Studienplan und Modulliste

<table>
<tr><th>1. Semester (WS)</th><th>2. Semester (SS)</th><th>3. Semester (WS)</th><th>4. Sem. (SS)</th></tr>
<tr><td>Tensor Calculus
FG 1.2 (PM; 7/4/210)</td><td>Finite Element Method Foundation
FG 1.3 (PM; 7/4/210)</td><td>Nonlinear Finite Element Method
FG 1.3 (PM 7/4/210)</td><td rowspan="5">Master-Arbeit + Kolloquium
(30/-/900)
Modul 9</td></tr>
<tr><td>Continuum Mechanics
FG 1.2 (PM; 7/4/210)</td><td>Thermodynamics of Materials
FG 1.2 (PM; 7/4/210)</td><td rowspan="2">Module des Wahlpflichtkatalog „Winter“
(WPM; 15/12/450)</td></tr>
<tr><td>Introduction to Numerical Methods
FG 1.1 (PM; 7/4/210)</td><td rowspan="3">Module des Wahlpflichtkatalog „Summer“
(WPM; 15/12/450)</td></tr>
<tr><td>Computer Languages for Engineers
FG 2.6 (PM; 5/4/150)</td><td rowspan="2">Soft Skills
(WM; 8/6/240)</td></tr>
<tr><td>Testing of Metallic Materials
FG 2.7 (PM; 5/4/150)</td></tr>
<tr><td colspan="4">Module (CR/SWS/work load=CR*30h)</td></tr>
<tr><td>(31/20/930)</td><td>(29/20/870)</td><td>(30/22/900)</td><td>- (30/-/900)</td></tr>
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<tr><th colspan="3">Wahlpflichtmodule</th></tr>
<tr><td></td><td>2. Semester (Summer)</td><td>3. Semester (Winter)</td></tr>
<tr><td colspan="3">Fächergruppe 1 (FG 1): Mathematisch-naturwissenschaftliche Grundlagen</td></tr>
<tr><td>1.1 Mathematik</td><td>Advanced Numerical Methods</td><td>Parallel Computing</td></tr>
<tr><td>1.2 Mechanik</td><td>FEM - Coupled Problems</td><td>FEM - Multiphase Materials</td></tr>
<tr><td>1.3 Computational Mechanics</td><td>-</td><td>Computational Inelasticity</td></tr>
<tr><td colspan="3">Fächergruppe 2 (FG 2): Fachspezifische Grundlagen / Anwendungen</td></tr>
<tr><td>2.1 Abfallwirtschaft</td><td>-</td><td>Simulation of Landfill Bodies</td></tr>
<tr><td>2.2 Geotechnik</td><td>Numerische Modellierung in der Geotechnik *</td><td>Bodenmechanik*</td></tr>
<tr><td>2.3 Informatik</td><td>Advanced Computer Architecture</td><td>CSCW and Software Engineering</td></tr>
<tr><td rowspan="2">2.4 Massivbau</td><td rowspan="2">Design of Concrete Structures</td><td>Pre-stressed Concrete</td></tr>
<tr><td>Finite Element Method Modeling Concrete Structures</td></tr>
<tr><td>2.5 Metall- und Leichtbau</td><td>Special chapters of steel structures*</td><td>Steel Shells, Towers and Masts*</td></tr>
<tr><td>2.6 Statik</td><td>CAD in Civil Engineering</td><td>Analysis of Structures</td></tr>
<tr><td>2.7 Materialtechnik / Umformtechnik</td><td>Fatigue and Lifetime of Machine Elements</td><td>Schwingungsanalyse mit Matlab*</td></tr>
<tr><td>2.8 Umwelttechnik / CFD</td><td>Computational Fluid Dynamics</td><td>--</td></tr>
<tr><td rowspan="2">2.9 Werkstofftechnik</td><td rowspan="2">--</td><td>Technische Schadensanalyse*</td></tr>
<tr><td>Werkstoffauswahl für hohe Temperaturen und Leichtbau*</td></tr>
<tr><td>2.10 Mechatronik</td><td>Advanced Modeling and Simulation Techniques</td><td>--</td></tr>
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