



**Karolinska
Institutet**

Course syllabus for

Industrial Management, 6 credits

Industriell ekonomi, 6 hp

This course syllabus is valid from autumn 2024.

Please note that the course syllabus is available in the following versions:

[Autumn2020](#) , [Autumn2022](#) , [Autumn2024](#)

Course code	4BP039
Course name	Industrial Management
Credits	6 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Bioentrepreneurship
Level	AV - Second cycle
Grading scale	Fail (U), pass (G) or pass with distinction (VG)
Department	Department of Learning, Informatics, Management and Ethics
Decided by	Utbildningsnämnden LIME
Decision date	2020-03-04
Revised by	Education committee LIME
Last revision	2024-02-14
Course syllabus valid from	Autumn 2024

Specific entry requirements

A bachelor's degree or a professional degree equivalent to a Swedish Bachelor's degree of at least 180 credits in health care, biomedicine, biology, cellular and molecular biology, pharmaceuticals, chemistry, medicine, biotechnology, or the equivalent. And proficiency in English equivalent to English B/English 6.

Objectives

Upon completion of the course, the student should be able to:

- Describe and explain various technology-based business models and the dynamics of value creation, value proposition, and value capture in industrial enterprises
- Describe and explain how industrial activities are managed and organized
- Select, use and interpret economic calculations as a basis for decision-making in different business situations
- Use the basic concepts and principles for bookkeeping and accounting, and describe and explain

- how the operations of an industrial enterprise can be financed
- Compile and analyze financial reports for an industrial enterprise
- Describe the activities and strategic position of an existing industrial enterprise by means of concepts from the subject industrial management and carry out a basic economic analysis of the company's operations, financial position and how it is financed

Content

Engineering work involves more than just technology. In order to be able to take part in technology-based transactions, implement projects, develop businesses and lead teams and employees in today's companies, good knowledge of industrial management is necessary. In practice, success lies in understanding both the technical and financial aspects of decisions. This course will give you a basic knowledge of industrial management.

The course focuses on basic concepts and models to understand and handle economic, organizational and management issues in technology-based and industrial activities, as an engineer.

Module 1: Industrial value creation

- Technical development as a competition factor
- Technology-based business models and strategies
- Innovation, production and marketing
- Organization
- Human resource management and leadership

Module 2: Product costing

- C/I (Cost/Income) analysis
- Product costing
- Investment appraisal

Module 3: Financial accounting and corporate finance

- Book-keeping and accounting
- Annual report and financial analysis
- Corporate finance

Teaching methods

The course consists of lectures and exercises. During the course, one voluntary business simulation including assignments that relate to the simulation, that can give bonus points on the first exam.

Examination

The examination consists of:

- three written exams (fail/pass/pass with distinction)
- one assignment (fail/pass)

The grade on the course will be a combination of the grades from the written exams and the assignment.

If there are special grounds or a need for adaptation for a student with a disability, the examiner may decide to deviate from the syllabus's regulations on the examination form, the number of examination

opportunities, the possibility of supplementation or exemptions from the compulsory section/s of the course etc. Content and learning outcomes, as well as the level of expected skills, knowledge and abilities, may not be changed, removed or reduced.

Compulsory participation

The examiner assesses if and how absence from compulsory parts can be compensated. Before the student has participated in compulsory parts or compensated absence in accordance with the examiner's instructions the student's course results will not be reported. Absence from a compulsory part may result in the student having to wait to compensate until the next time the course is given.

A limited number of examinations

Students who have not passed the regular examination are entitled to participate in five more examinations. If the student has failed six examinations/tests, no additional examination or new admission is provided.

The number of times that the student has participated in one and the same examination is regarded as an examination session. Submission of a blank exam is regarded as an examination session. An examination for which the student registered but not participated in, will not be counted as an examination.

Transitional provisions

Examination will be provided during a time of two years after a possible cancellation of the course. Examination can take place according to an earlier literature list during a time of one year after the date when a major renewal of the literature list has been made.

Other directives

The course language is English.

Course evaluation is carried out according to the guidelines that are established by The Committee for Higher Education.

Literature and other teaching aids

Mandatory literature

Modern industrial management

Engwall, Mats; Jerbrant, Anna; Karlson, Bo; Storm, Per

Second edition : Lund : Studentlitteratur, [2020] - 501 sidor

ISBN:9789144141527 LIBRIS-ID:0bvhp97pxmpcs46h

[Library search](#)

Engwall, Mats; Karlson, Bo; Akhbari, Mohammad

Exercises for Modern industrial management

Second edition : Lund : Studentlitteratur, [2020] - 328 sidor

ISBN:9789144141534 LIBRIS-ID:x8sfm75gvnx0pktm

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