

Environmental Engineering

Study Year 1, Academic Year 2009/10 (Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	09/10 sp4
FMAA05	15	G1	-	S	Calculus in One Variable		KS KE U W	
VVR111	15	G1	X	E	Hydrology and Aquatic Ecology		KS KE U W	
FAFA20	10	G1	-	S	Energy and Environmental Physics		KS KE U W	
KOOA01	5	G1	-	S	Introductory Chemistry		KS KE U W	
VTGA05	5	G1	-	S	Engineering Geology		KS KE U W	1
EXTA01	10	G1	X	E	Terrestrial Ecology		KS KE U W	1

Study Year 2, Academic Year 2010/11 (Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	10/11 sp4
FMA420	6	G1	-	S	Linear Algebra		KS KE U W	
KFKA01	10	G1	-	S	Thermodynamics and Surface Chemistry		KS KE U W	
FHL055	7.5	G1	-	S	Engineering Mechanics		KS KE U W	
KOKA10	7	G1	-	S	Organic Chemistry		KS KE U W	
KMB050	15	G1	X	E	Molecular Cell Biology		KS KE U W	
KOOF01	5	G2	X	E	Applied Aquatic Chemistry		KS KE U W	1
EKFF01	4	G2	X	E	Atmospheric Chemistry and Physics		KS KE U W	1
FMA430	6	G1	-	S	Calculus in Several Variables		KS KE U W	1

Study Year 3, Academic Year 2011/12 (Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	11/12 sp4
VVR120	7.5	G2	X	E	Fluid Mechanics		KS KE U W T	
EMS140	7.5	G2	-	S	Mathematical Statistics, Basic Course		KS KE U W T	
KTE170	15	G2	X	E	Mass Transfer Processes in Environmental Engineering		KS KE U W T	
EMIF05	12	G2	-	S	Environmental Management		KS KE U W T	1
FRT110	6	G2	-	S	Systems Engineering		KS KE U W T	1

Study Year 3, Academic Year 2011/12 (Elective Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	11/12 sp4
MIO012	6	G1	-	S	Managerial Economics, Basic Course	X	KS KE U W T	
EDA501	6	G1	-	S	Programming, First Course		KS KE U W T	
MIO012	6	G1	-	S	Managerial Economics, Basic Course	X	KS KE U W T	
MIOA01	9	G1	-	S	Managerial Economics, Basic Course	X	KS KE U W T	
EDA011	7.5	G1	-	S	Programming, First Course		KS KE U W T	1
EMAF15	7.5	G2	-	S	Applied Mathematics - Partial Differential Equations		KS KE U W T	1
FMS072	7.5	G2	X	E2	Design of Experiments		KS KE U W T	1

[MIO012](#) Managerial Economics, Basic Course: *Endast en av kurserna [MIO012](#) och [MIOA01](#) får ingå i examen.*

[MIOA01](#) Managerial Economics, Basic Course: *Endast en av kurserna [MIO012](#) och [MIOA01](#) får ingå i examen.*

Specialisation es - Energy Systems

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp4
MVKN40	5	A	V		4 - 12/13	3	X	S	District Heating and Cooling		KS KE U W T	1
MVKF10	7.5	G2	V		4 - 12/13	3	-	S	Power Plant Technology		KS KE U W T	1
AEB010	7.5	G2	V		4 - 12/13	4	X	E1	Solar Heating Technology, Basic Course		KS KE U W T	1
FMI050	7.5	A	V		4 - 12/13	3	-	S	Energy Systems Analysis: Energy, Environment and Natural Resources		KS KE U W T	1
FMI055	7.5	A	V		4 - 12/13	4	-	S	Environmental Systems Studies: Life Cycle Analysis		KS KE U W T	1
MVKN35	6	A	V		4 - 12/13	4	-	S	Energy Markets		KS KE U W T	
EIEN10	7.5	A	V		4 - 12/13	2	X	E1	Wind Power Systems		KS KE U W T	
ESSF15	5	G2	V		4 - 12/13	4	-	S	Electrical Engineering		KS KE U W T	
MVKN20	7.5	A	V		4 - 12/13	4	-	S	Energy Utilization		KS KE U W T	
MVK093	6	G2	V		4 - 12/13	3	-	S	Introduction to Combustion Engines		KS KE U W T	
AEB020	7.5	G2	V		4 - 12/13	4	X	E1	Photovoltaic Systems, Basic Course		KS KE U W T	
FMI040	7.5	A	V		4 - 12/13	3	-	S	Energy Systems Analysis: Renewable Sources of Energy		KS KE U W T	
FMIN05	7.5	A	V		4 - 12/13	4	-	S	Environmental System Studies: Climate, Science and Politics		KS KE U W T	

Course Code	Credits	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp4
		Cycle									
EKF100	7.5	A	V	4 - 12/13	3	X	E1	Methods for Environmental Monitoring		KS KE U W T	
MVKN15	7.5	A	V	4 - 12/13	4	-	S	Energy Supply Systems		KS KE U W T	
FMI070	7.5	A	V	4 - 12/13	3	X	E	Environmental Issues, Thematic Course		KS KE U W T	
FBR012	7.5	G2	V	4 - 12/13	3	X	E	Fundamental Combustion		KS KE U W T	
MVKN30	7.5	A	V	5 - 13/14	5	-	S	Advanced Efficient Energy Systems		KS KE U W T	1
EIEN10	7.5	A	V	5 - 13/14	2	X	E1	Wind Power Systems		KS KE U W T	

Specialisation ms - Environmental Systems

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp4
EMI110	7.5	A	V	4 - 12/13	4	-	S	Environmental Management Systems		KS KE U W T	1
EMI055	7.5	A	V	4 - 12/13	4	-	S	Environmental Systems Studies: Life Cycle Analysis		KS KE U W T	1
EMI090	15	G2	V	4 - 12/13	4	-	S	Solid Waste Management		KS KE U W T	1
EMIN05	7.5	A	V	4 - 12/13	4	-	S	Environmental System Studies: Climate, Science and Politics		KS KE U W T	
EMI085	15	A	V	4 - 12/13	4	-	S	Environmental Systems Studies: Environmental Impact Assessment		KS KE U W T	
EKF100	7.5	A	V	4 - 12/13	3	X	E1	Methods for Environmental Monitoring		KS KE U W T	
EMI070	7.5	A	V	4 - 12/13	3	X	E	Environmental Issues, Thematic Course		KS KE U W T	
FMAN01	7.5	A	V	4 - 12/13	3	X	E2	Biomathematics	X	KS KE U T	Course on hold

[FMAN01](#) Biomathematics: *The course is offered every other academic year and will next be offered in 2013/14.*

Specialisation p - Process Design

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp4
KTE071	7.5	A	V	4 - 12/13	4	X	E1	Biochemical Reaction Engineering		KS KE U W T	1
KBT115	7.5	G2	V	4 - 12/13	3	X	E2	Bioprocess Technology	X	KS KE U W T	1
KET040	7.5	G2	V	4 - 12/13	3	-	S	Chemical Process Technology	X	KS KE U W T	1
KETN05	7.5	A	V	4 - 12/13	3	-	S	Industrial Separation Processes		KS KE U W T	1
EMI055	7.5	A	V	4 - 12/13	4	-	S	Environmental Systems Studies: Life Cycle Analysis		KS KE U W T	1
KTE061	7.5	A	V	4 - 12/13	4	X	E1	Chemical Reaction Engineering, Advanced Course	X	KS KE U W T	
KET010	7.5	A	V	4 - 12/13	4	X	E	Energy and Environment		KS KE U W T	
KBT080	7.5	G2	V	4 - 12/13	3	X	E	Environmental Biotechnology		KS KE U W T	
KTE131	7.5	G2	V	4 - 12/13	3	-	S	Loss Prevention		KS KE U W T	
KETN01	7.5	A	V	4 - 12/13	3	X	E1	Process Simulation		KS KE U W T	
EMI040	7.5	A	V	4 - 12/13	3	-	S	Energy Systems Analysis: Renewable Sources of Energy		KS KE U W T	
KET050	15	A	V	4 - 12/13	4	-	S	Feasibility Studies on Industrial Plants		KS KE U W T	
KTE055	7.5	A	V	4 - 12/13	4	-	S	Catalysis, Extended Course	X	KS KE U W T	Course on hold

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links
KET010	7.5	A	V	5 - 13/14	4	X	E	Energy and Environment		KS KE U W T

[KBT115](#) Bioprocess Technology: *The course is given in English in study period 1 for the W programme*

[KET040](#) Chemical Process Technology: *The course is offered every other academic year and will be given in 2012/13, 2014/15.*

[KTE061](#) Chemical Reaction Engineering, Advanced Course: *Take-home examination*

[KTE055](#) Catalysis, Extended Course: *The course is offered every other academic year and will next be offered in 2013/14.*

Specialisation vr - Water Resources Engineering

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp4
VVR01	7.5	G2	V	4 - 12/13	3	X	E	Integrated Water Resources Management: International Aspects		KS KE U W T	1
VVA030	15	A	V	4 - 12/13	4	X	E	Urban Waters		KS KE U W T	1
VTG021	7.5	G2	V	4 - 12/13	4	X	E	Groundwater Engineering		KS KE U W T	
VTGN05	7.5	A	V	4 - 12/13	4	X	E	Groundwater Modelling and Contaminant Transport		KS KE U W T	
VVAN01	7.5	A	V	4 - 12/13	4	X	E	Decentralized Water and Wastewater Treatment		KS KE U W T	
VVR090	7.5	A	V	4 - 12/13	3	X	E	Hydromechanics		KS KE U W T	
VVR170	7.5	A	V	4 - 12/13	4	X	E	River Restoration		KS KE U W T	
VVR040	7.5	A	V	4 - 12/13	3	X	E	Coastal Hydraulics		KS KE U W T	
EXTF01	7.5	G2	V	4 - 12/13	4	-	E2	Geographical Information Systems for Landscape Studies	X	KS KE U W T	
VVR176	7.5	A	V	5 - 13/14	4	X	E	Environmental Hydraulics		KS KE U W T	1
VVRN10	7.5	A	V	5 - 13/14	4	X	E	Rainfall Runoff Modelling		KS KE U W T	1
VSMN25	7.5	A	V	5 - 13/14	4	X	E1	The Finite Element Method - Flow Analysis		KS KE U W T	1
VVRN01	7.5	A	V	5 - 13/14	4	X	E	Advanced Hydraulics		KS KE U W T	

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links
VVRN05	7.5	A	V	5 - 13/14	4	X	E	Advanced Hydrology		KS KE U W T

[EXTF01](#) Geographical Information Systems for Landscape Studies: *The date and time of the exam is announced by the course lecturer.*

Elective Courses - W

sp4

Course Code	Credits	Cycle	Language				Course Name	Footnote	Links	sp4
			Year	From year	S.Ex. stud.					
GEMA30	4.5	G1	3 - 11/12	1	-	S	Swedish for Engineers		KS KE U W T	
GEMA20	7.5	G1	3 - 11/12	1	-	E	English for Engineers		KS KE U W T	
GEMA25	7.5	G1	3 - 11/12	1	-	S	German for Engineers		KS KE U W T	
GEMA50	4.5	G1	3 - 11/12	1	-	S	History of Technology		KS KE U W T	
GEMA60	7.5	G1	3 - 11/12	1	-	S	Law for Engineers, Introductory Course in Business Law		KS KE U W T	
GEMA75	7.5	G1	3 - 11/12	1	-	S	Spanish for Engineers: Spanish and Latin-American culture and society		KS KE U W T	
GEMA65	7.5	G1	3 - 11/12	1	-	S	Chinese for Engineers		KS KE U T	
GEMA20	7.5	G1	3 - 11/12	1	-	E	English for Engineers		KS KE U W T	
GEMA40	7.5	G1	3 - 11/12	1	-	S	Entrepreneurship and Business Development		KS KE U W T	
GEMA01	7.5	G1	3 - 11/12	1	-	S	French for Engineers: Language, Culture and Society, First Course		KS KE U W T	
GEMA60	7.5	G1	3 - 11/12	1	-	S	Law for Engineers, Introductory Course in Business Law		KS KE U W T	
GEMA55	6	G1	3 - 11/12	1	-	S	Medicine for Engineers		KS KE U W T	
VVR05	7.5	G2	3 - 11/12	3	-	E	International Summer Water Resources Research School	X	KS KE U W T	
TEK035	15	A	4 - 12/13	4	X	E1	Limnology		KS KE U W T	1
EXTN20	15	A	4 - 12/13	3	-	E2	Soil Ecology		KS KE U W	1
GEMF05	7.5	G2	4 - 12/13	1	X	E	Gender in Science and Engineering		KS KE U	1

Course Code	Credits	Cycle		From year	S.Ex. stud.	Language		Course Name	Footnote	Links	
		Year									sp4
EDAA01	7.5	G1	4 - 12/13	3	-	S		Programming - Second Course		KS KE U W T	1
GEMA70	15	G1	4 - 12/13	1	-	S		Japanese for Engineers		KS KE U W T	1
TEK095	15	A	4 - 12/13	4	X	E1		Ecotoxicology		KS KE U W	
TEK097	15	A	4 - 12/13	4	-	E2		Applied Ecotoxicology		KS KE U W T	
EMAF10	5	G2	4 - 12/13	4	-	S		Applied Mathematics - Linear systems		KS KE U W T	
GEMA45	3	G1	4 - 12/13	1	-	S		Teaching and Learning		KS KE U W T	
KII010	7.5	G2	4 - 12/13	4	-	E2		Industrial Environmental Management		KS KE U W T	
EXTN25	15	A	4 - 12/13	4	-	S		Water Management		KS KE U W T	
VTGN01	7.5	A	5 - 13/14	4	X	E1		Field Investigation Methodology		KS KE U W T	1

[VVRF05](#) International Summer Water Resources Research School: *Undervisningen äger huvudsakligen rum utanför ordinarie terminstid.*

Degree Projects - W

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

Links

Course Code	Credits	Course Name	Links
MAM720	30	Degree Project in Aerosol Technology	KS KE U W
KBT820	30	Degree Project in Biotechnology for Engineers	KS KE U W
KET920	30	Degree Project in Chemical Engineering	KS KE U W
TEK920	30	Degree Project in Ecology	KS KE U W
AEB820	30	Degree Project in Energy and Building Design	KS KE U
MVK920	30	Degree Project in Energy Sciences	KS KE U W
VTG820	30	Degree Project in Engineering Geology for Engineers	KS KE U
FMI820	30	Degree Project in Environmental Studies	KS KE U W
MAM920	30	Degree Project in Ergonomics for Engineers	KS KE U W
PHYM01	30	Degree Project in Physics	KS KE U W
VVA820	30	Degree Project in Water and Environmental Engineering	KS KE U W
VVR820	30	Degree Project in Water Resources Engineering	KS KE U W

[MAM720](#) Degree Project in Aerosol Technology: *Only for students admitted to the programme of 270 credits*