inf332 - Practice Robotics

Module label
Practice Robotics
Module code
inf332
Credit points
6.0 KP
Workload
180 h
Used in course of study
- Master's Programme Computing Science > Technische Informatik
- Master's Programme Engineering of Socio-Technical Systems > Embedded Brain Computer Interaction

Contact person
Module responsibility
- Andreas Hein
- Die im Modul Lehrenden
Authorized examiners
- Die im Modul Lehrenden
- Andreas Hein

Entry requirements

Skills to be acquired in this module
Professional competences:
The students learn:
- Programming of robots (mobile or stationary)
- Implementation of elementary operations
- Integration of operations into a small application scenario
- Programming using Robot Operating System (ROS)

Methodological competences:
The students learn:
- Systematic development process with team members
- Systematic evaluation of the application
- Designing a robotic application using basic and advanced robotic concepts

Social competences:
The students learn:
- Project management
- Team work
- Organization of the team

Self-competences:
The students:
- Time management
- Autodidactic work (literature search, technical specs, related work)

Module contents
Robotic systems will be provided to the students. They will then define the project/application scenario of the robots by their own and complete the project as a small team with self-organization and work distribution among the team members.
The module consists of a lecture and an exercise part:
Lecture: 2-3 lectures for introduction onto the module and introduction into the Robot Operating System (ROS) as well as the concepts of the projects.
Exercises: After the introduction period, the students will work self-organized to complete the proposed project. Work can be distributed weekly or on as concentrated time blocks.

Reader's advisory
John J. Craig, Introduction to Robotics: Mechanics and Control
Patrick Goebel, ROS By Example

Links
Language of instruction
English
Duration (semesters)
1 Semester
Module frequency
Once a year
Module capacity
unlimited
Modullevel
AS (Akzentsetzung / Accentuation)
Modulart
Pflicht o. Wahlpflicht / compulsory or optional
Lern-/Lehrform / Type of program
V+Ü
Vorkenntnisse / Previous knowledge

Examination
Time of examination
Type of examination
Final exam of module
At the end of the lecture period
Demonstration and written documentation

Course type
Comment
Frequency
Workload attendance
Lecture
2.00
WiSe
28 h
Exercises
2.00
WiSe
28 h
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<td>Total time of attendance for the module</td>
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