

## **International Mechanical Engineering, 180 HE credits**

*Internationell maskiningenjör, 180 hp*

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Programme code: TGMEC

Higher education qualification: Degree of Bachelor of Science with a major in Mechanical Engineering

Cycle: First cycle

Established: 2020-12-17

Established by: Department of Engineering Science

Applies for: V22

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### **Courses that the study programme comprises**

#### **By main field of study: Computer Engineering:**

GPP110, Introduction to programming with Python, 5 HE credits, G1N

SDT200, Logic Control Engineering, 2,5 HE credits, G1F

SST200, Sensor Technology, 2,5 HE credits, G1F

#### **By main field of study: Electrical Engineering:**

ELK202, Electronics, fundamental, 5 HE credits, G1F

ISK100, Introduction to Electric Vehicle Systems and Components, 5 HE credits, G1F

SDT200, Logic Control Engineering, 2,5 HE credits, G1F

SST200, Sensor Technology, 2,5 HE credits, G1F

#### **By main field of study: Mechanical Engineering:**

MEL100, Machine element I, 2,5 HE credits, G1N

TVB100, Manufacturing I, 2,5 HE credits, G1N

PTA102, Manufacturing Processes, 7,5 HE credits, G1N

KVM200, Quality and environmental management, 5 HE credits, G1N

RTK300, Technical Drawing and CAD, 5 HE credits, G1N

ISK100, Introduction to Electric Vehicle Systems and Components, 5 HE credits, G1F

SDT200, Logic Control Engineering, 2,5 HE credits, G1F

MEL200, Machine element II, 2,5 HE credits, G1F

MTK200, Materials Science and Engineering, 7,5 HE credits, G1F

MEK210, Mechanics, 7,5 HE credits, G1F

MET100, Metallurgy, 5 HE credits, G1F

SST200, Sensor Technology, 2,5 HE credits, G1F

HFT200, Strength of materials, 7,5 HE credits, G1F

K0004012, Bachelor thesis work - International Mechanical Engineering, 22,5 HE credits, G2E

**Courses without main field of study:**

EFI120, Ethics for Engineers, 2,5 HE credits, G1N

MAT101, Mathematics A, 7,5 HE credits, G1N

FEM410, Finite element method: Mathematical formulation and applications, 5 HE credits, G1F

MAS200, Mathematical Statistics, 5 HE credits, G1F

MAT220, Mathematics B, 7,5 HE credits, G1F

TDV200, Thermodynamics and heat transfer: Mathematical formulation and analytic solution, 5 HE credits, G1F

**Options within the study programme**

The program offers the student the opportunity to freely choose courses of a total of 45 HE

credits, within and outside the university, provided that the subject is relevant to the program and that the course objectives do not overlap with the courses within the program. To determine whether a course is relevant for the education or not, the student needs to apply for a pre-approval (förhandsbesked) of the course selection and have it accepted by the program coordinator before taking the course.

The program has the following recommended courses:

- Energy Storage Systems in electric vehicles 7.5 HE credits
- Materials characterization and NDE 7.5 HE credits
- Virtual production-En 7.5 HE credits
- Additive Manufacturing-En 7.5 HE credits
- Industrial Placement 15 HE credits

Students are guaranteed a place in all these recommended courses.

However, according to the first paragraph, these courses can be replaced with other optional courses

### **By main field of study: Mechanical Engineering:**

MAP100, Materials Characterization and Testing, 7,5 HE credits, G1F

ADT110, Additive manufacturing, 7,5 HE credits, G2F

### **Courses without main field of study:**

INP100, Industrial Placement, 15 HE credits, G1F

## **Entry requirements**

General entry requirements

**You also need:** Chemistry 1, Mathematics 3c, Physics 2.

or

Chemistry A, Mathematics D, Physics B.

(Field-specific entry requirements 8 / A8)

## **Other regulations**

### **Language**

- The program is given in English.

### **Requirements within the program:**

- For the Industrial Placement course, a completed result om 90 HE credits within the program is required.
- For the course, Bachelor Thesis Work-international mechanical engineering, a completed result of 120 HE credits within the program is required.

A student who has been admitted to a programme with this programme syllabus is guaranteed a place on courses according to the study plan above, provided that the student follows the programme according to the study plan. The study plan and its courses may however be subject to change, within the framework of the qualitative targets, when revisions of education plans and syllabi are being made. Should the programme involve choosing a specialization, the student is guaranteed a place on courses concerning the chosen specialization.

## **Qualitative target**

### *National outcomes*

[uhr.se/en/start/laws-and-regulations/Laws-and-regulations/The-Higher-Education-Ordinance/](http://uhr.se/en/start/laws-and-regulations/Laws-and-regulations/The-Higher-Education-Ordinance/)