

Courses in English Course Description

Department	06 Applied Sciences and Mechatronics
Course title	PDE/Series/Integral Transforms
Course number	PSB330
Hours per week (SWS)	5
Number of ECTS credits	5
Course objective	<p>Professional Competence: The module imparts basic mathematical knowledge and the ability to use the procedures from the areas mentioned in the content as aids in solving technical and physical problems.</p> <p>Methodological competence: After completing the module, students will be able to understand and use transformations in particular as a mathematical tool in physics, signal processing and control engineering.</p> <p>Social competence: Through the requirements in seminar classes and exercises, students will be able to reason in terms of natural laws in order 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	PSB130, PSB230
Recommended reading	Meyberg, Vachenauer, Höhere Mathematik 2, 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 Sachs, Wahrscheinlichkeitsrechnung und Statistik, Hanser 2018
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=2165
Course content	Series, Fourier and Laplace Transformation, PDEs
Remarks	