

Sommersemester 2021

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| Course | Qualitative Methoden der Regelungstechnik, Teil 1: Programming in Process Control Systems (2V, 1Ü) |
| Zielgruppe | Studierende des ACE-Master Studierende im ME-Master Studierende im Hauptstudium Maschinenbau / Automatisierungstechnik Studierende im Hauptstudium Elektrotechnik / Automatisierungstechnik |
| URL of the course | https://moodle.uni-due.de/course/view.php?id=19652 |
| Lecturer | Lina Owino, M.Sc., Univ.-Prof. Dr.-Ing. Dirk Söffker |
| Assistant | Lina Owino, M.Sc. |
| About course | <p>In SoSe 2021, the course will be realized via the Moodle system using video material.</p> <p>The realization is carried out via:</p> <ul style="list-style-type: none"> - Lecture and exercise material (pdf) - Lecture video material - Exercise video material - Interactive chat hour (at the time of the course) <p>The commented material is published online 3 days before the lecture/exercise date in the Moodle course and can be downloaded. During the chat hours, questions can be asked (lecture or exercise) posted in the corresponding week. Downloading the commented versions after the chat hour is not possible.</p> <p>The interactive chat hours are held via Zoom. Prior to this, enrollment via the Moodle course is required for each individual course. After the enrollment you will receive all necessary information and the link for participation.</p> <p>The basis of the course is the specified textbook (> available in the textbook collection). The central teaching materials are available as encrypted PDF documents in the Moodle course.</p> <p>For each lecture unit a raw manuscript is published which can be downloaded in the Moodle course from the beginning of the course. This serves to structure the personal/personalisable notes.</p> <p>For preparation/postprocessing of the lecture it is strongly recommended</p> <p>➤ the previous substance,</p> |

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| | <ul style="list-style-type: none"> ➤ attend the consultation hours ➤ as well as reading the upcoming substance in the given chapters in advance (in the specified textbook/textbook) to work out. |
| Material | <p>Moodle: Qualitative Methoden der Regelungstechnik, Teil 1: Programming in Process Control Systems – QMR1 (https://moodle.uni-due.de/course/view.php?id=19652)</p> <p>The password can be requested via the e-mail address srs-pw@uni-due.de. The subject must contain the word QMR1.</p> |
| Day | Wednesday |
| Time | <p>Preparation time: 9:00 – 10:30 am</p> <p>Interactive consulting hour: 10:30 am – 12:00 pm</p> |
| First course | May 19, 2021 |
| Last course | June 23, 2021 |
| Literature | <p>Lehrbuchempfehlungen:</p> <p>K.-H John und M. Tiegelkamp: IEC61131-3: Programming Industrial Automation Systems, Springer, 2001.</p> <p>G. Wellenreuther und D. Zastrow: Automatisieren mit SPS – Theorie und Praxis, Vieweg Verlag, 2005.</p> <p>B. Vogel-Heuser und A. Wannagat: Modulares Engineering und Wiederverwendung mit CoDeSys V3, Oldenbourg Industrieverlag, München, 2009.</p> |
| Content | <ul style="list-style-type: none"> • Overview of automated systems architecture • Design and function of automation systems • PLC programming <ul style="list-style-type: none"> ○ Classic IEC 61131-3 Languages ○ Object-oriented extension of IEC 61131-3 languages • Bus systems and motion control |
| Exam | Written exam, 90 min, closed-book, mandatory registration at the examination office |