

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 ECTS
	SWH	ECTS	SWH	ECTS	SWH	ECTS	SWH	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: Conceptual 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