Module Overview B.Sc. Computational Engineering (9 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	7. Semester	8. Semester	9. Semester
Mathematics I for Mechanical Engineering (8 CP)	**Mathematics II for Mechanical Engineering (8 CP)**	**Mathematics III for Mechanical Engineering (4 CP)**	**Mathematics IV for ET (7 CP)**	**Computational Engineering and Robotics [4] (5 CP)**	**Elementary PDGL: Classical Methods (6 CP)**		**Bachelor Thesis and accompanying colloquium** in the choosen major **(12 CP)**	
Engineering Mechanics I (6 CP)	**Engineering Mechanics II (6 CP)**	**Engineering Mechanics III (6 CP)**	**Fundamentals of CAE/CAD (4 CP)**	**Materials Technology for CE (4 CP)**	**Practical Studies in CE (4 CP)**			
Electrical Engineering and Information Technology I (6 CP)	**Electrical Engineering and Information Technology II (6 CP)**	**Functional and Object-Oriented Concepts of Programming [2] (10 CP)**	**Algorithms and Data Structure[3] (10 CP)**	**Geometric Methods of CAE/CAD (5 CP)**	**Effective CE Studies II *or* Courses from other Departments (3 CP)**			
Effective CE Studies: The ECES Programme I (1 CP)				**Introduction to the Numerical Computation of Electromagnetic Fields [5] (5 CP)**	**Fundamental Courses in one Area of Specialisation (4^1/6 CP)**	**Area of Specialisation (CP 48/50[1])** Choose *One* of the following five majors: Applied Mathematics and Mechanics; Civil Engineering; Mechanical Engineering; Electrical Engineering and Information Technology; Computer Science		
Ø 21 CP	**Ø 20 CP**	**Ø 20 CP**	**Ø 21 CP**	**Ø 19 CP**	**Ø 17^1/19 CP**	**Ø $19/21^1$ CP**	**Ø 21 CP**	**Ø 20 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