

Environmental Engineering

Study Year 1, Academic Year 2014/15 (Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	14/15	14/15	14/15	14/15
								sp1	sp2	sp3	sp4
FMAA05	15	G1	-	S	Calculus in One Variable		KS KE U W T	1	2		
VVR111	15	G1	X	E	Hydrology and Aquatic Ecology		KS KE U W T	1	2		
FAFA20	10	G1	-	S	Energy and Environmental Physics	X	KS KE U W T			3	
KOOA01	5	G1	-	S	Introductory Chemistry		KS KE U W T			3	
VTGA05	5	G1	-	S	Engineering Geology		KS KE U W T				4
EXTA01	10	G1	X	E	Terrestrial Ecology		KS KE U W T				4

[FAFA20](#) Energy and Environmental Physics: *Anmälan till laborationsgrupp vid introduktionsföreläsningen är obligatorisk.*

Study Year 2, Academic Year 2015/16 (Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	15/16	15/16	15/16	15/16
								sp1	sp2	sp3	sp4
EMA420	6	G1	-	S	Linear Algebra		KS KE U W T	1			
KFKA01	10	G1	-	S	Thermodynamics and Surface Chemistry		KS KE U W T	1			
FHL055	7.5	G1	-	S	Engineering Mechanics		KS KE U W T		2		
KOKA10	7	G1	-	S	Organic Chemistry		KS KE U W T		2		
EMA430	6	G1	-	S	Calculus in Several Variables		KS KE U W T			3	
KMBF01	15	G2	X	E	Molecular Cell Biology		KS KE U W T			3	4
KOOF01	5	G2	X	E	Applied Aquatic Chemistry		KS KE U W T				4

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links								
							15/16 sp1	15/16 sp2	15/16 sp3	15/16 sp4					
EKFF01	4	G2	X	E	Atmospheric Chemistry and Physics		KS	KE	U	W	T				4

Study Year 3, Academic Year 2016/17 (Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	16/17	16/17	16/17	16/17
								sp1	sp2	sp3	sp4
VVR120	7.5	G2	X	E	Fluid Mechanics		KS KE U W T	1			
EMS140	7.5	G2	-	S	Mathematical Statistics, Basic Course		KS KE U W T	1			
MIO012	6	G1	-	S	Managerial Economics, Basic Course	X	KS KE U W T		2		
KTE170	15	G2	X	E	Mass Transfer Processes in Environmental Engineering		KS KE U W T		2	3	
EMIF05	12	G2	-	S	Environmental Management		KS KE U W T			3	4
FRT110	6	G2	-	E	Systems Engineering		KS KE U W T				4

[MIO012](#) Managerial Economics, Basic Course: *Only one of the courses [MIO012](#) and [MIOA01](#) may be included in a degree.*

Study Year 3, Academic Year 2016/17 (Elective Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	16/17	16/17	16/17	16/17
								sp1	sp2	sp3	sp4
EDAA45	7.5	G1	-	S	Introduction to Programming		KS KE U W T	1	2		
EDA501	6	G1	-	S	Programming, First Course		KS KE U W T			3	4
EMS072	7.5	G2	X	E1	Design of Experiments		KS KE U W T				4
ETE115	7.5	G2	-	S	Electromagnetics and Electronics		KS KE U W T				4
MVKN15	7.5	A	-	S	Energy Supply Systems		KS KE U W T				4

Specialisation es - Energy Systems

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
											sp1	sp2	sp3	sp4
MVKN40	5	A	V		4 - 17/18	3	X	S	District Heating and Cooling	KS KE U W T	1			
AEBF25	7.5	G2	V		4 - 17/18	4	X	E	Solar Heating Technology, Basic Course	KS KE U W T	1			
EMIN25	7.5	A	V		4 - 17/18	4	-	S	Energy Systems Analysis: Energy, Environment and Natural Resources	KS KE U W T	1	2		
EMIN30	7.5	A	V		4 - 17/18	4	-	S	Environmental Systems Studies: Life Cycle Analysis	KS KE U W T	1	2		
MVKN35	6	A	V		4 - 17/18	4	-	S	Energy Markets	KS KE U W T		2		
MVKN65	7.5	A	V		4 - 17/18	3	X	E1	Power Plant Technology	KS KE U W T		2		
MVKN20	7.5	A	V		4 - 17/18	4	-	S	Energy Utilization	KS KE U W T			3	

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
											sp1	sp2	sp3	sp4
EMIN20	7.5	A	V	4 - 17/18	4	-	S	Energy Systems Analysis: Renewable Sources of Energy		KS KE U W T			3	4
EMIN05	7.5	A	V	4 - 17/18	4	X	E1	Environmental System Studies: Climate, Science and Politics		KS KE U W T			3	4
MVKN15	7.5	A	V	4 - 17/18	3	-	S	Energy Supply Systems		KS KE U W T				4
EMIN35	7.5	A	V	4 - 17/18	4	X	E	Environmental Issues, Thematic Course		KS KE U W T				4
FBRF01	7.5	G2	V	4 - 17/18	3	X	E	Fundamental Combustion		KS KE U W T				4
MVKN30	7.5	A	V	5 - 18/19	5	-	S	Advanced Efficient Energy Systems		KS KE U W T	1	2		
EIEN10	7.5	A	V	5 - 18/19	2	X	E1	Wind Power Systems		KS KE U W T		2		

Specialisation ms - Environmental Systems

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
											sp1	sp2	sp3	sp4
EMIN25	7.5	A	V	4 - 17/18	4	-	S	Energy Systems Analysis: Energy, Environment and Natural Resources		KS KE U W T	1	2		
EMIN15	7.5	A	V	4 - 17/18	4	-	S	Environmental Management Systems	X	KS KE U W T	1	2		
EMIN30	7.5	A	V	4 - 17/18	4	-	S	Environmental Systems Studies: Life Cycle Analysis		KS KE U W T	1	2		
EMIF40	15	G2	V	4 - 17/18	4	-	S	Solid Waste Management and Resource Management		KS KE U W T	1	2		
EXTG40	15	G2	V	4 - 17/18	4	-	S	Environmental Law	X	KS KE U W T			3	
EMAN01	7.5	A	V	4 - 17/18	3	X	E1	Biomathematics	X	KS KE U W T			3	4
EMIN05	7.5	A	V	4 - 17/18	4	X	E1	Environmental System Studies: Climate, Science and Politics		KS KE U W T			3	4

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
										sp1	sp2	sp3	sp4
EMIN40	15	A	V	4 - 17/18	4	-	S	Environmental Systems Studies: Environmental Impact Assessment	KS KE U W T			3	4
EKFN35	7.5	A	V	4 - 17/18	3	X	E	Methods for Environmental Monitoring	KS KE U W T			3	4
EMIN35	7.5	A	V	4 - 17/18	4	X	E	Environmental Issues, Thematic Course	KS KE U W T				4
VTGN01	7.5	A	V	5 - 18/19	4	X	E	Field Investigation Methodology	KS KE U W T	1			

[EMIN15](#) Environmental Management Systems: *Replaces [FM110](#) Environmental management systems*

[EXTG40](#) Environmental Law: *The course is to be studied with Science students (MNXC01 - Environmental law)*

[FMAN01](#) Biomathematics: *The course is offered every other academic year and will be given in 2017/18, 2019/20.*

Specialisation p - Process Design

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
											sp1	sp2	sp3	sp4
KETN20	15	A	O	4 - 17/18	4	X	E1	Sustainable Process Design		KS KE U W T	1	2		
KETN30	7.5	A	V	4 - 17/18	4	X	E	Biochemical Reaction Engineering		KS KE U W T	1			
KBTF15	7.5	G2	V	4 - 17/18	3	X	E1	Bioprocess Technology	X	KS KE U W T	1			
KETF20	7.5	G2	V	4 - 17/18	4	X	E1	Chemical Engineering Processes		KS KE U W T	1			
EMIN30	7.5	A	V	4 - 17/18	4	-	S	Environmental Systems Studies: Life Cycle Analysis		KS KE U W T	1	2		
KETN10	7.5	A	V	4 - 17/18	4	X	E	Applied Transport Phenomena		KS KE U T		2		
KBTF10	7.5	G2	V	4 - 17/18	3	X	E	Environmental Biotechnology		KS KE U W T		2		

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
											sp1	sp2	sp3	sp4
KETE35	7.5	G2	V	4 - 17/18	3	-	S	Loss Prevention		KS KE U W T			3	
KETN01	7.5	A	V	4 - 17/18	3	X	E1	Process Simulation		KS KE U W T			3	
EMIN20	7.5	A	V	4 - 17/18	4	-	S	Energy Systems Analysis: Renewable Sources of Energy		KS KE U W T			3	4
KETN25	15	A	V	4 - 17/18	4	X	E1	Feasibility Studies on Industrial Plants		KS KE U W T			3	4
KBTN05	7.5	A	V	5 - 18/19	4	X	E	Downstream Processing in Biotechnology		KS KE U T		2		

[KBTE15](#) Bioprocess Technology: *The course is given in English in study period 1 for the W programme*

Specialisation vr - Water Resources Engineering

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
											sp1	sp2	sp3	sp4
VVRF01	7.5	G2	V		4 - 17/18	3	X	E	Integrated Water Resources Management: International Aspects	KS KE U W T	1			
VVAN05	15	A	V		4 - 17/18	4	X	E	Urban Waters	KS KE U W T	1	2		
VTGN10	7.5	A	V		4 - 17/18	4	X	E	Groundwater Engineering	KS KE U W T		2		
VTGN05	7.5	A	V		4 - 17/18	4	X	E	Groundwater Modelling and Contaminant Transport	KS KE U W T			3	
VVAN20	7.5	A	V		4 - 17/18	4	X	E	Advanced Wastewater Treatment	KS KE U W T			3	4
VVRN35	7.5	A	V		4 - 17/18	3	X	E	Hydromechanics	KS KE U W T			3	4
EXTF01	7.5	G2	V		4 - 17/18	4	X	E1	Geographical Information Systems for Landscape Studies	KS KE U W T				4

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
											sp1	sp2	sp3	sp4
VVRN20	7.5	A	V	4 - 17/18	4	X	E	Water, Society and Climate Change		KS KE U W T				4
VVRN40	7.5	A	V	5 - 18/19	4	X	E	Environmental Hydraulics		KS KE U W T	1			
VVRN10	7.5	A	V	5 - 18/19	4	X	E	Rainfall Runoff Modelling		KS KE U W T	1			
VSMN25	7.5	A	V	5 - 18/19	4	X	E1	The Finite Element Method - Flow Analysis		KS KE U W T	1			
VVRN30	7.5	A	V	5 - 18/19	4	X	E	Coastal Hydraulics		KS KE U W T		2		
VVRN25	7.5	A	V	5 - 18/19	4	X	E	Pipe System Engineering and Hydraulics		KS KE U W T		2		

Elective Courses - W

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1 sp2 sp3 sp4			
										sp1	sp2	sp3	sp4
EITA05	4.5	G1	3 - 16/17	1	-	S	History of Technology		KS KE U W T			3	4
VVRF05	7.5	G2	3 - 16/17	3	-	E	International Summer Water Resources Research School	X	KS KE U W T				4
IYT000	15	G2	4 - 17/18	3	-	S	Engineering Training Course		KS KE U W	1			
MVKN50	7.5	A	4 - 17/18	4	X	E1	Introduction to Combustion Engines		KS KE U W T	1			
EXTQ10	15	A	4 - 17/18	4	X	E1	Limnology		KS KE U W T	1			
EDAA01	7.5	G1	4 - 17/18	3	-	S	Programming - Second Course		KS KE U W T	1	2		
IYT000	15	G2	4 - 17/18	3	-	S	Engineering Training Course		KS KE U W		2		

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
									sp1	sp2	sp3	sp4
EXTQ15	15	A	4 - 17/18	4	-	S	Applied Ecotoxicology	KS KE U W T				3
EMAF10	5	G2	4 - 17/18	4	-	S	Applied Mathematics - Linear systems	KS KE U W T				3
ESSF15	5	G2	4 - 17/18	4	-	S	Electrical Engineering	KS KE U W T				3
IYT000	15	G2	4 - 17/18	3	-	S	Engineering Training Course	KS KE U W				3
AEBF30	7.5	G2	4 - 17/18	4	X	E	Photovoltaic Systems, Basic Course	KS KE U W T				3
MAMN35	7.5	A	4 - 17/18	4	-	S	Risk Analysis Methods for Health and Environment	KS KE U T				3
MVKN60	7.5	A	4 - 17/18	4	X	E1	Theory of Turbo Machinery	KS KE U W T				3

Course Code	Credits	Cycle		From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
		Year							sp1	sp2	sp3	sp4		
IYT000	15	G2	4 - 17/18	3	-	S	Engineering Training Course		KS	KE	U	W	4	
KIIF01	7.5	G2	4 - 17/18	4	X	E1	Industrial Environmental Management		KS	KE	U	W	T	4
EXTN25	15	A	4 - 17/18	4	-	S	Water Management		KS	KE	U	T	4	

[VVRE05](#) International Summer Water Resources Research School: *Most of the course is taught outside normal semester time.*

Externally Elective Courses - W

Course Code	Credits	Cycle	Language			S.Ex. stud.	Course Name	Footnote	Links				
			Year	From year						sp1	sp2	sp3	sp4
GEMA20	7.5	G1	3 - 16/17	1	-	E	English for Engineers	X	KS KE U W T	1	2		
GEMA25	7.5	G1	3 - 16/17	1	-	S	German for Engineers	X	KS KE U W T	1	2		
GEMA60	7.5	G1	3 - 16/17	1	-	S	Law for Engineers, Introductory Course in Business Law	X	KS KE U W T	1	2		
GEMA65	7.5	G1	3 - 16/17	1	-	S	Chinese for Engineers	X	KS KE U W T			3	4
GEMA20	7.5	G1	3 - 16/17	1	-	E	English for Engineers	X	KS KE U W T			3	4
GEMA01	7.5	G1	3 - 16/17	1	-	S	French for Engineers: Language, Culture and Society, First Course	X	KS KE U W T			3	4
GEMA60	7.5	G1	3 - 16/17	1	-	S	Law for Engineers, Introductory Course in Business Law	X	KS KE U W T			3	4

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
GEMA70	15	G1	4 - 17/18	1	-	S	Japanese for Engineers	X	KS KE U W T	1	2	3	
BMEA01	6	G1	4 - 17/18	1	-	S	Medicine for Engineers	X	KS KE U W T			3	4

[GEMA20](#) English for Engineers: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*

[GEMA25](#) German for Engineers: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*

[GEMA60](#) Law for Engineers, Introductory Course in Business Law: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*

[GEMA65](#) Chinese for Engineers: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*

[GEMA01](#) French for Engineers: Language, Culture and Society, First Course: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*

[GEMA70](#) Japanese for Engineers: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*

[BMEA01](#) Medicine for Engineers: *The course is offered every other academic year and will be given in 2017/18, 2019/20.*

Bachelor's Projects - W

The list contains the bachelor's projects that are included in the W programme.

Links

Course Code	Credits	Course Name	Links
MAML10	15	Bachelor Project in Aerosol Technology	KS KE U W
EXTL02	15	Bachelor Project in Ecology	KS KE U
VTGL01	15	Bachelor Project in Engineering Geology	KS KE U
FMIL01	15	Bachelor Project in Environmental Studies	KS KE U
VVRL01	15	Bachelor Project in Water Resources Engineering	KS KE U

Degree Projects - W

The list contains the degree project courses that are included in the W programme.

Links

Course Code	Credits	Course Name	Links
MAMM05	30	Degree Project in Aerosol Technology	KS KE U W
KBTM05	30	Degree Project in Biotechnology	KS KE U W
KETM05	30	Degree Project in Chemical Engineering	KS KE U W
EXTM20	30	Degree Project in Ecology	KS KE U
AEBM05	30	Degree Project in Energy and Building Design	KS KE U
MVKM01	30	Degree Project in Energy Sciences	KS KE U W
VTGM05	30	Degree Project in Engineering Geology	KS KE U
FMIM01	30	Degree Project in Environmental Studies	KS KE U W
MAMM10	30	Degree Project in Ergonomics	KS KE U W
PHYM01	30	Degree Project in Physics	KS KE U W
VVAM05	30	Degree Project in Water and Environmental Engineering	KS KE U W
VVRM05	30	Degree Project in Water Resources Engineering	KS KE U W