CHALMERS
UNIVERSITY OF TECHNOLOGY

Production Engineering, MSc

Course list

Year 1

- Production systems (compulsory)
- Production management (compulsory)
- Quality and reliability engineering (compulsory)
- Sustainable production projects (compulsory)

Year 2

- Specialisation courses and/or other elective courses (elective)
- Master's thesis (compulsory)

During your second year, a flexibility window is offered for all master's students. A flexibility window is a 30-credit semester during your second year where you do not take any compulsory courses. Instead, you are free to take advanced elective courses in your specialisation, study a minor, or go on an exchange programme.

Specialisations course list

Digitalised production systems

Year 1

- Production and product service systems (compulsory elective)
- Simulation of production systems (compulsory elective)
- Robotics and manufacturing automation (compulsory elective)
- Production ergonomics and work design (compulsory elective)

Year 2

- AI in product realisation (compulsory elective)
- Asset management (compulsory elective)
- Project course: Digitalised and automated production (compulsory elective)
- Master's thesis (compulsory)

Manufacturing processes

Year 1

- Additive manufacturing (compulsory elective)
- Advanced manufacturing processes (compulsory elective)
- Metal forming and joining (compulsory elective)
- Advanced 2D materials for energy and environmental applications (compulsory elective)
- Functional ceramics and hard materials (compulsory elective)
- Battery processing: From materials to components (compulsory elective)

Year 2

- AI in product realisation (compulsory elective)
- Metal cutting (compulsory elective)
- Project course: Industrialisation of manufacturing processes (compulsory elective)
- Master's thesis (compulsory)

Quality and production management

Year 1

- Change management (compulsory elective)
- Production ergonomics and work design (compulsory elective)
- Project course: Six sigma black belt (compulsory elective)

Year 2

- Manufacturing strategy (compulsory elective)
- Lean management (compulsory elective)
- Asset management (compulsory elective)
- Production logistics (compulsory elective)
- Master's thesis (compulsory)

Please note that this course list is subject to change.

Glossary

Compulsory courses:

These courses are obligatory to finish the programme.

Compulsory elective courses:

These are elective courses within your programme where you choose to focus on a specific topic.

Elective courses:

You have the option to choose elective courses from outside the programme plan.

If it states **compulsory/elective** in some courses, this means that the course is compulsory for a specific specialisation, while it can be elective for another specialisation.

Specialisation:

A specialisation is a set of courses and a master's thesis that lets you focus on a specific area within your programme.