



Course Syllabus ML2301 HT22

Course name: Production management and Development

Course code: ML2301

HP/ECTS:	9,0
Teachers:	Monica Bellgran (bellgran@kth.se) Zuhara Chavez (zuhar@kth.se) (course responsible) Seyoum Eshetu Birkie (seyoume@kth.se) Sara Linderson (linderso@kth.se) Hasibul Islam (mhisla@kth.se) Kristian Ericsson (kerics@kth.se) Emma Lindahl (emlindah@kth.se) John Larsson (johnla2@kth.se)
Industry engagement:	Problem ideas for course project task Guest lectures from industry and academic experts
Examiner:	Monica Bellgran
Grading:	A-F
Language:	English

Learning objectives and course content

Intended learning objectives (ILOs) of the course

Upon successful completion of this course, the student shall be able to:

- (ILO1)- Define and explain production management, Lean management and methods for follow up and control
- (ILO2) - Describe production strategies for industrial production and relate these to management and control
- (ILO3 - Describe and explain how incremental and radical development of production systems can be managed, as well as their connection to the operational phase and the production organisation
- (ILO4) - Describe and analyse processes for introduction, industrialisation and scale up of production.
- (ILO5) - Describe and compare theories about how company groups develop and control their production network and locate their production globally
- (ILO6) - Relate the increased digitalisation in production to industrial production management and analyse how it can change management processes.

- *(ILO7) - Relate environmental, social and economic sustainability to industrial production management and how it is integrated in both the development and operational phases*

Course main content

The overall aim of the course is that students should increase their understanding and knowledge of production management in the development and operational phases in an industrial context. The course contains a number of important subareas and issues in the area of production management as well as methods and models that are used to lead and control industrial production activities. The course highlights the importance of the production organisation for development and operation of production system and show how change can be managed for incremental and radical changes, including specification and purchase of production equipment. The course also contributes to an increased understanding of the possibilities to have an impact on production sustainability, in both developmental and operational phases.

Disposition

The course is delivered in diverse formats including: lectures, group exercises, seminars and lab activities. Guest lectures are held on selected topics. Students shall communicate their understanding of the subject matter through oral presentation, written project reports, as well as providing logically coherent reflections in written exam.

Following KTH guidelines for the fall period, the lectures, seminar and lab sessions are planned to be carried out according to [Scenarios for KTH's educational activities](#), being **Scenario LOW** valid for autumn semester 2021.

Learning platform

Course information, material, assignments and results are collected in the canvas course room (ML2301HT21).

Course assessment and grading

Assessment

INL1 (A-F, 5hp). Group assignment. Case based continuous activity in course with oral presentation and written hand-in (project report).

- Please refer to project description that is provided separately.

TEN1 (A-F, 4hp). Written final exam to assess theoretical understanding.

- Closed book exam (Digital zoom – presence and Canvas)

Grading criteria

The overall grading of the course shall be a combination of INL1 and TEN1 according to the rule set in the table below. The final passing grade is assigned on condition that all mandatory activities are completed.

ILOs	INL1	TEN1	TEN1 (4hp)					
			INL1 (5hp)	A	B	C	D	E
ILO1	X							
ILO2	X	X	A	A	A	B	C	D
ILO3		X	B	B	B	B	C	D
ILO4		X	C	B	C	C	C	D
ILO5		X	D	C	C	D	D	E
ILO6	X		E	D	D	D	E	E
ILO7	X							

Course literature

Selected book chapters and articles

- Articles uploaded in the course canvas page.
- Bellgran, M., and Säfsten, K., (2010). Production development design and operation of production systems, Springer.
- Slack, N., Brandon-Jones, A., Johnston, R. (2016). Operations Management, 8th ed., Pearson Education.
- Barnes, D. (2018). Operations Management: An International Perspective, Macmillan Education

Adapted examination for students with disabilities

The application for compensatory assistance in case of disability is made via KTH FUNKA, more information can be found via the link:

<https://www.kth.se/en/student/stodkontakt/stod/funktionsnedsattning/funka-1.953214>

For students with disabilities who have a statement from KTH's FUNKA unit on recommended support measures in the examination, the following applies in this course:

All support actions under code R (i.e. adjustments relating to space, time and physical circumstances) are granted without special decision by the examiner.

Support measures under code P (educational adaptation) must be actively granted or rejected by the examiner after contact has been made by the student in accordance with KTH's rules. Normally, support actions under code P will also be approved.