Valid from 2026.HS

Module description: CAD for Mechanical Engineering

Module Code	t.BA.MTI.CAD.26HS
ECTS Credits	2
Language of Instruction/Examination	German
Organizational Unit	IPP
Module Coordinator	Peter Hug
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 1b 2 lecture lessons per semester week and half-class
Module Description	Students are familiarised with the handling and application of a modern CAD/PLM program. The tuition is designed to build students' skills progressively from the outlines of the modelling through to component assembly. What is learned is immediately applied in the project module.
Module Content	• - Introduction to the CAD/PLM technologies • - Sketching -> with CAD • - Individual parts (Part Design) • - Casting-specific functions & methods • - Import/Export of parts/assemblies via STEP/STL • - Combinations (Assembly Design) • - Method in a CAD/PLM environment • - Collaboration in the CAD/PLM system in the team
Prerequisite Knowledge	none

Learning Objectives (Competencies)

Students...	Competencies	Taxonomies
Are aware of methodologically good approaches for modeling individual parts and structuring assemblies	M	K3
Can independently pick up knowledge from tutorials and put it into practice	SE	K2
master the application of the basic CAD functions (Sketcher, PartDesign, Assembly)	F	K3
gain knowledge about operations in a modern CAD/PLM environment	M	K3
gain knowledge of collaborative cooperation in a CAD/PLM environment	M	K3
receive knowledge about the creation of a cast construction in the CAD	F	K2
can model individual parts and assembly structures in the CAD	F	K3
are in the position to import external CAD models and export their own	F	K3

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Performance Assessment

End-of-module exam	Assessment	Length (min.)	Weighting	Social Form	Scenario/Format
written + oral		90	100%	acc. to module agreement	

	Assessment	Length (min.)	Weighting	Social Form	Scenario/Format
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Classroom Attendance Requirement

None

Comments

CAD lessons take place in half-classes (max 20 people) in classrooms specially equipped with CAD workstations.For CAD beginners, we recommend visiting the “Technical Drawing/CAD” pre-course.