

Sommersemester 2026

Course	Measurement and Automation Technology (2V, 1Ü, 2P)
Zielgruppe	ISE (Bachelor)
URL of the course	https://lehre.moodle.uni-due.de/course/view.php?id=12277
Lecturer	Univ.-Prof. Dr.-Ing. Dirk Söffker
Assistant	Mateusz Szkatula, M.Sc.
About course	<p>In SoSe, the course will be realized in presence at the university.</p> <p>The course is based on the following material (downloadable via Moodle):</p> <ul style="list-style-type: none"> - Lecture and exercise material (pdf) <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/individualize the personal notes.</p> <p>For preparation/postprocessing of the lecture it is strongly recommended</p> <ul style="list-style-type: none"> ➤ preparation of the previous material, ➤ attending the consultation hours, ➤ as well as reading the upcoming material in the given chapters in advance (in the specified textbook/textbook).
Material	<p>Moodle: Measurement and Automation Technology (https://lehre.moodle.uni-due.de/course/view.php?id=12277)</p> <p>The password can be requested via the e-mail address srs-pw@uni-due.de. The subject must contain the word MAT.</p>
Day	Friday
Time	1:00 – 4:00 pm
Room	MB 144
First course	April 17
Last course	June 19

Consulting hours	Wednesday, 08.00 – 09.30 am, MB 326
Literature	Lunze, J.: Regelungstechnik 1, Springer, 3. Auflage, 2001 (available in the library) > L Ogata, K.: Modern Control Engineering, 4th Edition, 2002. (available in the library) > O
Additional Reading	Franklin, G.F.; Powell, J.D.; Emami-Naeini, A.: Feedback Control of Dynamic Systems, Prentice Hall 2002 (available in the library) Dorf, R.C.; Bishop, R.H.: Modern Control Systems, Pearson, 2005.
Content	<ol style="list-style-type: none"> 1 Terms, Definition, Idea of Feed Back, Technical Control (L 1 – 2.10, O1 + Material) 2 Dynamic Systems, Description of dynamical systems (L 3.1-3.2,4.1; O2.3(**), O3.4(*), O3.5(*), O11.4(*)) [Eq. 11-25f,11-39f] 3 Description of linear systems (L 4.1-4.3.3; O2.3(**),O3.4(*),O3.5(*),O11.4(*))[Eq. 11-25f,11-39f] 4 Behavior of linear systems (L 5.1.1, L 5.1.2-5.2 + Material) 5 Time behavior of elements and loops (L 5.6 + Material)
Practical Exercise	Check separate notice
Exam	Written exam, 120 min, closed-book, English OR German examination , mandatory registration at the examination office