Module Overview B.Sc. Computational Engineering (12 Semester)

Degree Guidelines as per 05.08.2014, Version 01.10.2021

The degree program consists of 180 Credit Points (CP) in total:

Compulsory Courses:	114 CP	🟦
Area of Specialisation:	54 CP	🟩
Bachelor Thesis:	12 CP	🟧

Language of Tuition: GERMAN
Certificates required

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This leads to the following *possible* part-time semester course schedule:

1. Semester	2. Semester	3. Semester	4. Semester	5. Semester	6. Semester
Mathematics I for Mechanical Engineering (8 CP)	Mathematics II for Mechanical Engineering (8 CP)	Electrical Engineering and Information Technology I (6 CP)	Electrical Engineering and Information Technology II (6 CP)	Mathematics III for Mechanical Engineering (4 CP)	Mathematics IV for ET (7 CP)
Engineering Mechanics I (6 CP)	Engineering Mechanics II (6 CP)	Functional and Object-Oriented Concepts of Programming [2] (10 CP)	Algorithms and Data Structure [3] (10 CP)	Engineering Mechanics III (6 CP)	Elementary PDGL: Classical Methods (6 CP)
Effective CE Studies: The ECES Programme I (1 CP)				Computational Engineering and Robotics [4] (5 CP)	Fundamentals of CAE/CAD (4 CP)
Ø 15 CP	Ø 14 CP	Ø 16 CP	Ø 16 CP	Ø 15 CP	Ø 17 CP

7. Semester	8. Semester	9. Semester	10. Semester	11. Semester	12. Semester
Materials Technology for CE (4 CP)	Practical Studies in CE (4 CP)			Bachelor Thesis and accompanying colloquium in the choosen major (12 CP)	
Introduction to the Numerical Computation of Electromagnetic Fields [5] (5 CP)	Effective CE Studies II *or* Courses from other Departments (3 CP)				
Geometric Methods of CAE/CAD	Fundamental Courses in one Area of Specialisation (4[1]/6 CP)	Area of Specialisation (48/50[1] CP) Choose *one* of the following majors: Applied Mathematics and Mechanics; Civil Engineering; Mechanical Engineering; Electrical Engineering and Information Technology; Computer Science			
Ø 14 CP	Ø 11[1]/13 CP	Ø 16 CP	Ø 16 CP	Ø 16 CP	Ø 12/14[1] CP

[1] for Mechanical Engineering   [2] prev. Foundations of Computer Science I   [3] prev. Foundations of Computer Science II   [4] prev. Introduction to Computational Engineering   [5] prev. Project Seminar Electromagnetic CE