

## Design

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**Subject area:** Mechanical Engineering

<b>University:</b>	CTU
<b>Level:</b>	BA3, BA4
<b>Teaching mode:</b>	completely online, at specific time
<b>Instructor(s):</b>	Mgr. Ing. Daniel Hadraba, Ph.D. Ing. František Lopot, Ph.D.

### Short description

This course offers to students exercising of their knowledge and skills in practical task of designing the power unit with electric motor, gearbox, additional transmission and coupling. This course is a lot about independent work, which is continuously discussed with the teacher.

### Full description

Content:

1. introduction of the process of designing and explanation of basic principles used in prepared tasks
2. set up the dates of check points for discussion of particular outcomes of the work with each student
3. independent self-work

Outcomes for assignment

1. proposal calculations
2. lay-out of the power unit and of the gearbox
3. final design for the gearbox
4. checking calculations
5. 3D model of the gearbox
6. 2 manufacturing drawings of chosen parts

### Learning outcomes

Basic knowledge and skills of designing mechanical assemblies

### General information

**Contact hours per week:** 4

**Total workload:** 100 (in student hours for the whole course)  
**ECTS credits:** 4  
**Language:** English

**Course start date:** 19 September 2022  
**Course end date:** 15 January 2023

**Add. info about start date:** Start course date refers to start of the semester at CTU. Schedules will be available 1-2 weeks before semester starts. Lectures are taken place from 19.9.2022 until 15.1.2023. Examination period from 16.1.2023 until 19.2.2023.

**Weekly teaching day/time:**

**Time zone:** CET (Denmark, Germany, France, Netherlands, Switzerland, Czech Republic)

**Further information:**

**Prerequisites:** Experience with 3D CAD and technical drawings recommended

**Activities and methods:** Group work, Self-study, Tutorial sessions

**Presence on campus:**

## Final examination

**Form:** assignment

**Date:**

**Location/format:**

**Re-sit possibility:**

**Transcript available:** end of semester

**Add. info/requirements:**

## Registration

To register for this course, follow the registration requirements of your **home university** as specified here: [www.euroteq.eu/courses-registration](http://www.euroteq.eu/courses-registration).

## Administration

**Number of places:** 20

**Minimum participants:** 10  
**Internal course code:** E133025  
**Contact:** frantisek.lopot@fs.cvut.cz, daniel.hadraba@fs.cvut.cz

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*This course is part of the EuroTeQ Engineering University joint course catalogue 2022/2023. This is a collaborative activity of the partner universities DTU, L'X, TU/e, TalTech, CTU, TUM as well as Technion. Students from these universities can participate in the offered courses. It is the responsibility of the student to check if you fulfil the requirements to participate in a specific course. Students are also advised to check with their home institution how to get recognition of the ECTS credits gained in courses of the EuroTeQ course catalogue. For further information about EuroTeQ Engineering University, visit [www.euroteq.eu](http://www.euroteq.eu) or get in touch with the above-mentioned point of contact.*