



Joint Curricula

Appendix for Courses in the Collaborative Master Program

“Systems Engineering and Engineering Cybernetics”

amendment of 23 July 2015

Participating Institutions: Otto von Guericke University (Magdeburg, Germany) and KNRTU-KAI (Kazan, Russia)

Duration of Study: 2 years

Place for Study: 1st, 2nd semesters at KNRTU-KAI, 3rd semester – at Otto von Guericke University. 4th semesters – at KNRTU-KAI or Otto von Guericke University.

1st semester

Module	Credits of module	Contact hours	Individual work hours	Exams	Total Student workload	Cert	
Foreign language	3	40	68		108		FL
Mathematical modeling of object and control system	6	50	130	36	216	exam	AU
Modern problems of control theory	6	50	130	36	216	exam	AU
Design of digital control systems of mobile objects	3	40	68		108	graduate test	AU
Computer-aided design of control means and systems	3	40	32	36	108	exam	AU
Methods of optimal control theory	3	32	40	36	108	exam	AU
Research work	7		252		252		AU
Total	31						

2nd semester

Module	Credits of module	Contact hours	Individual work hours	Exams	Total Student workload	Cert	
Foreign language	3	22	50	36	108	exam	FL
History and methodology of science and technology in the field of control	2	30	42		72		Ph
Computer technology of control in engineering systems	4	68	40	36	144	exam	AU
Modern applied control theory	8	76	176	36	288	exam	AU
Modern methods of mobile objects control	3	32	40	36	108	exam	AU
Modern problems of automation and control	3	32	40		72	graduate test	AU
Research work	7		252		252	graduate test	AU
Total	30						

3rd semester

Module	Credits of module	Contact hours	Individual work hours	Exams	Total Student workload	Cert	
Complex Systems	5	42	108		150	exam	OvGU
Dynamics of Distributed Parameter Systems	5	42	108		150	exam	OvGU
Advanced Process Systems Engineering	5	42	108		150	exam	OvGU
Optimal Control	5	42	108		150	exam	OvGU
Hybride Discrete Event Systems	5	42	108		150	exam	OvGU
Digital Information Processing	5	42	108		150	exam	OvGU
Total	30						

4th semester

Module	Credits of module	Contact hours	Individual work hours	Exams	Total Student workload	Cert	
Master thesis	27		972		972		AU
State exam	3			108	108		AU
Total	30		972	108	1080		

On behalf of OVGU Magdeburg



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Prof. Jens Strackeljan
Rector

01/09/15

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Prof. Dr.-Ing. A. Lindemann
Coordinator of the MSc Programm

On behalf of KNRTU-KAI



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