Technology
Arts Sciences
TH Köln

Course
AMS - Special Aspects of Mobile Autonomous Systems

Version: 1 | Last Change: 02.10.2019 18:24 | Draft: 0 | Status: vom verantwortlichen Dozent freigegeben

General information

Long name	Special Aspects of Mobile Autonomous Systems
Approving CModule	AMS_MaTIN
Responsible	Prof. Dr. Chunrong Yuan Professor Fakultät IME
Level	Master
Semester in the year	winter semester
Duration	Semester
Hours in self-study	96
ECTS	5
Professors	Prof. Dr. Chunrong Yuan Professor Fakultät IME
Requirements	Capability of software and project development Knowledge of signal processing and mathematics
Language	English
Separate final exam	Yes

Final exam

Details

Oral exam

Minimum standard

At least 50% with correct answers

Exam Type

Oral exam

Lecture

Learning goals

Knowledge

Mobile autonomous systems
Cognitive and behaviour-based robotics
Environmental modelling and spatial cognition
Interaction and navigation

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	2
Tutorial (voluntary)	0

Separate exam

none

Project

Learning goals

Skills

Teamwork: Development of autonomous systems with cognitive capabilities and intelligent behaviours.
Such cognitive capabilities include e.g.: Recognize objects with sensors, estimate their locations or movements, make 3D representations and interpretations or build a map of the environment etc.
Intelligent behaviours can be demonstrated among others by such actions: Move and navigate autonomously without collision in unknown environments, fetch or transport objects for a special application, nature interactions and collaborations among human and robots.

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Project	1
Tutorial (voluntary)	0

Separate exam

Exam Type

working on projects assignment with your team e.g. in a lab)

Details

Evaluation of the achieved results based on presentations, live demonstrations, discussions as well as documentations in form of texts, source codes, graphic illustrations and video clips

Minimum standard

Presentation of a feasible project idea on the kick-off day and on-schedule delivery, presentation and demonstration of a working system.