

<b>Module title</b>		<b>Abbreviation</b>
<b>Material Science 1 (Basic introduction)</b>		o8-FU-MaWi1-152-mo1
<b>Module coordinator</b>		<b>Module offered by</b>
holder of the Chair of Chemical Technology of Material Synthesis		Chair of Chemical Technology of Material Synthesis
<b>ECTS</b>	<b>Method of grading</b>	<b>Only after succ. compl. of module(s)</b>
5	numerical grade	--
<b>Duration</b>	<b>Module level</b>	<b>Other prerequisites</b>
1 semester	undergraduate	--
<b>Contents</b>		
Uncertainty analysis, process engineering: mixing, comminution, agglomeration, separation, drying, conveying. Vacuum technology, coating processes, sintering.		
<b>Intended learning outcomes</b>		
The students possess comprehensive knowledge about various techniques from different areas of the field of chemical process engineering. For a given objective they are able to weigh the pros and cons of different techniques and can suggest ways of fabrication, processing and treatment of materials. Furthermore they are confident in handling of measurement data as well as statistical and systematic errors and possess extensive knowledge about nomenclature, significance as well as practically determining characteristic material properties.		
<b>Courses</b> (type, number of weekly contact hours, language – if other than German)		
V (3) + Ü (1)		
<b>Method of assessment</b> (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English		
<b>Allocation of places</b>		
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<b>Additional information</b>		
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<b>Workload</b>		
150 h		
<b>Teaching cycle</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
Bachelor' degree (1 major) Nanostructure Technology (2015) Bachelor' degree (1 major) Functional Materials (2015) Master's degree (1 major) Chemistry (2016) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016) Master's degree (1 major) Chemistry (2018) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Bachelor' degree (1 major) Nanostructure Technology (2020)		

