



Course syllabus

Industriell ekonomi, allmän kurs Managerial Economics, Basic Course

MIOA01, 9 credits, G1 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED I

Date of Decision: 2023-04-14

General Information

Main field: Technology.

Compulsory for: I1

Elective for: C4, D4, RH4

Language of instruction: The course will be given in Swedish

Aim

The aim of the course is to give a general economic overview. The students should, from an economic perspective, arrive at an understanding of the interplay of the various part systems in the enterprise. The course is intended to give a basic ability to understand and utilize economic and business concepts. Basic models used in this context are also included in the course. Relying on this basic knowledge, the students must be able to form judgements taking into account the whole of the enterprise. Special stress is laid on the basic knowledge of economics, which will be necessary in the professional life of a Master of Engineering Science.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- be able to explain and understand the basic concepts of business administration.
- be able to describe basic concepts and models within the following areas: business plans and strategy, as well as organization and marketing.

- be able to understand and describe models and key concepts in production and investment calculations.
- be able to describe and have an understanding of basic external reporting.
- be able to formulate in detail estimates of capital requirements in manufacturing companies.
- be able to have an insight into possible alternative methods of financing.
- be able to relate to and identify with an engineers role within business development.
- be able to create and set out an article on a popular scientific subject.

Competences and skills

For a passing grade the student must

- be able to use and synthesize basic business models and concepts in the areas, strategy, marketing, production, product development, organisation and HRM.
- be able to apply running overall external reporting and balancing of the books and, with the help of a key value, evaluate the annual accounts of an enterprise.
- be able to use detailed estimates of capital requirements in manufacturing enterprises.
- be able to apply business concepts in realistic situations.
- be able to author in writing an article on a popular scientific subject, and discuss orally and debate its contents.

Judgement and approach

For a passing grade the student must

- show insight within technological possibilities and limitations, its contribution to society and engineers' responsibilities regarding social, financial and environment aspects

Contents

The course focuses on basic concepts and models to understand and manage financial, organizational and managerial issues in technology-based and industrial operations as an engineer.

The course consists of four modules.

Module 1: Industrial economics and value creation concerns the areas of technology development as a competitive factor, technology-based business models, strategy and marketing, production and product development as well as organization and HRM.

Module 2: Product Costing and Investment Assessment begins with the basic concepts of cost and revenue analysis, followed by profit planning models that describe how these basic economic concepts are affected by volume. Product costing deals with basic cost calculations and contribution calculations. The module ends with investment assessment, here the four statistical models are touched upon in detail.

Module 3: Financial accounting and financing is of central importance for gathering data for various calculations and models. How the financial information is stored in a company is conveyed through the areas of bookkeeping and accounting. Understanding the company's annual report and being able to carry out an accounting analysis and calculation of the company's capital needs completes the courses. The learning objective of this module is to understand the basic principles of bookkeeping, accounting and capital requirements calculation.

Module 4: Project focus on new models created arising out of contacts with professional engineers and with understanding given to business conditions and

challenges. Oral and written capability are trained.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)

Assessment: The final grade 4 for the course Industrial Economics AK is achieved when the course's four mandatory parts are approved: practical case assignments 1,2, laboratory and article portraying the situation of an entrepreneur. If a higher grade is subsequently desired, a written examination (examination) is required.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0118. **Name:** Examination.

Credits: 6. **Grading scale:** TH. **Assessment:** Approved examination, containing both theoretical questions and problem solving.

Code: 0218. **Name:** Assignment.

Credits: 3. **Grading scale:** UG. **Assessment:** Approved popular scientific article.

Code: 0318. **Name:** Case.

Credits: 0. **Grading scale:** UG. **Assessment:** Prepared assignment and participation in a case discussion.

Admission

The number of participants is limited to: No

The course overlaps following course/s: MIOA12, MIO012, MIO080, MIOA15

Reading list

- Engwall et al: Modern Industriell ekonomi. Studentlitteratur.
- Engwall et al: Övningar till Modern Industriell ekonomi. Studentlitteratur.

Contact and other information

Director of studies: Ingela Elofsson, ingela.elfsson@iml.lth.se

Course coordinator: Carole Gustavsson, carole.gustavsson@iml.lth.se

Course homepage: <http://www.pm.lth.se>

Further information: This course may not be part of the end degree together with the courses MIO012, MIOA12 or MIOA15.