KURSPLAN
Hållbar produktion, 7,5 högskolepoäng

Sustainable Production, 7.5 credits

Kurskod:	THPR22	**Utbildningsnivå:**	Avancerad nivå
Fastställd av:	VD 2022-03-01	**Utbildningsområde:**	Tekniska området
Gäller fr.o.m.:	2022-08-01	**Ämnesgrupp:**	TE9
Version:	1	**Fördjupning:**	A1N
		Huvudområde:	Produktionssystem

Lärandemål

After a successful course, the student shall

Kunskap och förståelse
- demonstrate knowledge of how sustainability aspects can be considered during product realisation
- demonstrate knowledge of methods and tools used to consider sustainability aspects during production activities
- demonstrate knowledge of strategies for sustainable manufacturing
- demonstrate knowledge of sustainable manufacturing system and circularity for sustainable manufacturing

Färdighet och förmåga
- demonstrate the ability to describe sustainability and life cycle concepts
- demonstrate the ability to describe different environmental strategies and business models, and how these relate to a company's operations
- demonstrate the ability to describe drivers and barriers for sustainable manufacturing

Värderingsförmåga och förhållningssätt
- demonstrate the ability to understand and analyze empirical and theoretical material relating to sustainability in production activities
- demonstrate the ability individually or in groups to execute and present projects and/or seminar assignments, both orally and in writing and to provide feedback critically and constructively on such reports.

Innehåll

The course covers how sustainability issues affect and can be managed during product development and production activities.

The course includes the following elements:
- Introduction of sustainable development aspects (environment, economy, and society)

- Sustainability in product development and production
- Life cycle concepts
- Drivers, barriers, and strategies for sustainable manufacturing
- Sustainable manufacturing system
- Circularity for sustainable manufacturing
- Measuring sustainable manufacturing
- Return logistics and remanufacturing
- Resilience

Undervisningsformer

Lectures and seminars.

Undervisningen bedrivs på engelska.

Förkunskapskrav

Completed courses of 180 credits in first cycle, at least 90 credits within the major subject Mechanical Engineering, Industrial Engineering and Management or Civil Engineering, and 15 credits in Mathematics. 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
Tentemen[I]	4 hp	5/4/3/U
Seminarier	3,5 hp	U/G

[I] Bestämmer kursens slutbetyg vilket utfärdas först när samtliga moment godkänts.

Kurslitteratur

Kurslitteraturen fastställs 8 veckor innan kursstart.

Title: Sustainable Manufacturing
Authors: Glenn Johansson, Erik Sundin, Magnus Wiktorsson (2019)
Publisher: Studentlitteratur AB
ISBN: 9789144120546

Seminar literature will be available before the course starts.