

Curriculum

Semester Credit Units | ECTS-Credits

	1	2	3	4
PROCESS ENGINEERING				
Process Control	2 2			
Reaction Engineering	2 3			
Heat & Mass Transfer	3 4			
Matlab in Engineering	1 1			
Revision Course in Process Technology	4 10			
Conceptual Process Design & Simulation		2 4		
Plantwide Control		2 3		
Apparatus Engineering		2 3		
Solid Process Engineering – Particle Technology		2 3		
Advanced Thermal Process Technology		2 2		
Plant Safety			2 2	
Plant Engineering			2 3	
Computational Fluid Dynamics – Theory			1 2	
Computational Fluid Dynamics – Simulation			2 3	
Interdisciplinary Project			3 10	
BEYOND ENGINEERING				
Regulations & Standards in Process Engineering	1 1			
Legal Aspects of Engineering	1 1			
Business Economics	2 3			
Academic Writing		1 1		
Design of Experiments		1 2		
Ethics		1 1		
Literature Seminar		1 1		
PLANT ENGINEERING & OPERATIONS				
Strength of Materials	2 2.5			
Process Integration		1 1		
Plant Automation		1 1		
Materials Handling & Logistics		2 3		
Plant Design Project			4 5	
CHEMICAL ENGINEERING				
Polymer Chemistry	2 2,5			
Advanced Industrial Chemistry		2 2,5		
Advanced Catalysis		2 2,5		
Chemical Technology Seminar			1 1	
Chemical Product Design & Development			1 1	
Industrial Scale-Up			1 2	
Field Trip			1 1	
ENERGY ENGINEERING				
Energy Storage	1 1.25			
Electrochemical Energy Storage & Conversion	1 1.25			
Power & Smart Grids		2 2.25		
Energy Conversion Technologies & Synthetic Bio-Fuels		2 2.25		
Renewable Energy Systems			2 2.25	
Heating & Cooling Technology			2 2.25	
ENVIRONMENTAL ENGINEERING				
Waste Engineering	1 1.25			
Noise Control	1 1.25			
Groundwater, Advanced Water Engineering & Reuse		3 4		
Life Cycle Assessment		1 1		
Membrane Technology			2 2.25	
Flow & Transport in Environmental Engineering			2 2.25	
MASTER'S THESIS				
Master's Seminar				2 5
Master's Thesis				25
SEMESTER CREDIT UNITS ECTS-CREDITS	20 30	22 30	18 30	2 30