

Master Course Computational Engineering

Ruhr-Universität Bochum Fakultät für Bau- und Umweltingenieurwissenschaften RUHR UNIVERSITÄT BOCHUM



EXAMINATION DATES SUMMER SEMESTER 2025

Title		Module Coordinator	Date in 2025	Sem.	Perpetual date
WEEK 1					
CE-WP08	Numerical Methods and Stochastics	Prof. Kronbichler Dr. Boulin	18.08.	2	1 st Monday
CE-P04	Scientific Programming	Prof. Vogel		1	1 st Tuesday
CE-P04	Modern Programming Concepts in Engineering Last examination offered in summer semester 2025	Prof. König	19.08.	1	1 st Tuesday
CE-WP04	Nonlinear Finite Element Methods for Structures	Prof. Sauer	20.08.	2	1 st Wednesday
CE-WP26	High-Performance Computing on Clusters	Prof. Vogel	21.00	3	1 st Thursday
CE-WP33	Deep Learning for Engineers	Prof. Vogel	21.08.	2	1 st Thursday
CE-WP32	Scientific C++ Programming (Advanced)	Prof. Vogel	22.08.	2	1 st Friday
WEEK 2					
CE-P02	Mechanical Modelling of Materials	Prof. Balzani	25.08.	1	2 nd Monday
CE-WP25	High-Performance Computing on Multicore Processors	Prof. Vogel	26.08.	2	2 nd Tuesday
CE-WP31	Scientific C++ Programming (Basics)	Prof. Vogel	27.08.	1	2 nd Wednesday
CE-P07	Continuum mechanics	Prof. Waimann	28.08.	2	2 nd Thursday
CE-WP20	Materials for Aerospace Applications	Prof. Bartsch	28.08.	3	2 nd Thursday
CE-WP13	Advanced Control Methods for Adaptive Mechanical Systems	Prof. Nestorovic	29.08.	3	2 nd Friday
WEEK 3					
CE-P03	Computer-based Analyses of Steel Structures	Prof. Winkler	01.09.	1	3 rd Monday
CE-WP05	Computational Fluid Dynamics	Prof. Henning	02.09.	2	3 rd Tuesday
CE-WP01	Variational Calculus and Tensor Analysis	Prof. Waimann	00.00	1	3 rd Wednesday
CE-WP34	Advanced Discretization Methods	Prof. Vogel	03.09.	2	3 rd Wednesday
CE-WP03	Adaptronics	Prof. Nestorovic	04.09.	2	3 rd Thursday
CE-WP15	Coupled Multiphysical Modeling and Simulations	Dr. Kozinov	05.09.	3	3 rd Friday
WEEK 4					
CE-P01	Mathematical Aspects of Differential Equations and Numerical Mathematics	Prof. Bramham	08.09.	1	4 th Monday
CE-WP09	Numerical Simulation in Geotechnics and Tunneling	Prof. Sauer	09.09.	2	4 th Tuesday
CE-WP17	Numerical Methods for Conservation Laws	Prof. Henning	10.09.	3	4 th Wednesday
CE-WP14	Computational Wind Engineering	Prof. Höffer	11.09.	3	4 th Thursday
CE-WP12	Computational Plasticity Portfolio examination summer semester only	Prof. Hartmaier	12.09.	2	4 th Friday
WEEK 5					
CE-WP02	Optimization Aided Design – Reinforced Concrete	Prof. Mark	15.09.	2	5 th Monday
CE-P05	FE Methods in Linear Structural Mechanics	Prof. Sauer	16.09.	1	5 th Tuesday
CE-W06	Advanced Constitutive Models for Geomaterials	Prof. Wichtmann	17.00	2	5 th Wednesday
CE-WP06	Inclastic Finite Element Method for Structures Winter semester only	Prof. Sauer	17.09.	3	5 th Wednesday
CE-WP19	Computational Fracture Mechanics Portfolio examination winter semester only	Prof. Hartmaier	18.09.	3	5 th -Thursday
CE-P06	Fluid Dynamics	Prof. Höffer	19.09.	2	5 th Friday

Modules with individual dates

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CE-WP11	Applied Computational Simulations of Structures Can NOT combined with CE-WP30	Prof. Sauer	HW*	2	TBA		
CE-WP28	Machine Learning: Supervised Methods Not offered in the summer semester 2025	Prof. Glasmachers	ΕX	2	TBA		
CE-WP10	Object-oriented Modelling and Implementation of Structural Analysis Software	Prof. Sauer	PW*	2	TBA		
CE-W04	Recent Advances in Numerical Modeling and Simulation	Prof. Sauer	SP*	2	TBA		
CE-WP30	Transient Finite Element and Finite Difference Methods Can NOT combined with CE-WP11	Prof. Sauer	HW*	2	TBA		
CE-WP29	Uncertainty Quantification in FE Analyses with Surrogate Modeling First time in winter semester 2025/26	Prof. Sauer	₽W*	3	TBA		

^{*} The submission deadlines for the Homework (HW), Project Work (PW) and Seminar Presentation (SP) will be announced in the corresponding lecture.

14th April 2025

Subject to change without notice!