

Department	06 Applied Sciences and Mechatronics
Course title	Calculus I / Linear Algebra
Course number	PSB130
Hours per week (SWS)	8
Number of ECTS credits	8
Course objective	<p>Professional competence: The module provides fundamental mathematical knowledge. Students learn to understand, describe and apply fundamental scientific facts. They learn basic mathematical knowledge and ways of thinking and the ability to use mathematical tools to solve physical and technical problems.</p> <p>Methodological competence: Upon completion of the module, students will be able to formulate physical and technical issues mathematically, find solutions and interpret them.</p> <p>Social competence: Through the requirements in seminar classes and exercises, students will be able to use natural law reasoning to infer the truth of statements and to engage with others at this level.</p> <p>Self-competence: Students achieve cognitive progress from memorization (collecting formulas) to comprehension (ability to solve new problems through insight into the nature of things and mastery of the mathematical tools of the trade) upon completion of the module.</p>
Prerequisites	
Recommended reading	Meyberg, Vachenaer, Höhere Mathematik 1, Springer 2001 Papula, Mathematik für Ingenieure und Naturwissenschaftler, 3 Bände, Vieweg 2011 Erven, Schwägerl, Mathematik für Ingenieure, Oldenbourg 2011 Bartsch, Taschenbuch mathematischer Formeln, Hanser 2018 Papula, Mathematische Formelsammlung, Vieweg 2009 Kerner, von Wahl, Mathematik für Physiker, Springer 2007 Koch, Stämpfle, Mathematik für das Ingenieurstudium, Hanser 2010
Teaching methods	Seminaristic teaching
Assessment methods	Written exam
Language of instruction	English
Name of lecturer	Felix Allmendinger
Email	Felix.Allmendinger@hm.edu
Link	https://sci-intern.hm.edu/fk/modulbeschreibungen.php?lang_nr=&id=2153
Course content	
Remarks	