HÖGSKOLAN VÄST

COURSE SYLLABUS

Course code: **MVI600**

Machine Vision, 3 HE credits

Machine vision, 3 hp

Established: 2020-06-04
Established by: Department of Engineering Science
Applies from: V21

Learning outcomes

After completion of the course, the student should be able to:

- demonstrate knowledge of mathematical projection and transformations for a robot vision system.
- demonstrate knowledge of machine vision calibration.
- manage 3D machine vision including filter, detail detection and matching.
- apply navigation and tracking in 2D and 3D for a robotic system.

Entry requirements

Degree of Bachelor of Science in computer engineering, electrical engineering, mechanical engineering or Industrial Engineering and Management. Additionally the Bachelor of Science degree must be comprised of a minimum of 5 HE credits in programming.
General entry requirements and approved result from the following course/courses:
RBS720-Robotic Systems and
RBK600-Robot Certificate or the equivalent.

The forms of assessment of student performance

Laborations and project work in groups with individual written examination.

Course contents

The course consists of the following contents:

- 3D vision
- Vision based robot control
- Camera calibration

Other regulations

Course grading: F/Fx/E/D/C/B/A - Insufficient, Insufficient- more work required before the credit can be awarded, Sufficient, Satisfactory, Good, Very Good, Excellent
Course language: The teaching is conducted in English.

General rules pertaining to examination at University West are available at www.hv.se.

If the student has a decision/recommendation on special support due to disability, the examiner has the right to examine the student in a customized examination form.

Cycle
Second cycle

Progressive specialization
A1F - second cycle, has second-cycle course/s as entry requirements

Main field of study
Automation, Production Technology