

0952 Introduction to Technology

1	Module Number 0952	Study Programme TBB/TAB	Semester 1	Offered in xWS xSS	Duration 1 Semester	Module Type Mandatory	Workload (h) 30	ECTS Points 2
2	Courses Introduction to Technology		Teaching and Learning Forms Lecture		Contact Time (SWS) (h) 2 30		Self-Study Time (h) 30	Language english
3	<p>Learning Outcomes and Competences</p> <p>Once the module has been successfully completed, the students can...</p> <p>Knowledge and Understanding</p> <ul style="list-style-type: none"> ... students have a basic knowledge and understanding of fundamental processes and concepts from different technological fields. ... students are familiar with specific technologies that will change over time, depending on what is currently in the industrial focus <p>Use, Application and Generation of Knowledge</p> <ul style="list-style-type: none"> ... students understand the construction and functioning of a number of technical devices and machines <p>Communication und Cooperation</p> <ul style="list-style-type: none"> ...students are able to express their knowledge in English using the correct technical terminology. <p>Scientific Self-Conception/ Professionalism</p> <ul style="list-style-type: none"> ... reflect on and assess one's own abilities (in a group comparison). 							
4	<p>Contents</p> <p>The Introduction to Technology sub-module provides a grounding in the principal areas of technology. The first section gives an introduction to the basic principles of mechanics and thermodynamics including some applications in the automotive industry. The second section deals with the principles of magnetism and electronics leading up to the development of the computer and other modern communication technologies. The third section focuses on the most recent developments in robotics and its use in industrial areas.</p> <p>Topics discussed include: Engineering materials, classifying engineering processes and machines, units of measurement in engineering. Mechanisms like motion and friction, external and internal combustion engines and engine subsystems, electrochemical and fuel cells and other propulsion types, automobile manufacturing, battery-powered electric cars. Principles of electric circuits, function of electronic devices, circuit symbols, understanding electronic diagrams, circuit protection, radio technology, signal modulation, transmission and reception. Computer technology, basic components, memory, recent developments, robotics and its future potential in industry.</p>							
5	<p>Participation Requirements</p> <p>recommended: Proficiency in English corresponding to at least level B2 according to the Common European Framework of Reference for Languages. School knowledge in mathematics and physics.</p>							
6	<p>Examination Forms and Prerequisites for Awarding ECTS Points</p> <p>Introduction to Technology: 60 minutes written examination.</p>							
7	<p>Further Use of Module</p> <p>Compulsory module in the Bachelor's degree course in Business Management / Automotive Industry (TAB) and International Technical Business administration (TBB). Basics of modules 0953 Technik 1, 0956 Technik 2, 0957 Technik3, 0919 project.</p>							

8	Module Manager and Full-Time Lecturer Prof. Sarnitz
9	Literature <ul style="list-style-type: none">• Introduction to Technology: An electronic manuscript will be provided.
10	Last Updated 26.10.2019