

# BEE CLEAN PRODUCTION & BEE WATER AND ENVIRONMENT CURRICULA

Please note: SCHEDULES are ACCORDING to DPEE STUDY GUIDE 2011-2012

## BEE / CLEAN PRODUCTION: BASIC MODULE 31 ECTS

BEE / CLEAN PRODUCTION: BASIC MODULE 31 ECTS						COURSE SCHEDULES PER SEMESTERS AND PERIODS 2011-2012-2013													
Course	Course name	ECT	Period	Year		Au1/P1	Au1/P2	Au1/P3	Sp1/P4	Sp1/P5	Sp1/P6	Su	Au2/P1	Au2/P2	Au2/P3	Sp2/P4	Sp2/P5	Sp2/P6	
488400A	Orientation to the BEE studies	1	1	1st		x													
488401A	Introduction to the Environmental and Socio-economical Issues of the Barents region	2	1-2	1st		x	x												
488402A	Sustainable Development	3	3	1st				x											
488012A	Environmental Legislation (2011-2012 on P4-P5)	5	(2-3)	1st					x	x									
477307S	Research Methodology	5	2-6	1st			x	x	x	x	x								
488404A	Global Change	5	1-2	1st		x	x												
488406A	Introduction to Environmental Science	5	4-5	1st					x	x									
488203S	Industrial Ecology	5	2	1st			x												
<b>Basic Module total (ECTS)</b>		<b>31</b>																	

## BEE / CLEAN PRODUCTION: ADVANCED MODULE ABOUT 30 OP COMPULSORY\* / ELECTIVE

BEE / CLEAN PRODUCTION: ADVANCED MODULE ABOUT 30 OP COMPULSORY* / ELECTIVE						COURSE SCHEDULES PER SEMESTERS AND PERIODS 2011-2012-2013													
Course	Course name	ECT	Period	Year		Au1/P1	Au1/P2	Au1/P3	Sp1/P4	Sp1/P5	Sp1/P6	Su	Au2/P1	Au2/P2	Au2/P3	Sp2/P4	Sp2/P5	Sp2/P6	
488405S	Environmental issues in the Barents region*	5	6	1st							x								
488002S	Advanced practical training*	3	Summe	1st								x							
477203A	Process design	5	4-5	1st					x	x									
477041S	Experimental design	5	4-5	1st					x	x									
477311S	Advanced separation processes	5	5	1st						x									
488205S	Environmental load of process industry	4	6	1st							x								
477309S	Process and environmental catalysis	5	2	2nd										x					
488104A	Industrial and communal waste management	5	6	1st							x								
<b>Advanced Module total (ECTS)</b>		<b>30</b>																	

## BEE / CLEAN PRODUCTION: SUPPLEMENTARY MODULE ABOUT 30 ECTS ELECTIVE

BEE / CLEAN PRODUCTION: SUPPLEMENTARY MODULE ABOUT 30 ECTS ELECTIVE						COURSE SCHEDULES PER SEMESTERS AND PERIODS 2011-2012-2013													
Course	Course name	ECT	Period	Year		Au1/P1	Au1/P2	Au1/P3	Sp1/P4	Sp1/P5	Sp1/P6	Su	Au2/P1	Au2/P2	Au2/P3	Sp2/P4	Sp2/P5	Sp2/P6	
<b>Submodule 1 Energy and Environment</b>																			
488204S	Air Pollution Control Engineering	5	3	2nd											x				
488202S	Production and Use of Energy	3	1	2nd									x						
<b>Submodule 2 Control of Phenomena</b>																			
477306S	Non-ideal Reactors	5	3	2nd											x				
477305S	Flow Dynamics	5	2	2nd										x					
<b>Submodule 3 Process Design</b>																			
477206S	Advanced Process Design	6	5-6	1st						x	x								
477503S	Simulation	3	3	2nd											x				
<b>Submodule 4 Economics and Management</b>																			
555321S	Risk Management	3	1-3	2nd									x	x	x				
721236A	Principles of Environmental Economics	5	4-5	1st					x	x									
721704A	Business logistics	5	2-3	2nd										x	x				
<b>Submodule 5 Elective Courses</b>																			
Sub 5	Courses by or at the BEE partner universities	10	1-3	2nd									x	x	x				
<b>Supplementary Module total (ECTS)</b>		<b>30</b>																	

## BEE / CLEAN PRODUCTION: MASTER'S THESIS 30 OP ECTS

BEE / CLEAN PRODUCTION: MASTER'S THESIS 30 OP ECTS						COURSE SCHEDULES PER SEMESTERS AND PERIODS 2011-2012-2013													
Course	Course name	ECT	Period	Year		Au1/P1	Au1/P2	Au1/P3	Sp1/P4	Sp1/P5	Sp1/P6	Su	Au2/P1	Au2/P2	Au2/P3	Sp2/P4	Sp2/P5	Sp2/P6	
Thesis	Master's Thesis	30	4-6	2nd												x	x	x	
<b>Master's Thesis total (ECTS)</b>		<b>30</b>																	

**All CP studies in total (ECTS) 120**

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### BEE / WATER & ENVIRONMENT: BASIC MODULE 31 ECTS

					COURSE SCHEDULES PER SEMESTERS AND PERIODS 2011-2012-2013												
Course	Course name	ECT	Period	Year	Au1/P1	Au1/P2	Au1/P3	Sp1/P4	Sp1/P5	Sp1/P6	Su	Au2/P1	Au2/P2	Au2/P3	Sp2/P4	Sp2/P5	Sp2/P6
488400A	Orientation to the BEE studies	1	1	1st	x												
488401A	Introduction to the Environmental and Socio-economical Issues of the Barents region	2	1-2	1st	x	x											
488402A	Sustainable Development	3	3	1st			x										
488012A	Environmental Legislation (2011-2012 on P4-P5)	5	(2-3)	1st				x	x								
477307S	Research Methodology	5	2-6	1st		x	x	x	x	x							
488118S	Laboratory and Field Measurements in Environmental Engineering	10	1-6	1st	x	x	x	x	x	x							
488110S	Water and Wastewater Treatment	5	1-2	1st	x	x											
<b>Basic Module total (ECTS)</b>		<b>31</b>															

### BEE / WATER & ENVIRONMENT: ADVANCED MODULE ABOUT 30 ECTS COMPULSORY\* / ELECTIVE

					COURSE SCHEDULES PER SEMESTERS AND PERIODS 2011-2012-2013												
Course	Course name	ECT	Period	Year	Au1/P1	Au1/P2	Au1/P3	Sp1/P4	Sp1/P5	Sp1/P6	Su	Au2/P1	Au2/P2	Au2/P3	Sp2/P4	Sp2/P5	Sp2/P6
488405S	Environmental issues in the Barents region*	5	6	1st						x							
488002S	Advanced practical training*	3	Summe	1st							x						
488102A	Hydrological processes	5	4-5	1st				x	x								
477041S	Experimental design	5	4-5	1st				x	x								
477311S	Advanced separation processes	5	5	1st					x								
477203A	Process design	5	4-5	1st				x	x								
488104A	Industrial and communal waste management	5	6	1st						x							
<b>Advanced Module total (ECTS)</b>		<b>30</b>															

### BEE / WATER & ENVIRONMENT: SUPPLEMENTARY MODULE 30 ECTS: ELECTIVE COURSES

					COURSE SCHEDULES PER SEMESTERS AND PERIODS 2011-2012-2013												
Course	Course name	ECT	Period	Year	Au1/P1	Au1/P2	Au1/P3	Sp1/P4	Sp1/P5	Sp1/P6	Su	Au2/P1	Au2/P2	Au2/P3	Sp2/P4	Sp2/P5	Sp2/P6
<b>Submodule 4 Economics and Management</b>																	
555321S	Risk Management	3	1-3	2nd								x	x	x			
721236A	Principles of Environmental Economics	5	4-5	1st				x	x								
721704A	Business logistics	5	2-3	2nd									x	x			
<b>Submodule 5 Elective Courses</b>																	
Sub5	Courses by or at the BEE partner universities	10	1-3	2nd								x	x	x			
<b>Submodule 6a Water 1 (only on odd years, next 2011)</b>																	
488108S	Groundwater Engineering (odd years)	5	1-2	2nd				(x)	(x)			x	x				
488117S	Water Resources Management (odd years)	5	2-3	2nd					(x)	(x)			x	x			
<b>Submodule 6b Water 2 (only on even years, next 2012)</b>																	
488103A	Environmental Impact Assessment (even years, P1-4)	5	1-2-3-4	2nd									x	x			
488113S	Introduction to surface water quality modelling	5	2-3	2nd									x	x			
<b>Submodule 8 Environmental Systems</b>																	
488203S	Industrial Ecology	5	2	2nd									x				
488404A	Global Change	5	1-2	2nd								x	x				
<b>Supplementary Module total (ECTS)</b>		<b>30</b>															

### BEE / WATER & ENVIRONMENT: MASTER'S THESIS 30 OP ECTS

					COURSE SCHEDULES PER SEMESTERS AND PERIODS 2011-2012-2013												
Course	Course name	ECT	Period	Year	Au1/P	Au1/P	Au1/P	Sp1/P	Sp1/P	Sp1/P	Su	Au2/P	Au2/P	Au2/P	Sp2/P	Sp2/P	Sp2/P
Thesis	Master's Thesis	30	4-6	2nd											x	x	x
<b>Total (ECTS)</b>		<b>30</b>															
<b>All WE studies in total (ECTS)</b>		<b>120</b>															