and principles.

The course includes the following elements:

Knowledge Intensive Product Realisation

- Challenges in industrial companies
- Overview processes and change management
- Organize for Information exchange and learning

Agile Project Management

- Agile history and background, including methods and principles
- Project management and decision making
- Organization, collaboration and communication.
- Iterative development methods
- Planning, including Visible Planning (VP)

Production Concept Development

- Requirement management, Product architecture and Production system
- Innovative thinking and activities
- Tools and methods for innovation and evaluation

Production Concept Selection and Decisions

- Decision support and evaluation of alternatives
- Tools and methods for concept presentation and selection
- Implementation and follow-up

Undervisningsformer

The learning is primarily based on self-study as well as applied individual and group discussions. 3 (preliminary) IRL workshops and several e-meetings (preliminary). The learning process is supported by lectures, online resources, seminars and workshops. The course work requires continuous deliveries in the forms of short assignments.

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 in Mechanical Engineering, Industrial Engineering and Management or Civil Engineering or equivalent, and 15 credits Mathematics. English Language requirements corresponding to English 6 in the Swedish upper secondary school (or the equivalent). The applicant must also have 1 year of qualified work experience. It is possible to apply for exemption from a bachelor's degree and 15 credits Mathematics if the applicant has at least 5 years of qualified work experience.

Examination och betyg

Kursen bedöms med betygen Underkänd eller Godkänd.

The final grade will only be issued after satisfactory completion of all assessments. The final grade will be based on active participation in project work and participation in mandatory events.

Poängregistrering av examinationen för kursen sker enligt följande system:

Examinationsmoment	Omfattning	Betyg
Seminars	3 hp	U/G
Individuell projektrapport	2 hp	U/G

Kurslitteratur

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

Bellgran, Säfsten (2010), Production Development, available online through the JU library.

English and Swedish edition will work fine in the course;

Agile Project management

Tomas Gustavsson

ISBN 978-91-523-5743-9

Sanoma Utbildning

2019

Agil Projektledning, (any edition)

Tomas Gustavsson

ISBN 978-91-523-4048-6

Sanoma Utbildning

2016 / 2020 (4e)