Module description: Product Development for Systems Engineering 3

Module Code	t.BA.ST.PM3-EN.19HS
ECTS Credits	4
Language of Instruction/Examination	English
Organizational Unit	IMS
Module Coordinator	Duncan Webster
Legal Framework	The module description is part of the legal basis in addition to the general academic regulations. It is binding. During the first week of the semester a written and communicated supplement can specify the module description in more detail.
Module Characteristic	Type 4* 4 lab lessons per semester week and half-class
Module Description	Product development in the context of systems engineering 3
Module Content	• - Structure and properties of the FE program ANSYS/Workbench • - Creation of easily validatable finite element models and - Execution of the FE-simulation including result evaluation and assessment • - Handling of assemblies • - Calculation of contact problems • - Application of the FE analysis process using the example of a real component • - Application of the FE analysis process using the example of a real componen
Prerequisite Knowledge	

Learning Objectives (Competences)

Students...	Competencies	Taxonomies
Students apply their acquired knowledge from the fields of mechanics, materials and design and deepen and complement it with content from the fields of systems engineering, development processes and simulation technology using the finite element method.	F, SO, M	K2, K3, K4
Understanding of the fundamentals of the FE method, conversion of CAD models into an FE model (assembly), recognition and assessment of the possibilities and limitations in the application of the FE method for strutur-mechanical analyses, introduction to the independent work of an industrially used FE system, integration of simulation tools of structural mechanics into the product development process.	F, SO, M	K2, K3, K4

Performance Assessment

End-of-module exam	Assessment	Length (min.)	Weighting	Form
report	Grade		100	acc. to module agreement

Performance assessment during the semester	Assessment	Length (min.)	Weighting	Form
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Classroom Attendance Requirement	None
Learning material	

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Comments	