



Curriculum

Degree: Master of Science (Tech.), 120 ECTS, Industrial Engineering and Management

Major: Service Management and Engineering

Professors in charge of the major: Paul Lillrank and Jan Holmström

The Master's Programme consists of six modules:

1. Service Management and Engineering A2 (20 cr)
2. Service Management and Engineering A3 (20 cr)
3. Special studies Industrial Engineering and Management C (20) cr or Special Studies in Software Engineering and Services C (20 cr)
4. Scientific principles M (10 cr)
5. Elective studies W (20 cr)
6. Master's thesis D (30 cr)

Study Programme

Service Management and Engineering intermediate module A2 (20 cr)

The objective of the intermediate module is to introduce students to the operational side of service delivery, focusing on the service delivery systems, human resource management, and sales and marketing.

TU-22.1307 Introduction to Services 4 cr

TU-22. 1320 Industrial Service Operations L 6 cr

TU-22.1325 Assignment in Industrial Service Operations 2 cr

TU-91.2510 Managing Sales L 3 cr

TU-22. 1330 Service Purchasing and Supply Management 5 cr

Total: 20 cr

Given the credit ranges, there is only one combination that adds up to 20 credits, i.e. choosing the maximum credits suggested for each course.

Service Management and Engineering, advanced module A3 (20 cr)

The objective of the advanced module is for students to become aware of the state of the art in service innovation and procurement, and to gain first hand experience in proposing solutions to problems in a specific contexts.

TU-22.1335 Service Innovation and New Service Development L 5 cr

TU-53.1110 Human Resources in Service Management and Engineering 5 cr

TU-22.1345 Special Study in Service Management and Engineering 5 cr

TU-22.1340 Seminar on Service Management and Engineering 5 cr

Total: 20 cr

Special Studies in Industrial Engineering and Management C (20 cr)

The objective of this module is to harmonize the background knowledge of students. It also allows enhancement of knowledge of some specific area of industrial management.

Below is a list of the courses that are recommended for this module. If a student wants to include in the module a course that is not mentioned here, he/she will have to discuss that with the professor in charge. In the case of any modifications in the content of the module, the student is required to attach to their personal study plan (HOPS) a list of courses that form the module, approved by the professor.

The list of the recommended courses:

TU-53.1030 Knowledge and Competence Management 3 cr

TU-22.1115 Design of Production Systems B 4 cr

TU-91.1003 Principles of Strategic Management 3-4 cr

TU-53.1360 Cross-Cultural Management 3 cr

TU-22.1425 Advanced Project-based Management 3 cr

TU-91.2003 New Venture Development I 3 cr

Total amount of credits must be at least 20.

Students with insufficient technical background must complete a technical package of 20 credits:

Special Studies in Software Engineering and Services C (20 cr)

T-76.3601 Introduction to Software Engineering 5 cr

T-76.4602 Software Development Methods 6 cr

T-86.5310 ICT Enabled Service Business and Innovation 6 cr

T-110.4206 Information Security Technology 3 cr

Total: 20 cr

Scientific principles M (10 cr)

TU-0.2000 Industrial Management Research Methods 5 cr

5 credits from the list of [methodological courses](#) concerning the whole School of Science and Technology, some examples of suitable courses:

Mat-1.3621 Statistical Inference 5 cr

Mat-2.2103 Design of Experiments and Statistical Models 5 cr

Mat-2.2104 Introduction to Statistical Inference 5 cr

T-61.5010 Information Visualization 5 cr

Mat-2.1197 Philosophy and Systems Thinking 3 cr (mainly in Finnish)

Elective studies W (20 cr)

Compulsory courses:

English language test/course (3 cr) (including both written and oral skills)

Recommended: Practical training max. 5 cr

T-106.1003T, IT Services at Aalto (2cr)

Master's thesis D (30 cr)

More detailed information about the courses can be found here: [course descriptions](#) [pdf].

Please note that most of the courses are organised for the first time when this programme kicks off with the first students.

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