Bergische Universität Wuppertal
Zentrales Prüfungsamt

Modulübersicht Masterstudiengang Computer Simulation in Science
(Prüfungsordnung vom 19.05.2014)

Prüf-Nr.	P	Pflichtmodule	74
1100	**P**	**Computer Simulation 1**	**10**
1101	P	Computer Simulation 1 [1] MAP - 2 mal wiederholbar	8
1102	P	Introduction to Computer Simulation	2
1200	**P**	**Computer Simulation 2**	**13**
1201	P	Parallel Algorithms [2] [3]	8
1202	P	Data Analysis [3]	5
1300	**P**	**Computer Simulation 3**	**12**
1301	P	Computer Simulation 3 [1] MAP - 2 mal wiederholbar	10
1302	P	Lab Course II	2
1400	**P**	**Computer Science 1**	**10**
1401	P	Computer Science 1 [2] MAP	8
1402	P	Worldwide Distributed (GRID) Computing	2
1500	**P**	**Computer Science 2**	**7**
1501	P	Computer Science 2 [2] [3] MAP	7
1600	**P**	**Numerical Methods 1**	**8**
1601	P	Numerical Methods 1 [2] [3] MAP	6
1602	P	Numerical Analysis and Simulation I	2
1700	**P**	**Numerical Methods 2a**	**8**
1701	P	Numerical Analysis and Simulation II [2] [3] MAP	6
1702	P	Numerical Analysis and Simulation II Übung	2
1800	**P**	**Numerical Methods 2b**	**8**
1801	P	Numerical Methods in Classical Field Theory and Quantum Mechanics [3] MAP	3
1802	P	Numerical Methods in Classical Field Theory and Quantum Mechanics Ausarb.	5
1900	**P**	**Numerical Methods 3**	**6**
1901	P	Numerical Methods 3 [2] [3] MAP	6
	P	**Master-Thesis** (Voraussetzung für die Ausgabe des Themas sind 70 LP) -1 mal wiederholbar	**30**

Prüf-Nr.	P	Spezialisierung	16
	W	**Atmospheric Physics**	**16**
3100	**P**	**Atmospheric Physics 1**	**8**
3101	P	Atmospheric Physics 1 [3] MAP	5
3102	P	Selected Topics in Atmospheric Physics	3
3200	**W**	**Atmospheric Physics 2a**	**8**
3201	P	Atmospheric Physics 2a [3] MAP	8
3202	P	Introduction to Atmospheric Physics	3
3300	**W**	**Atmospheric Physics 2b**	**8**
3301	P	Atmospheric Physics 2b [3] MAP	3
3302	P	Selected Topics in Atmospheric Physics	2
3303	P	Seminar on Atmospheric Physics	3
	W	**Computational Electromagnetics**	**16**
3400	**P**	**Computational Electromagnetics 1**	**8**
3401	P	Computational Electromagnetics 1 [3] MAP	8
3500	**P**	**Computational Electromagnetics 2**	**8**
3501	P	Computational Electromagnetics 2 [3] MAP	8

P = Pflichtelement / -modul
W = Wahlpflichtelement / -modul

	W	**Computational Fluid Mechanics**	**16**
3600	**P**	**Computational Fluid Mechanics 1**	**8**
3602	P	Computational Fluid Mechanic 1 Begutachtung der Sammelmappe (A+C oder B+C)	8
3603	W	Smooth Particle Hydrodynamics (A)	0
3604	W	Multiphase Flows (B)	0
3605	P	Computational Fluid Dynamics (C)	0
3700	**P**	**Computational Fluid Mechanics 2**	**8**
3702	P	Computational Fluid Mechanic 2 [3] Begutachtung der Sammelmappe (2 Komponenten)	8
3703	W	Pedestrian Dynamics	0
3603	W	Smooth Particle Hydrodynamics	0
3704	W	Groundwater Flow	0
3705	W	Free Surface Water Flow	0
3706	W	Fire Simulation	0
	W	**Experimental Particle Physics**	**16**
2300	**P**	**Experimental Particle Physics 1**	**8**
2301	P	Experimental Particle Physics 1 [3] MAP	3
2302	P	The Standard Model of Elementary Particle Physics	5
2400	**P**	**Experimental Particle Physics 2**	**8**
2402	P	Experimental Particle Physics 2 [3] Begutachtung der Sammelmappe (B oder A+C oder A+D)	8
2403	W	Architectures (A)	0
2404	W	Foundations of Elementary Particle and Astroparticle Physics (B)	0
2405	W	Introduction to Cosmology and General Relativity (C)	0
2406	W	Detector Physics (D)	0
	W	**Financial Mathematics**	**16**
2501	P	Financial Mathematics 1 [2] [3] MAP	8
2601	P	Financial Mathematics 2 [2] [3] MAP	8
	W	**Materials Science**	**16**
2901	P	Materials Science 1 [3] MAP	8
3001	P	Materials Science 2 [4] MAP	8
	W	**Theoretical Chemistry**	**16**
2700	**P**	**Theoretical Chemistry 1**	**8**
2701	P	Theoretical Chemistry 1 [3] MAP	6
2702	P	Quantum Theory of Molecules	2
2800	**P**	**Theoretical Chemistry 2**	**8**
2801	P	Theoretical Chemistry 2 [3] MAP	6
2802	P	Theoretical Chemistry Applications	2
	W	**Theoretical Particle Physics**	**16**
2100	**P**	**Theoretical Particle Physics 1**	**8**
2101	P	Theoretical Particle Physics 1 [3] MAP	3
2302	W	The Standard Model of Elementary Particle Physics	5
2102	W	Statistical Field Theory	5
2103	W	Many Particle Theory	5
2200	**P**	**Theoretical Particle Physics 2**	**8**
2202	**P**	Theoretical Particle Physics 2 [3] Begutachtung der Sammelmappe (A+C oder B)	8
2403	W	Architectures (A)	0
2203	W	Quantum Field Theory in Particle Physics (B)	0
2405	W	Introduction to Cosmology and General Relativity (C)	0

1) Schriftliche Prüfung, Klausur 180 min
2) Schriftliche Prüfung, Klausur 120 min
3) Mündliche Prüfung, 30 min
4) Schriftliche Hausarbeit

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