

Department	06 Applied Sciences and Mechatronics
Course title	Modelling and Testing of Products and Processes
Hours per week (SWS)	Blockunterricht, 26.-30.04.2021
Number of ECTS credits	6
Course objective	Types of Models. Modeling methods. Modeling of physical properties of products (structural analysis); modeling of processes (electrical- and temperature fields, fluid dynamics); physical testing of products and processes. Experimental modal analysis. Solving different problems with FE program ANSYS. Classical theory of Strength of materials. Stress analysis. Local stresses and fatigue.
Prerequisites	Bachelors degree
Recommended reading	A. C. Fowler, Mathematical Models in the Applied Sciences, Cambridge University Press, 1997; Edward A. Bender, An Introduction to Mathematical Modeling, Dover Publications (March 6, 2000); Andy J. Keane; Prasanth B. Nair; Computational Approaches for Aerospace Design; Wiley 2005; Vince Adams, Abraham Askenazi, Building Better Products With Finite Element Analysis, 1998; Learning materials in PowerPoint
Teaching methods	Lecture and Project
Assessment methods	Exam and projekt
Language of instruction	English
Name of lecturer	Prof. Dr. Martin Eerme
Email	Martin.Eerme@ttu.ee
Link	
Course content	
Remarks	