Title:	**Finite Element Method**
Lecturer:	Prof. Dr.-Ing. Hendrike Raßbach
Qualification aim:	On completion of this course, the students should have some basic knowledge on the method of finite elements and they should be able to build up simple FEM-models. Some examples will be solve with the program ANSYS. The students can critically judge and interpret results.
Content:	Basic Ideas of the Method of Finite Elements Different Finite Elements for Structural Mechanics The Applications of FEA Basic Procedure Creating a FEA-Model Accuracy, Reliability, Errors Possibilities for Verification Structure of FEAPrograms ANSYS – The Layout of the GUI Goal and StartingPoint of a FE-Analysis Reasonable Simplifications Coupling of FEA and CAD-Programs Examples
Teaching method:	45 min lectures, 135 min lab-work per week
Necessary knowledge:	fundamentals of technical mechanics
Usability:	special course for foreign students, DD (B.Eng.)
Preconditions for the granting of credits:	written examination and work with program ANSYS: 120 min
Credits:	5 ECTS - Credits
Frequency:	annually in the summer semester
Work load:	15 hours (present time: 60 h + self study 90 h)
Duration of one unit:	90 min
Supporting documents:	scriptum
Recommended publications:	Adams, V., Askenazi, A.; “Building Better Products with Finite Element Analysis”, On Word Press, 1999, SAN 694-0269 Saeed Moaveni; “Finite Element Analysis”; Pearson Education, 2003, ISBN 0-13-191857-5