Neue Anlage 1: Curriculum Master-Studiengang „International Material Flow Management (M.Eng.)

Modules/Subjects IMAT M.Eng.	Semester 1		Semester 2		Semester 3		Semester 4		Gesamt
	SWH	ECTS	SWH	ECTS	SWH	ECTS	SWH	ECTS	ECTS
MODULE 1: ECOSYSTEM MANAGEMENT	**4**	**6**							**6**
MODULE 2: REGIONAL MATERIAL FLOW MANAGEMENT	**3**	**4**	**4**	**6**					**10**
2.1 Regional Development Strategies	3	4							
2.2 Regional Material Flow Management: Conceptional Approach and International Case Studies			4	6					
MODULE 3: INDUSTRIAL MATERIAL FLOW MANAGEMENT	**4**	**6**	**2**	**2**					**8**
3.1 Principles of Industrial Material Flow Management	2	3							
3.2 Sustainability Management and Reporting	2	3							
3.3 Industrial Aspects of Factor 10 (Cleaner Production)			2	2					
MODULE 4: INDUSTRIAL ECOLOGY & ZERO EMISSION STRATEGIES			**4**	**6**					**6**
4.1 Industrial Ecology			2	2					
4.2 International ZE Policy Approaches: Case Studies from Asia, Africa and Europe			2	4					
MODULE 5: SUSTAINABLE WATER MANAGEMENT			**2**	**2**	**2**	**4**			**6**
5.1. Basic Engineering Aspects of Sustainable Water Management			2	2					
5.2. Sustainable Water Management: Future Challenges and Best Practices					2	4			
MODULE 6: ENERGY SYSTEM MANAGEMENT			**2**	**2**	**2**	**2**			**4**
6.1 Basic Principles of Energy System Management			2	2					
6.2 Energy System Design: Future Challenges and Strategies					2	2			
MODULE 7: RENEWABLE ENERGY AND ENERGY EFFICIENCY					**4**	**4**			**4**
MODULE 8: SUSTAINABLE WASTE AND RESOURCE MANAGEMENT					**4**	**4**			**4**
MODULE 9: BUSINESS PLANNING FOR ENGINEERS	**4**	**4**							**4**
9.1 Business Plan Development	2	2							
9.2 Project Planning and Project Management	2	2							
MODULE 10: TECHNICAL ASPECTS OF DE-CARBONISING STRATEGIES			**2**	**2**	**4**	**6**			**8**
10.1 Chemistry of Global Climate Change: Important GHG Cycles					2	2			
10.2 Greenhouse Gas Abatement Strategies and Carbon Trading			2	2					
10.3 Modelling Carbon Footprints					2	4			
MODULE 11: SYSTEM CHANGE MANAGEMENT	**2**	**2**	**2**	**2**					**4**
11.1 Cultural Aspects of System Change	2	2							
11.2 Stakeholder Management			2	2					
MODULE 12: PHYSICS AND CHEMISTRY FOR THE ENVIRONMENT	**4**	**4**							**4**
12.1 Environmental Chemistry for Engineers	2	2							
12.2 Environmental Physics for Engineers	2	2							
MODULE 13: SELECTIVES - SEMINARS IN APPLIED MATERIAL FLOW MANAGEMENT	**3**	**4**	**6**	**8**	**2**	**4**			**16**
13.1 Elective I	3	4							
13.2 Elective II			3	4					
13.3 Elective III			3	4					
13.4 Elective IV					2	4			
MODULE 14: INTERNSHIP					**6**	**6**			**6**
MASTER THESIS							**24**	**30**	**30**
Total	**24**	**30**	**24**	**30**	**24**	**30**	**24**	**30**	**120**

Erläuterungen zum Curriculum:
Das erste und zweite Fachsemester werden in der Regel an einer ausländischen IMAT-Partnerhochschule unterrichtet.
SWH = Semester Weekly Hours
ECTS = European Credit Transfer System