



The table below list all modules/sub courses together with the workload and credit points divided into the four study semester:

Modules/Subjects	Semester 1			Semester 2			Semester 3			Semester 4			Modulverantwortlicher
	SWH	ECTS	Workload	SWH	ECTS	Workload	SWH	ECTS	Workload	SWH	ECTS	Workload	
MODULE 1: ECOSYSTEM MANAGEMENT	4	6	180										Prof. Dr. Peter Heck
MODULE 2: REGIONAL MATERIAL FLOW MANAGEMENT	3	4	120	4	6	180							Prof. Dr. Peter Heck
2.1 Regional Development Strategies	3	4	120										
2.2 Regional Material Flow Management: Conceptual Approach and International Case Studies				4	6	180							
MODULE 3: INDUSTRIAL MATERIAL FLOW MANAGEMENT	4	6	180	2	2	60							Prof. Dr. Klaus Helling
3.1 Principles of Industrial Material Flow Management	2	3	90										
3.2 Sustainability Management and Reporting	2	3	90										
3.3 Industrial Aspects of Factor 10 (Cleaner Production)				2	2	60							
MODULE 4: INDUSTRIAL ECOLOGY & ZERO EMISSION STRATEGIES				4	6	180							Prof. Dr. Susanne Hartard
4.1 Industrial Ecology				2	2	60							
4.2 International ZE Policy Approaches: Case Studies from Asia, Africa and Europe				2	4	120							
MODULE 5: SUSTAINABLE WATER MANAGEMENT				2	2	60	2	4	120				Dr. Ingo Bruch
5.1. Basic Engineering Aspects of Sustainable Water Management				2	2	60							
5.2. Sustainable Water Management: Future Challenges and Best Practices							2	4	120				
MODULE 6: ENERGY SYSTEM MANAGEMENT				2	2	60	2	2	60				Dipl. Ing. Christian Synwoldt
6.1 Basic Principles of Energy System Management				2	2	60							
6.2 Energy System Design: Future Challenges and Strategies							2	2	60				
MODULE 7: RENEWABLE ENERGY AND ENERGY EFFICIENCY							4	4	120				Dipl. Ing. Christian Synwoldt
MODULE 8: SUSTAINABLE WASTE AND RESOURCE MANAGEMENT							4	4	120				Prof. Dr. Susanne Hartard
MODULE 9: BUSINESS PLANNING FOR ENGINEERS	4	4	120										Prof. Dr. Dirk Löh
9.1 Business Plan Development	2	2	60										
9.2 Project Planning and Project Management	2	2	60										
MODULE 10: TECHNICAL ASPECTS OF DE-CARBONISING STRATEGIES				2	2	60	4	6	180				Prof. Dr. Eckhard Helmers
10.1 Chemistry of Global Climate Change: Important GHG Cycles							2	2	60				
10.2 Greenhouse Gas Abatement Strategies and Carbon Trading				2	2	60							
10.3 Modelling Carbon Footprints							2	4	120				
MODULE 11: SYSTEM CHANGE MANAGEMENT	2	2	60	2	2	60							Prof. Dr. Alfons Matheis
11.1 Cultural Aspects of System Change	2	2	60										
11.2 Stakeholder Management				2	2	60							
MODULE 12: PHYSICS AND CHEMISTRY FOR THE ENVIRONMENT	4	4	120										Prof. Dr.-Ing. Michael Bottlinger
12.1 Environmental Chemistry for Engineers	2	2	60										
12.2 Environmental Physics for Engineers	2	2	60										
MODULE 13: SELECTIVES - SEMINARS IN APPLIED MATERIAL FLOW MANAGEMENT	3	4	120	6	8	240	2	4	120				Dr. Michael Knäus
13.1 Selective I: MFM-Seminar of the Partner Universities	3	4	120										
13.2 Selective II: MFM-Seminar of the Partner Universities				3	4	120							
13.3 Selective III: MFM-Seminar of the Partner Universities				3	4	120							
13.4 Selective IV: Traveling University / Practical Research Project Development and Fundraising							2	4	120				
MODULE 14: INTERNSHIP							6	6	180				Dr. Michael Knäus
MASTER THESIS										24	30	900	Prof. Dr. Peter Heck
Total	24	30	900	24	30	900	24	30	900	24	30	900	