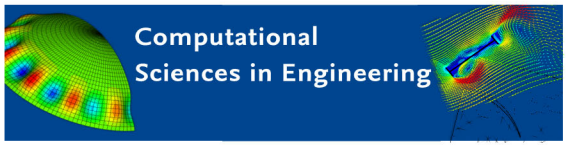
Technische Universität Braunschweig

**Study Plan** (Exam. Regul. 2024)




Name: _____

Matricle Number: _____ Year of Enrollment: 20____

New exam regulation valid from winter term 2025/2026!

| 1. Semster (Winterterm) | | | | | |
|---|---|---|---|---|---|
| | **CP** | | | | |
| **MAF** | 5 | Ordinary Differential Equations (ODE) | | | |
| | 5 | Partial Differential Equations (PDE) | | | |
| | 5 | Algorithms & Programming | | | |
| **ENG** | 10 | **Solid and Structual Mechanics** | **Fluid Mechanics** | **Information Technology** | **Track:** |
| | | Linear Solid Mechanics | Fluid Mechanics | Nonlinear Photonics | **Date:** |
| | | Introduction to FEM | Introduction to FVM | Information Theory | **Signature:** |
| **CEQ** | 5 | Career Entry Qualifications | | | |
| | **30** | | | | |

| 2. Semester (Summerterm) | | | | | | |
|---|---|---|---|---|---|---|
| | **CP** | | | | | |
| **MAF** | 5 | Numerical methods for ordinary and partial different equations | | | | |
| **ENG** | 5 | **Solid and Structual Mechanics** | **Fluid Mechanics** | **Information Technology** | | |
| | | Nonlinear Solid Mechanics | Turbulent Flows | Pattern Recognition | | |
| **CEM** | 10 | **Compulsory Electives – Choose 1-2** | | | **Date:** | **Signature:** |
| | | Data-driven material modeling | | | | |
| | | Methods of uncertainty Analysis and Qualification I | | | | |
| | | Multi-Scale Methods | | | | |
| | | Scientific Software Engineering (Lab) | | | | |
| | | Network Security | | | | |
| | | Quantum Communication Networks | | | | |
| | | Dynamic Optimization (10 CP) | | | | |
| | | Numerische Lineare Algebra (10 CP, German) | | | | |
| | | Multidisciplinary Design Optimization (MDO) | | | | |
| | | Parallel and Distributed Computing | | | | |
| **ECL** | 5 | **Elective Class(es)** | | | | |
| | | 1. | | | Date:<br>Signature: | |
| **CEQ** | 5 | Career Entry Qualifications | | | | |
| | **30** | | | | | |

| 3. Semester (Winterterm) | | | | |
|---|---|---|---|---|
| | **CP** | | | |
| **CEM** | 5 | **Electives - Choose 1-2** | **Date:** | **Signature:** |
| | | Nonlinear FEM | | |
| | | Advanced FEM (for structures) | | |
| | | Introduction to Lattice-Boltzmann-Methods | | |
| | | Simulationsmethoden der Partikeltechnik (GER) | | |
| | | Deterministic and Stochastic Computations (“Uncertainty II”) | | |
| | | Spoken Language Processing (“Pattern Recognition II”) | | |
| | | Computer Network Engineering | | |
| | | Algorithms for Solving the Euler and Navier Stokes Equations | | |
| | | Statistical methods: Optimality and high dimensionality (10 CP) | | |
| | | Heat and Mass Transfer | | |
| **ECL** | 10 | **Elective Class(es)** | | |
| | | 1. | Date:<br>Signature: | |
| | | 2. | Date:<br>Signature: | |
| **PRO** | 15 | Research Project | | |
| | **30** | | | |

| 4. Semester (Summerterm) | | |
|---|---|---|
| | **CP** | |
| **MTH** | **30** | Master Thesis |

| Additional Courses |
|---|
| **1.** |
| **2.** |
| **3.** |
| **4.** |
| **5.** |

**Notes:**

MAF courses are compulsory and do not aquire signatures

The courses in the chosen engineering track are compulsory and not interchangeable!