



Faculty of Health, Science and Technology
Materials Engineering

Syllabus

Manufacturing Technology

Course Code:	MTGC13
Course Title:	Manufacturing Technology <i>Tillverkningssteknik</i>
Credits:	7.5
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has at least 60 credits in first-cycle course/s as entry requirements (G2F)

Major Field of Study:
MTA (Mechanical Engineering)

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2022-08-30, and is valid from the Spring semester 2023 at Karlstad University.

Prerequisites

Registered for Materials Engineering, 7.5 ECTS credits, or equivalent

Learning Outcomes

The aim of the course is for students to acquire knowledge and skills in manufacturing technology and workshop engineering.

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

Give an account of different manufacturing methods and methodological variants.

Give an account of basic workshop metrology.

Give an account of manufacturing equipment and workshop layout.

Suggest a suitable manufacturing method for a component based on geometry, material, and size.

Give an account of specifications for the design of a component based on the manufacturing

process.

Give an account of manufacturing adaptation of components for the manufacturing methods covered in the course.

Give an account of basic concepts in sustainable production.

Content

The course includes:

Lectures on manufacturing methods and systems, including workshop metrology.

Mandatory laboratory sessions and exercises.

Study visits.

A hand-in assignment and seminar.

Reading List

See separate document.

Examination

Assessment is based on a written exam and course components which include laboratory work, exercises, a hand-in assignment discussed in a seminar, and study visits.

If students have a decision from Karlstad University entitling them to Targeted Study Support due to a documented disability, the examiner has the right to give such students an adapted examination or to examine them in a different manner.

Grades

One of the grades U (Fail), 3 (Pass), 4 (Some Distinction), or 5 (Distinction) is awarded in the examination of the course.

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional information

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.