

Sommersemester 2020

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 Course description of previous semester: http://www.uni-due.de/srs/v-qmr.shtml
Lecturer	Lina Owino, M.Sc., Univ.-Prof. Dr.-Ing. Dirk Söffker
Assistant	Lina Owino, M.Sc.
About course	<p>In SoSe 2020, the course will be realized via the moodle system using video material.</p> <p>The realisation is carried out via:</p> <ul style="list-style-type: none"> - Lecture and exercise material (pdf) - Lecture video material (mp4) - Exercise video material (mp4)* - Interactive consulting hour (at the time of the course) <p>* is currently being clarified</p> <p>The videos are published online 3 days before the lecture/exercise date in the Moodle course. During the consulting hours, questions can be asked about the video (lecture or exercise) posted in the corresponding week.</p> <p>The consulting hours are held via Jitsi/Zoom/MS Teams*. Prior to this, registration via the Moodle course is required for each individual course. After the registration you will receive all necessary information or the weekly updated link for participation. * is currently being clarified</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>The password can be requested via the e-mail address srs-pw@uni-due.de. The subject must contain the word QMR1.</p> <p>For preparation/postprocessing of the lecture it is strongly recommended</p> <ul style="list-style-type: none"> ➤ the previous substance, ➤ 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>
Day	Wednesday
Time	<p>Preparation time: 2:00 – 3:30 pm Interactive consulting hour: 3:30 – 5:00 pm</p>
First course	13.05.
Last course	17.06.
Literature	<p>Lehrbuchempfehlungen: K.-H John und M. Tiegelkamp: IEC61131-3: Programming Industrial Automation Systems, Springer, 2001. G. Wellenreuther und D. Zastrow: Automatisieren mit SPS – Theorie und Praxis, Vieweg Verlag, 2005. 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	<p>** , Written exam, 90 min, closed-book, mandatory registration at the examination office ** is currently being clarified</p>