Energy-Environment-Management M Sc in Engineering

300 credits

Civilingenjör i energi - miljö - management

6CEMM

Valid from: 2016 Spring semester

Determined by
Board of Studies for Mechanical Engineering and Design

Date determined
2016-01-19

Entry requirements

Degree in Swedish

Civilingenjör 300 hp och Teknologie master 120 hp

Curriculum

Semester 2 (Spring 2017)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TATA41	Calculus in One Variable 1	6	G1F	3	C
TEAE04	Industrial Economics and Organisation	6	G1X	2	C
TMMV04	Engineering Thermodynamics	6	G1X	2	C
TRTE16	Basic Principles for Environmental Chemistry	6*	G1X	1	C
THEN18	English	6*	G1X	4	E
TGTU35	Introduction to University Studies	2*	G1X	-	V
Period 2					
TATA42	Calculus in One Variable 2	6	G1F	3	C
TEAE01	Industrial Economics, Basic Course	6	G1X	2	C
TRTE16	Basic Principles for Environmental Chemistry	6*	G1X	1	C
THEN18	English	6*	G1X	4	E
TGTU35	Introduction to University Studies	2*	G1X	-	V

Semester 3 (Autumn 2017)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TATA69	Calculus in Several Variables	6	G1F	4	C
TMKT94	Introduction to CAD	6*	G1X	1	C
TMME62	Engineering Mechanics	6	G1X	2	C
Period 2					
TEAE05	Resource Theory	6	G1X	1	C
TMKT94	Introduction to CAD	6*	G1X	2	C
TMMV11	Fluid Mechanics and Heat Transfer	6	G2X	3	C

Semester 4 (Spring 2018)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TKMJ15	Environmental Management Strategies	6	G1F	3	C
TMEL08	Electrical Systems	6	G2F	2	C
TMMV19	Applied Energy Conversion	6*	G2X	4	C
Period 2					
TAOP88	Engineering Optimization	6	G2F	3	C
TMKM21	Engineering Materials	6	G2X	1	C
TMMV19	Applied Energy Conversion	6*	G2X	4	C
TPTE06	Industrial Placement	6	G1X	-	E

Semester 5 (Autumn 2018)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TETS44	Logistics and Quality Development	6*	G2X	1	C
TMES30	Building Energy Systems	6	G2F	2	C
TSRT22	Automatic Control	6	G2X	4	C
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E
Period 2					
TETS44	Logistics and Quality Development	6*	G2X	1	C
TKMJ35	Industrial Ecology	6	G2F	3	C
TMES31	Efficient Industrial Energy Systems	6	G2F	2	C
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E

Semester 6 (Spring 2019)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAMS11	Probability and Statistics, first course	6	G2F	1	C
TEIO47	Industrial Project Management	6*	G2X	3	C
TKMJ41	Bachelor Thesis - Energy and Environment Engineering	18*	G2E	4	C
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E
Period 2					
TEIO47	Industrial Project Management	6*	G2X	3	C
TKMJ41	Bachelor Thesis - Energy and Environment Engineering	18*	G2E	4	C
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E

Semester 7 (Autumn 2019)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDEI72	Strategy and Digitisation - Technology, Standards and Network Effects	6	A1X	4	E
TEAE08	Cost-benefit Analysis	6	G2F	3	E
TEIM11	Industrial Marketing	6	G2X	3	E
TEIO19	Industrial Management	6	G2F	4	E
TEIO90	Innovation Management	6	A1N	2	E
TFYA88	Additive Manufacturing: Tools, Materials and Methods	6	A1N	3	E
TFYA88	Additive Manufacturing: Tools, Materials and Methods	6	A1N	3	E
TGTU91	Oral and Written Communication	6	G1F	2	E
TKMJ38	Industrial Symbiosis	6	A1N	1	E

Course code	Course name	Credits	Level	Timetable module	ECV
TMES27	Modelling of Energy Systems	6	A1N	3	E
TMHL22	Solid Mechanics	6	G2X	3	E
TMHP02	Fluid Power Systems	6	G2X	2	E
TMKM16	Sustainable Material Selection	6	A1X	4	E
TMKM17	Polymer Materials	6	A1X	2	E
TMKT78	Product Development	6	G2F	1	E
TMME64	Biomechanics, basic course	6	G2X	2	E
Period 2					
TAOP61	Optimization of Realistic Complex Systems	6	A1N	3	E
TATA71	Ordinary Differential Equations and Dynamical Systems	6	G2F	2	E
TEAE09	Environmental Law	6	G1X	4	E
TEIE42	Industrial Sales Management	6	A1X	4	E
TEIM10	Industrial Service Development	6	A1X	2	E
TETS27	Supply Chain Logistics	6	A1X	2	E
TFYA96	The physics behind technology	6	G2F	4	E
TGTU04	Leadership	6	G2X	2	E
TGTU49	History of Technology	6	G1F	3	E
TKMJ39	Resource Efficient Products and Production	6	G2F	1	E
TMES45	Energy Planning and Modelling of Communities	6	A1F	4	E
TMES51	International Energy Markets	6	A1N	1	E
TMME28	Engineering Mechanics - Dynamics	6	G1X	2	E
TMMS07	Biomechanics	6	A1X	4	E
TMMV18	Fluid Mechanics	6	A1X	2	E
TMMV54	Computational Heat Transfer	6	A1X	1	E
TSIU02	Computer Hardware and Architecture	4	G1X	2	E
TSRT06	Automatic Control, Advanced Course	6	A1X	2	E

Specialisation: Sustainable Business Development

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TEIM11	Industrial Marketing	6	G2X	3	C
TEIO19	Industrial Management	6	G2F	4	C
TEIO90	Innovation Management	6	A1N	2	C
TDEI72	Strategy and Digitisation - Technology, Standards and Network Effects	6	A1X	4	E
TETS23	Purchasing	6	A1N	2	E
TKMJ38	Industrial Symbiosis	6	A1N	1	E
TMKM16	Sustainable Material Selection	6	A1X	4	E
Period 2					
TEAE09	Environmental Law	6	G1X	4	C
TAOP61	Optimization of Realistic Complex Systems	6	A1N	3	E
TEIE42	Industrial Sales Management	6	A1X	4	E
TEIM10	Industrial Service Development	6	A1X	2	E
TETS27	Supply Chain Logistics	6	A1X	2	E
TKMJ39	Resource Efficient Products and Production	6	G2F	1	E
TMMV18	Fluid Mechanics	6	A1X	2	E
TMMV54	Computational Heat Transfer	6	A1X	1	E

Specialisation: System Tools for Sustainable Development

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TKMJ38	Industrial Symbiosis	6	A1N	1	C
TMES27	Modelling of Energy Systems	6	A1N	3	C
TEIO19	Industrial Management	6	G2F	4	E
Period 2					
TMES45	Energy Planning and Modelling of Communities	6	A1F	4	C
TAOP61	Optimization of Realistic Complex Systems	6	A1N	3	E
TGTU04	Leadership	6	G2X	2	E
TMMV54	Computational Heat Transfer	6	A1X	1	E

Specialisation: Technology for Sustainable Development

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMKM16	Sustainable Material Selection	6	A1X	4	C
TMKT78	Product Development	6	G2F	1	C
TMES27	Modelling of Energy Systems	6	A1N	3	E
TMHL22	Solid Mechanics	6	G2X	3	E
TMHP02	Fluid Power Systems	6	G2X	2	E
TMKM17	Polymer Materials	6	A1X	2	E
Period 2					
TAOP61	Optimization of Realistic Complex Systems	6	A1N	3	C
TMMV54	Computational Heat Transfer	6	A1X	1	C
TMMV18	Fluid Mechanics	6	A1X	2	E

Semester 8 (Spring 2020)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TEIM09	International Business	6	A1X	2	E
TEIO13	Leadership and Organizational Change	6	A1X	4	E
TETS57	Logistics Analysis	6	A1X	2	E
TGTU59	Responding to Global Climate Change	6	A1N	4	E
TGTU94	Technology and Ethics	6	G1F	1	E
TKMJ47	Environmental Systems Analysis	6*	A1N	3	E
TMES43	Analysis and Modelling of Industrial Energy Systems	6	A1F	1	E
TMES52	Policies and instruments for the energy conversion	6	A1N	3	E
TMES53	Energy management	6	A1N	3	E
TMKA10	Design for sustainable everyday life	6*	A1X	3	E
TMKO01	Advanced materials and the environment	6	A1X	2	E
TMQU31	Statistical Quality Control	6	A1X	2	E
TSRT07	Industrial Control Systems	6	A1N	2	E
Period 2					

Course code	Course name	Credits	Level	Timetable module	ECV
TDDD12	Database Technology	6	G2F	4	E
TEAE13	Civil and Commercial Law	6	G1X	2	E
TEIO06	Innovative Entrepreneurship	6	A1X	2	E
TEIO41	Corporate Social Responsibility	6	A1X	3	E
TETS36	Sustainable Logistics Systems	6	A1X	4	E
TGTU95	Philosophy of Science and Technology	6	G1F	4	E
TKMJ47	Environmental Systems Analysis	6*	A1N	2	E
TKMJ50	Environmental and Energy Related Policy Instruments	6	A1N	1	E
TMES41	Strategic Development of Sustainable Energy Systems	6	A1F	2	E
TMKA10	Design for sustainable everyday life	6*	A1X	3	E
TMKM09	Engineering Materials for Lightweight Applications	6	A1X	3	E
TMKT83	Small Scale Renewable Energy Conversion	6	A1X	4	E
TMMV07	Computational Fluid Dynamics, advanced course	6	A1X	4	E
TMQU04	Six Sigma Quality	6	A1X	2	E
TSFS03	Vehicle Propulsion Systems	6	A1X	3	E
TSFS11	Electrical and Energy Technology	6	G2F	4	E

Specialisation: Sustainable Business Development

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TKMJ47	Environmental Systems Analysis	6*	A1N	3	C
TEIM09	International Business	6	A1X	2	E
TEIO13	Leadership and Organizational Change	6	A1X	4	E
TETS57	Logistics Analysis	6	A1X	2	E
TMQU31	Statistical Quality Control	6	A1X	2	E
Period 2					
TKMJ47	Environmental Systems Analysis	6*	A1N	2	C
TKMJ50	Environmental and Energy Related Policy Instruments	6	A1N	1	C
TEIO41	Corporate Social Responsibility	6	A1X	3	E
TETS36	Sustainable Logistics Systems	6	A1X	4	E
TMQU04	Six Sigma Quality	6	A1X	2	E

Specialisation: System Tools for Sustainable Development

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TKMJ47	Environmental Systems Analysis	6*	A1N	3	C
TMES43	Analysis and Modelling of Industrial Energy Systems	6	A1F	1	C
TGTU59	Responding to Global Climate Change	6	A1N	4	E
TMES52	Policies and instruments for the energy conversion	6	A1N	3	E
Period 2					
TKMJ47	Environmental Systems Analysis	6*	A1N	2	C
TETS36	Sustainable Logistics Systems	6	A1X	4	E
TKMJ50	Environmental and Energy Related Policy Instruments	6	A1N	1	E
TMES41	Strategic Development of Sustainable Energy Systems	6	A1F	2	E

Specialisation: Technology for Sustainable Development

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMKO01	Advanced materials and the environment	6	A1X	2	C
TMMV08	Computational Fluid Dynamics	6	A1X	3	E
TSRT07	Industrial Control Systems	6	A1N	2	E
Period 2					
TMES41	Strategic Development of Sustainable Energy Systems	6	A1F	2	E
TMKM09	Engineering Materials for Lightweight Applications	6	A1X	3	E
TMKT83	Small Scale Renewable Energy Conversion	6	A1X	4	E
TMMV07	Computational Fluid Dynamics, advanced course	6	A1X	4	E
TSFS03	Vehicle Propulsion Systems	6	A1X	3	E

Semester 9 (Autumn 2020)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TEAE08	Cost-benefit Analysis	6	G2F	3	E
TEIE72	Corporate Strategies	6	A1X	4	E
TETS23	Purchasing	6	A1N	2	E
TKMJ31	Biofuels for Transportation	6	A1N	1	E
TKMJ48	Sustainable City Development	6*	A1F	1	E
TKMJ49	Environmentally Driven Business Development	6*	A1N	3	E
TMES52	Policies and instruments for the energy conversion	6	A1N	4	E
TMKT73	CAD, second course	6*	G2X	1	E
TMMV01	Aerodynamics	6	A1X	2	E
TMMV12	Gas Turbine Engines	6	A1X	4	E
Period 2					
TEAE18	Sustainable Value Chain Strategies	6	A1X	4	E
TETS31	Logistics Strategies	6	A1X	4	E
TFKE30	Analytical Chemistry	6	G1X	4	E
TKMJ48	Sustainable City Development	6*	A1F	4	E
TKMJ49	Environmentally Driven Business Development	6*	A1N	3	E
TMES51	International Energy Markets	6	A1N	1	E
TMKT73	CAD, second course	6*	G2X	1	E
TMQU12	Lean Production	6	A1X	2	E
TSRT06	Automatic Control, Advanced Course	6	A1N	2	E

Specialisation: Sustainable Business Development

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TEIE72	Corporate Strategies	6	A1X	4	C
TMPI04	Project Course Advanced - Sustainable Business Development	12*	A1X	3	C
TKMJ31	Biofuels for Transportation	6	A1N	1	E
TMES27	Modelling of Energy Systems	6	A1N	3	E
Period 2					
TMPI04	Project Course Advanced - Sustainable Business Development	12*	A1X	3	C
TEAE18	Sustainable Value Chain Strategies	6	A1X	4	E
TMQU12	Lean Production	6	A1X	2	E

Specialisation: System Tools for Sustainable Development

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TKMJ48	Sustainable City Development	6*	A1F	1	C
TMPE07	Project Course Advanced - System Tools for Sustainable Development	12*	A1F	2	C
TMES52	Policies and instruments for the energy conversion	6	A1N	4	E
Period 2					
TKMJ48	Sustainable City Development	6*	A1F	4	C
TMPE07	Project Course Advanced - System Tools for Sustainable Development	12*	A1F	2	C
TMES51	International Energy Markets	6	A1N	1	E

Specialisation: Technology for Sustainable Development

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMMV12	Gas Turbine Engines	6	A1X	4	C
TMPE09	Project Course Advanced - Technology for Sustainable Development	12*	A1X	3	C
TKMJ31	Biofuels for Transportation	6	A1N	1	E
TMKT73	CAD, second course	6*	G2X	1	E
TMMV01	Aerodynamics	6	A1X	2	E
Period 2					
TMPE09	Project Course Advanced - Technology for Sustainable Development	12*	A1X	4	C
TMKT73	CAD, second course	6*	G2X	1	E
TSRT06	Automatic Control, Advanced Course	6	A1N	2	E

Semester 10 (Spring 2021)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TQXX33	Degree project - Master's Thesis	30*	A1X	-	C
Period 2					
TQXX33	Degree project - Master's Thesis	30*	A1X	-	C

ECV = Elective / Compulsory /Voluntary
*The course is divided into several semesters and/or periods