

SYLLABUS

Operations management and strategy 7.5 credits K0019N

Operations management och strategi

Course syllabus admitted: Autumn 2023 Sp 1 - Present

**DECISION DATE
2022-02-11**

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Operations management och strategi

First cycle, K0019N

| Education level | Grade scale | Subject | Subject group (SCB) |
|-----------------|-------------|---------------------|---------------------------------------|
| First cycle | G U 3 4 5 | Industriell ekonomi | Industrial Engineering and Management |

Main field of study

Industrial and Management Engineering

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language + Swedish upper secondary school courses Mathematics 4 or Mathematics E.

Selection

The selection is based on final school grades or Swedish Scholastic Aptitude Test.

Course Aim

After completing the course, the student should be able to:

- Explain the concept of corporate strategy and describe important strategic decisions that management face, e.g., competitive strategy, and be able to value these decisions for a case company.
- Describe and explain strategic and sustainability related operations management positions in a global context.
- Explain the concept of operations management and its dependence and relationship to supply chain management.
- Describe and explain how industrial operations can be designed, controlled, analysed and developed (operations management) and be able to solve related problems.
- Describe the purpose of enterprise resource planning (ERP) and their application areas for business management.
- Describe and explain improvement initiatives and philosophies for improving efficiency and quality assurance in industry.
- Describe and explain strategic and tactical levels of industrial production planning for goods and services.
- Solve problems using basic quantitative forecasting techniques based on industrial data.
- Based on generated forecasts apply basic queueing theory as well as quantitative planning and analysis tools to analyse and develop the production system, for example through linear programming and simulation.

Contents

The course mainly deals with methods for analysing, controlling and improving the internal operations in an organisation given the overall strategic decisions. The methods discussed in the course are often based on quantitative mathematical analysis. In addition, the course links the organisation's internal governance with important strategic choices that management faces. Fundamental strategic decisions are defined and dealt with.

Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

Teaching is conducted through synchronous and/or recorded lectures and several classroom session, laboratory sessions, and calculation exercise sessions related to the quantitative areas in the course. The student presents solutions to laboratory and course assignments through written assignments and oral presentations in seminars. A student in this course is expected to work independently with the literature, work with other learning material, work in groups with other students and learn how to use relevant software to solve problems in the course. Compulsory attendance when presenting coursework, at seminars, and at other teaching sessions may occur. The course is taught in Swedish and/or English.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. The course is examined via final written examination. The examiner may decide to conduct an oral examination for individual students. The course is also examined via compulsory assignments that are carried out individually and/or in groups. Compulsory seminars and/or presentations of assignments may occur where compulsory and active attendance is part of the examination.

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Remarks

Students must register for the courses themselves, or contact ETKS educational administration eduetks@ltu.se, no later than three days after the quarter commences. Failure to do so can result in the place being lost. This rule also applies to students with a guaranteed place.

Replaces the course Operations management, T0008N.

Due to overlap, the course cannot be included in the degree together with T0008N or other course with similar content.

Overlap

The course K0019N is equal to T0008N

Course offered by

Department of Social Sciences, Technology and Arts

Modules

| Code | Description | Grade scale | Cr | Status | From period | Title |
|------|---|-------------|-----|-----------|-------------|-------|
| 0001 | Written exam | G U 3 4 5 | 4 | Mandatory | S22 | |
| 0002 | Laboratory work - Operations management | U G# | 2 | Mandatory | S22 | |
| 0003 | Assignment/seminars - Strategy | U G# | 1.5 | Mandatory | S22 | |

Last revised

by Director of Undergraduate Studies Daniel Örtqvist, Department of Social Sciences, Technology and Arts 2022-02-11

Syllabus established

by Director of Undergraduate Studies Daniel Örtqvist, Department of Social Sciences, Technology and Arts 2021-02-17