

Product Development and Innovation Management 7.5 credits

Produktutveckling och innovationsledning 7.5 hp

Second cycle

Main field: Industrial Management, Second cycle, has only first-cycle course/s as entry requirements (AIN)

Syllabus is adopted by the Research and Education Board (2024-04-02) and is valid for students admitted for the autumn semester 2024.

Placement in the Academic System

The course are included in Master's Programme (120 credits) in Industrial Management and Innovation

Prerequisites and Conditions of Admission

Degree of Bachelor of Science or Degree of Bachelor of Science in Engineering. The degree must be equivalent to a Swedish teknologie kandidatexamen or Swedish högskoleingenjörsexamen and must have been awarded from an internationally recognised university. 15 credits industrial management. English 6. Exemption of the requirement in Swedish is granted.

Course Objectives

This course provides, firstly, an overview on modes of innovations in relation to the different types of industrial organizations. Secondly, by treating innovation as a process – as opposed to a discrete event or outcome – this course goes further on the organization of innovation works in technology-based firms and with a special emphasis on product development. The aim of the course is to provide a theoretical foundation and practical tools for describing, analysing, comparing and designing innovation processes at the firm level and apply them to product development processes in technology-based firms. The course provides a link between the strategic management of technology and the management of individual innovation projects.

Following successful completion of the course the student should be able to:

Knowledge and understanding

- identify and describe key elements affecting the organization of innovative works in technology-based firms
- describe and analyse the structures and processes of organization of innovative works
- explain how and why product novelty and product complexity affect the organization of product development processes in technology-based firms.

- describe the connection between product development and other innovation processes in technology based firms.

Skills and ability

- identify and describe factors that affects firms' organization of innovative works.
- present and analyse the structures and processes of innovation management.
- analyse and compare product development processes in technology-based firms.
- in a group, to design a product development process in technology-based firms taking into account both product novelty and product complexity.

Judgement and approach

- reflect on how to organize innovative work in technology-based firms operating in different strategic contexts.

Primary Contents

The course consists of four modules:

1. Knowledge management in technology-based firms: Theories related to knowledge sourcing (technology alliances; open innovation), knowledge generation (R&D process) and knowledge appropriation (IPR management).
2. Organization of innovative work: Theories on technology-based firms; theories and practices on innovation management: structures (differentiation; integration), conditions (routines; competences; resources) and processes of organizing innovation at the firm level.
3. Process analysis and design: Introduction to and basic training in applying tools for mapping, analysis and designing processes.
4. Product development processes: Theory and practice on product development processes in technology-based firms.

Teaching Formats

The teaching consists of lectures, homework before classroom work, group discussions, seminars, exercises and supervision in the form of analysis and practical problem-solving of cases, and presentation of group work. Some parts of the teaching may be through online lectures.

Teaching is in English.

Examination

The overall grades of F (Insufficient), E (Sufficient), D (Satisfactory), C (Good), B (Very Good), A (Excellent) will be awarded for the course.

The final grade is based on the following examination:

- Quiz (Individual)
- Assignments and presentation (Group)
- Project report and presentation (Group)
- Take-home exam (Individual)

Students need to pass the minimum requirements for each learning outcome to pass the course.

Name of the test		Grading
Take-home Examination	3 credits	F/E/D/C/B/A
Quiz	1 credits	U/G
Assignment and Presentation	1,2 credits	F/E/D/C/B/A
Project Report and Presentation	2,3 credits	F/E/D/C/B/A

If there are special reasons, the examiner may make exceptions from the specified examination format and allow a student to be examined in another way. Special reasons can e.g. be a decision on learning support.

For elite sports students according to Riktlinjer för kombinationen studier och elitidrott vid Högskolan i Halmstad, DNR: L 2018/177, the examiner has the right to decide on an adapted examination component or let the student complete the examination in an alternative way.

Course Evaluation

Course evaluation is part of the course. This evaluation should offer guidance in the future development and planning of the course. Course evaluations should be documented and made available to the students.

Course Literature and Other Study Resources

Paul Trott. Innovation Management and New Product Development, 6th edition. Pearson Education Limited, 1998/2017

A compendium of articles presented in a course pm