Sommersemester 2020

Course	**Diagnosis and Prognosis (2V, 1Ü)**
Zielgruppe	Master Program: Mechanical Engineering – all programs Automation and Safety - Safe Systems and all programs Maschinenbau
URL of the course	https://moodle.uni-due.de/course/view.php?id=19649
Lecturer	Univ.-Prof. Dr.-Ing. Söffker
Assistant	Dr.-Ing. Sandra Rothe/Sebastian Wirtz, M.Sc.
About course	In SoSe 2020, the course will be realized via the moodle system using video material. The realisation is carried out via: - Lecture and exercise material (pdf) - Lecture video material (mp4) - Exercise video material (mp4) - Interactive consulting hour (at the time of the course) 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. 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 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. 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. The password can be requested via the e-mail address srs-pw@uni-due.de. The subject must contain the word **DaP**. For preparation/postprocessing of the lecture it is strongly recommended ➢ **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	Moodle: Diagnosis and Prognosis - DaP (https://moodle.uni-due.de/course/view.php?id=19649)
Day	Tuesday
Time	Preparation time: 2:00 – 4:00 pm Interactive consulting hour: 4:00 – 6:00 pm
First course	April, 21th
Last course	June, 2nd
Literature	• Gertler, J.J.: Fault detection and diagnosis in engineering systems. New York, Dekker, 1998 • Isermann, R.: (Hrsg.): Überwachung und Fehlerdiagnose. Moderne Methoden und ihre Anwendung bei technischen Systemen. VDI Verlag, Düsseldorf, 1994 • Klein, U.: Schwingungsdiagnostische Beurteilung von Maschinen und Anlagen. 2., überarbeitete Auflage. Düsseldorf, Stahleisen, 2000 • Lunze, J.: Automatisierungstechnik, Oldenbourg, 2003
Additional Reading	To be announced during lecture
Content	• Methoden der Schadendiagnose I – Signalbasiert Methoden der Schadendiagnose II – Modellbasiert • Methoden der Schadendiagnose III – Datenbasiert • Vorhersage von Lebensdauer und Restlebensdauer • Anwendungen • Zur Veranschaulichung der Lehrinhalte werden Praktika und Übungen durchgeführt
Exam	** is currently being clarified