

## Automatic Control

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**Subject area:** Mechanical Engineering

<b>University:</b>	CTU
<b>Level:</b>	BA2, BA3
<b>Teaching mode:</b>	blended: mostly online, but presence on campus required in certain period
<b>Instructor(s):</b>	Jaromír Fišer, Youssef Alsoufi, Pavel Trnka

### Short description

Automatic controllers are important part of many industrial processes. The goal of this course is to introduce students into basic knowledge of automatic control theory and practice like transfer functions, open versus closed loop control, design of controllers and frequency based analysis of control systems. The course also concentrates on logic control and control via programmable logic controllers.

### Full description

<https://kos.fs.cvut.cz/synopsis/course/E371047/en>

If student does not find all necessary information regarding the course, please contact Mr Fiser as a contact person for this course: [jaromir.fiser@fs.cvut.cz](mailto:jaromir.fiser@fs.cvut.cz)

### Learning outcomes

Control engineering methods, practical skills in computer-aided control design, MATLAB software knowledge as a platform of control engineers.

### General information

<b>Contact hours per week:</b>	5
<b>Total workload:</b>	125 (in student hours for the whole course)
<b>ECTS credits:</b>	5
<b>Language:</b>	English
<b>Course start date:</b>	19 September 2022
<b>Course end date:</b>	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:** Archive on recorded lectures and tutorials is available on MS-Teams.

**Prerequisites:** Workplace safety training (4 hours) required for this course, can be passed before the first laboratory class.

**Activities and methods:** Lectures, Group work, Lab-work, Tutorial sessions

**Presence on campus:** requires 5x 2hours classes in labs, can be organized in one week anytime in the second half of the semester, in at least three days, starting with an additional workplace safety training (see prerequisites).

## Final examination

**Form:** written and oral exam

**Date:**

**Location/format:** online

**Re-sit possibility:** yes

**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:** 42

**Minimum participants:** -

**Internal course code:** E371047

**Contact:** Jaromir.Fiser@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.*