Technology
Arts Sciences
TH Köln

Course Manual VA

Networking in automation technology

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General information

Long name	Networking in automation technology
Approving CModule	VA_BaET
Responsible	Prof. Dr. Markus Stockmann Professor Fakultät IME
Valid from	summer semester 2023
Level	Bachelor
Semester in the year	winter semester
Duration	Semester
Hours in self-study	78
ECTS	5
Professors	Prof. Dr. Markus Stockmann Professor Fakultät IME
Requirements	IP, PI1, PI2, GTI
Language	German
Separate final exam	Yes

Literature

Wird zu Beginn der Vorlesung vorgestellt

Final exam

Details	Pro rata: Written examination to test for the competences K4, K5, K7, K11, K16, K8 in terms of LO1 Pro rata: Assessment of a student solution to a practical problem (domain of networking). The project has to be worked on in small groups during the semester and tests for the competences in terms of LO1

Minimum standard	Students know the interfaces and communication protocolls of modern microcontrollers and (mini)computers and they can program them. Students know the typical challenges of IoT applications in the contrast to classical automation applications and they can assess presented networking strategies. Students know the differences between classical protocolls in contrast to IoT protocolls and they can name the (dis)advantages, apply and evaulate them. Students know the modern principles of networking ioT devices.
Exam Type	EN andere summarische Prüfungsform

− Lecture / Exercises

Learning goals

Goal type	Description
Knowledge	Linking microcontrollers and (mini)computers with sensors and actuators (modern interfaces and protocolls) Networking of devices (also in terms of smart and IoT devices) Standard protocolls vs. IoT protocolls

Special requirements

none

Accompanying material	undefined
Separate exam	No

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	3
Tutorial (voluntary)	0

− Lecture / Exercises

Learning goals

Goal type	Description
Skills	Students have to work in small groups on a practical problem and by that they learn to work on complex technical problems in a team.

Special requirements

none

Accompanying material	undefined
Separate exam	No

Expenditure classroom teaching

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