

Attachment 2, Part 1

Study Schedule

the module type and its duration (lecture hours per week (LHPW) is indicated and the necessary assessment, type, scope and structure is to be found in the module descriptions.

Module No.	Module Name	1. Semester	2. Semester	3. Semester (M)	4. Semester	CP	Total CP
		L/E/S/T/RP/P/LC	L/E/S/T/RP/P/LC	L/E/S/T/RP/P/LC	L/E/S/T/RP/P/LC		
Compulsory Modules of Basic Education							25
CMS-SKL	Soft Skills	2/0/0/0/0/0/2 2 GW				5	
CMS-PRO	Research Project			0/0/0/0/12/0/0 2 GW		15	
CMS-SEM	Literature Studies in Computational Modeling		0/0/4/0/0/0/0 GW*			5	
Elective Compulsory Modules of the Basic Education (3 of 8) (for the track "Computational Life Science" 3 of 7)							15
CMS-COR-MLD	Machine Learning and Data Mining	2/2/0/0/0/0/0 GW				5	
CMS-COR-HPC	Parallel Programming and High-Performance Computing	2/2/0/0/0/0/0 GW				5	
CMS-COR-NUM	Basic Numerical Methods	2/2/0/0/0/0/0 GW				5	
CMS-COR-SAP	Stochastics and Probability	2/2/0/0/0/0/0 GW				5	
CMS-COR-VIZ	Data Visualization	2/2/0/0/0/0/0 GW				5	
CMS-COR-SED	Statistical Principles and Experimental Design (nicht wählbar für Track Computational Life Science)	2/2/0/0/0/0/0 PEW GW				5	
CMS-COR-DBM	Database Management	2/2/0/0/0/0/0 GW				5	
CMS-COR-SSE	Scientific Software Engineering	2/2/0/0/0/0/0 GW				5	

Compulsory elective for professional profiling					
Choice of a track of six according to attachment 2, Part 2	Compulsory modules according to attachment 2, Part 2				50
				Master's Thesis Defence	29 1
	30	30	30	30	120

\* The type and extent of the individual forms of teaching and learning, as well as the number of assessments vary, depending on the student's choice.

Attachment 2, Part 2

Curriculum of the professional profiling – compulsory modules in the selected track

the module type and its duration (lecture hours per week (LHPW)) is indicated and the necessary assessment, type, scope and structure is to be found in the module descriptions.

Module No,	Module Name	1. Semester	2. Semester	3. Semester (M)	4. Semester	CP	Total CP
		L/E/S/T/RP/P/LC	L/E/S/T/RP/P/LC	L/E/S/T/RP/P/LC	L/E/S/T/RP/P/LC		
Choice of a track from six options							
<i>Computational Life Science</i>							50
CMS-CLS-IBC	Introduction to Biochemistry	2/0/0/0/0/2/0 2 GW				5	
CMS-COR-SED	Statistical Principles and Experimental Design	2/2/0/0/0/0/0 GW				5	
CMS-CLS-ELG	Computational Life Science Basics		4 LHPW* GW*	4 LHPW * GW*		10	
CMS-CLS-ABI	Applied Bioinformatics		2/2/0/0/0/0/0 GW			5	
CMS-CLS-MOS	Modeling and Simulation in Biology		2/2/0/0/0/0/0 GW			5	
CMS-CLS-TEA	Computational Life Science Teamproject		0/0/0/0/8/0/0 2 GW			10	
CMS-CLS-ELV	Computational Life Science Advanced			8 LHPW * GW*		10	
<i>Computational Mathematics</i>							50
CMS-CMA-ELG	Computational Mathematics Basics	4 LHPW * GW*	4 LHPW * GW*			10	
CMS-CMA-FEM	Finite Element Methods	3/1/0/0/0/0/0 PEW GW				5	
CMS-CMA-MODSEM	Modeling Case Studies		0/0/4/0/4/0/0 GW			10	
CMS-CMA-PROJ	Computational Mathematics Project			0/0/2/0/2/0/0 GW		5	
CMS-CMA-ELV1	Computational Mathematics Advanced		4 LHPW * GW*	4 LHPW * GW*		10	
CMS-CMA-ELV2	Computational Mathematics Applications		4 LHPW * GW*	4 LHPW * GW*		10	

Module No.	Module Name	1. Semester	2. Semester	3. Semester (M)	4. Semester	LP	LP-Ges
		L/E/S/T/RP/P/LC	L/E/S/T/RP/P/LC	L/E/S/T/RP/P/LC	L/E/S/T/RP/P/LC		
<i>Visual Computing</i>							50
CMS-VC-ELG	Visual Computing Basics	8 LHPW * GW*				10	
CMS-VC-ELV1	Visual Computing Advanced		6 LHPW * GW*	6 LHPW * GW*		15	
CMS-VC-ELV2	Visual Computing Applications		1/1/0/0/0/0/0 + 4 LHPW * GW*	1/1/0/0/0/0/0 + 4 LHPW * GW*		15	
CMS-VC-TEA	Visual Computing Teamproject		0/0/0/0/8/0/0 2 GW			10	
<i>Computational Modelling in Energy Economics</i>							50
CMS-EE-EPM	Electric Power Markets	2/2/0/0/0/0/0 GW				5	
CMS-EE-EL1	Computational Modelling in Energy Economics Basics	4 LHPW * GW*	4 LHPW * GW*			10	
CMS-EE-SCEE	Case Studies in Energy Economics		0/0/2/0/0/0/0 2 GW			10	
CMS-EE-LSEE	Literature Studies in Energy Economics		0/0/2/0/0/0/0 2 GW			5	
CMS-EE-REEP	Resource Economics and Environmental Policy			2/2/0/0/2/0/0 2 GW		10	
CMS-EE-EL2	Computational Modelling in Energy Economics Advanced		4 LHPW * GW*	4 LHPW * GW*		10	
<i>Computational Engineering</i>							50
CMS-CE-FEM	Engineering Finite Element Methods	3/1/0/0/0/0/0 PEW GW				5	
CMS-CE-EL1	Computational Engineering Basics		4 LHPW* GW*	4 LHPW * GW*		10	
CMS-CE-AT	Advanced Topics in Finite Element Analysis		2/2/0/0/0/0/0 GW			5	
CMS-CE-MBD	Multibody Dynamics		2/2/0/0/0/0/0 GW			5	
CMS-CE-MP	Multifield Problems		2/2/0/0/0/0/0 GW			5	

Module No.	Module Name	1. Semester	2. Semester	3. Semester (M)	4. Semester	LP	LP-Ges
		L/E/S/T/RP/P/LC	L/E/S/T/RP/P/LC	L/E/S/T/RP/P/LC	L/E/S/T/RP/P/LC		
CMS-CE-CFD	Computational Fluid Dynamics	2/2/0/0/0/0/0 GW				5	
CMS-CE-EL2	Computational Engineering Advanced		6 S LHPW * GW*	6 LHPW * GW*		15	
<i>Applied Artificial Intelligence</i>							50
CMS-AAI-CV	Computer Vision	2/2/0/0/0/0/0 GW				5	
CMS-AAI-RL	Robot Learning		2/2/0/0/0/0/0 GW			5	
CMS-AAI-TSP	Touch Sensing and Processing			2/2/0/0/0/0/0 GW		5	
CMS-AAI-DCT	Digital Circuit Technology	2/2/0/0/0/0/0 GW				5	
CMS-AAI-DNNH	Deep Neural Network Hardware		2/2/0/0/0/0/0 GW			5	
CMS-AAI-AV	Advanced Applied Artificial Intelligence		4 LHPW * GW*			5	
CMS-AAI-AP	Applications of Applied Artificial Intelligence			8 LHPW * GW*		10	
CMS-AAI-TEA	Applied Artificial Intelligence Teamproject		0/0/0/0/8/0/0 2 GW			10	

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Explanations:

- L Lecture
- E Exercise
- S Seminar
- T Tutorial
- M Mobility window
- RP Research project
- P Practical

LC Language Course  
PEW Preliminary Examination Work  
CP Credit Points  
GW Graded Work