

Code/Dates	WERKMEC .BA.Nr. 253	Version: 02.12.10	Start: WS 2011
Name	Mechanics of Materials		
Responsible	Last Name Kuna First Name Meinhard Title Prof. Dr.		
Lecturer(s)	Last Name Kuna First Name Meinhard Title Prof. Dr.		
Institute(s)	Mechanics and Fluid-Dynamics		
Duration	1 semester		
Competencies	Development of an understanding of the deformation and failure mechanisms of technological materials; students will get familiar with elastic, plastic, viscous, viscoelastic and viscoplastic behaviors of materials; development of the ability to assess the behavior of materials and to design structures accordingly.		
Contents	Most important ingredients are: continuum mechanics foundations of deformation and failure, rheological models for elastic, plastic, viscous, viscoelastic, and viscoplastic behavior; failure theories / criteria for multiaxial loading; introduction to fracture and damage mechanics		
Literature	J. Lemaitre and J.-L. Chaboche: Mechanics of Solid Materials, Cambridge University Press,2000		
Types of Teaching	Lecture (2 SWS); Exercise (2 SWS); Practical Exercise (0 SWS). Lectures are given in English		
Pre-requisites	Basic knowledge in theoretical mechanics		
Applicability	All programs that require sound knowledge of mechanics of materials, such as Materials Science, Materials Technology, Vehicle Construction and Mechanical Engineering.		
Frequency	Every winter semester		
Requirements for Credit Points	Written exam (120 minutes)		
Credit Points	The course has a value of 6 credit points.		
Grade	The corresponding mark is the result of the written examination.		
Workload	The course requires 180 hours split into 60 hours of personal attendance and 120 hours of private study.		