Mechanical Engineering, M Sc in Engineering

300 credits

Civilingenjör i maskinteknik

6CMMM

Valid from: 2017 Spring semester

Determined by
Board of Studies for Mechanical Engineering and Design

Date determined
2017-01-25

Entry requirements

Degree in Swedish

Civilingenjör 300 hp och Teknologie master 120 hp

Curriculum

Semester 1 (Autumn 2017)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 0					
TATM79	Foundation Course in Mathematics	6*	G1X	-	C
Period 1					
TATA67	Linear Algebra with Geometry	6*	G1N	3	C
TATM79	Foundation Course in Mathematics	6*	G1X	3	C
TMKT94	Introduction to CAD	6*	G1X	1	C
TMMV04	Engineering Thermodynamics	6	G1X	2	C
Period 2					
TATA67	Linear Algebra with Geometry	6*	G1N	4	C
TDDE04	Introduction to Programming and Computational Thinking	6	G1N	1	C
TMKT94	Introduction to CAD	6*	G1X	2	C

Semester 2 (Spring 2018)

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
TMMT04	Experimental Mechanical Engineering	6*	G1X	1	C
THEN18	English	6*	G1N	1	E
TGTU35	Introduction to University Studies	2*	G1X	-	V
Period 2					
TATA42	Calculus in One Variable 2	6	G1F	3	C
TMME63	Engineering Mechanics - Statics	6	G1X	2	C
TMMT04	Experimental Mechanical Engineering	6*	G1X	1	C
THEN18	English	6*	G1N	3	E
TGTU35	Introduction to University Studies	2*	G1X	-	V

Semester 3 (Autumn 2018)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TATA69	Calculus in Several Variables	6	G1F	4	C
TMHL22	Solid Mechanics	6	G2X	3	C
TMPS34	Manufacturing Engineering	6*	G1X	2	C
Period 2					
TMME28	Engineering Mechanics - Dynamics	6	G1X	2	C
TMMV11	Fluid Mechanics and Heat Transfer	6	G2X	3	C
TMPS34	Manufacturing Engineering	6*	G1X	4	C

Semester 4 (Spring 2019)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAMS11	Probability and Statistics, first course	6	G2F	1	C
TMKA02	Mechanical Design Methodology and Product Development	6*	G2X	2	C
TMKM12	Engineering Materials Metals	6	G1X	4	C
Period 2					
TKMJ24	Environmental Engineering	6	G1N	4	C
TMHL63	Introduction to Computational Mechanics	6	G2X	1	C
TMKA02	Mechanical Design Methodology and Product Development	6*	G2X	2	C
TPTE06	Industrial Placement	6	G1X	-	E

Semester 5 (Autumn 2019)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMEL08	Electrical Systems	6	G2X	2	C
TMHL24	Solid Mechanics - Design Criteria	6	G2X	3	C
TMKM14	Industrial Material Selection	6*	G2X	1	C
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E
Period 2					
TMKM14	Industrial Material Selection	6*	G2X	1	C
TMKT39	Machine Elements	6	G2X	2	C
TSRT19	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

Semester 6 (Spring 2020)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMMS21	Mechatronics	6	G2F	1	C
TMMT31	Bachelor Thesis - Mechanical Engineering	18*	G2X	-	C
TPPE91	Production System Planning and Management	6	G2X	2	C
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E
Period 2					
TMMT31	Bachelor Thesis - Mechanical Engineering	18*	G2X	-	C
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E

Semester 7 (Autumn 2020)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TANA21	Scientific Computing	6	G1F	3	E
TDDE18	Programming C++	6*	G2F	2	E
TEIM11	Industrial Marketing	6	G2X	3	E
TETS37	Basics in Logistics Management	6	G2X	4	E
TFYA88	Additive Manufacturing: Tools, Materials and Methods	6	A1N	3	E
TKMJ31	Biofuels for Transportation	6	A1N	1	E
TMAL02	Aircraft and Vehicle Design	6	G2F	4	E
TMES09	Industrial Energy Systems	6	A1X	2	E
TMES27	Modelling of Energy Systems	6	A1N	3	E
TMHL03	Mechanics of Light Structures	6	A1X	2	E
TMHP02	Fluid Power Systems	6	G2X	2	E
TMKM17	Polymer Materials	6	A1X	2	E
TMKM99	Engineering Materials and Manufacturing Technology	6	A1X	2	E
TMKO02	Engineering Materials and Manufacturing Technology	6	A1X	2	E
TMKT69	Conceptual Design - Project Course	6	A1N	4	E
TMKT80	Wood - Material	6	G2X	2	E
TMME14	Machine Elements, Second Course	6	A1X	3	E
TMME40	Vibration Analysis of Structures	6	A1N	3	E
TMME66	Musculoskeletal Biomechanics and Human Movements	6	G2X	2	E
TMME67	Musculoskeletal Biomechanics and Human Movements	6	A1X	2	E
TMMI68	CAD and Drafting Techniques, Continued Course	6*	G2X	2	E
TMMS11	Models of Mechanics	6*	A1X	3	E
TMMV01	Aerodynamics	6	A1X	2	E
TMMV18	Fluid Mechanics	6	A1X	1	E
TMPS33	Virtual Manufacturing	6	A1N	4	E

Course code	Course name	Credits	Level	Timetable module	ECV
TMPT03	Production Engineering - Continuing Course	6	G2F	2	E
TMQU03	Quality Management and Engineering	6	G2X	2	E
TPPE16	Manufacturing Strategies	6	A1X	2	E
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	4	E
TMPP02	Project Course - Race Vehicle Engineering	6*	G1X	-	V
Period 2					
TATA71	Ordinary Differential Equations and Dynamical Systems	6	G2F	2	E
TDDE18	Programming C++	6*	G2F	1	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	G2X	4	E
TGTU04	Leadership	6	G2X	2	E
TGTU49	History of Technology	6	G1F	3	E
TKMJ28	Management Systems and Sustainability	6	A1X	2	E
TMES17	Building Energy Systems	6	A1N	3	E
TMES25	Energy Resources	6	A1X	1	E
TMES45	Energy Planning and Modelling of Communities	6	A1F	4	E
TMHL41	Continuum Mechanics	6	A1X	4	E
TMHP03	Engineering Systems Design	6	A1X	4	E
TMKA03	Industrial Design	6	G2X	1	E
TMKM90	Engineering Materials - Deformation and Fracture	6	A1X	2	E
TMKT71	Affective Engineering	6	A1X	2	E
TMKU02	Wood - Realisation	6	G2X	1	E
TMME50	Flight Mechanics	6	A1X	2	E
TMMI68	CAD and Drafting Techniques, Continued Course	6*	G2X	4	E
TMMS11	Models of Mechanics	6*	A1X	3	E
TMMS31	Biomechanical Modelling of Tissues and Systems	6	A1N	4	E

Course code	Course name	Credits	Level	Timetable module	ECV
TMMV54	Computational Heat Transfer	6	A1X	1	E
TMPS22	Assembly Technology	6	A1N	3	E
TMPS31	Sustainable Manufacturing	6	A1X	1	E
TMQU12	Lean Production	6	A1X	2	E
TPPE76	Operations Planning and Control	6	A1N	4	E
TSEA81	Computer Engineering and Real-time Systems	6	A1X	4	E
TSFS02	Vehicle Dynamics and Control	6	A1N	1	E
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	3	E
TSIU02	Computer Hardware and Architecture	4	G1X	2	E
TSRT06	Automatic Control, Advanced Course	6	A1N	2	E
TSRT78	Digital Signal Processing	6	A1X	2	E
TMPP02	Project Course - Race Vehicle Engineering	6*	G1X	-	V

Specialisation: Aeronautical Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMAL02	Aircraft and Vehicle Design	6	G2F	4	C
TMMV01	Aerodynamics	6	A1X	2	C
TAOP88	Engineering Optimization	6	G2F	1	E
TMHL03	Mechanics of Light Structures	6	A1X	2	E
Period 2					
TMHP03	Engineering Systems Design	6	A1X	4	C
TMME50	Flight Mechanics	6	A1X	2	C
TMHL41	Continuum Mechanics	6	A1X	4	E
TMMS20	Structural Optimization	6	A1X	1	E

Specialisation: Energy and Environmental Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAOP88	Engineering Optimization	6	G2F	1	C
TMES09	Industrial Energy Systems	6	A1X	2	C
TKMJ31	Biofuels for Transportation	6	A1N	1	E
TMES27	Modelling of Energy Systems	6	A1N	3	E
Period 2					
TMES25	Energy Resources	6	A1X	1	C
TKMJ28	Management Systems and Sustainability	6	A1X	2	E
TMES17	Building Energy Systems	6	A1N	3	E
TMES45	Energy Planning and Modelling of Communities	6	A1F	4	E

Specialisation: Engineering Design and Product Development

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAOP88	Engineering Optimization	6	G2F	1	C
TMKT69	Conceptual Design - Project Course	6	A1N	4	C
TMME14	Machine Elements, Second Course	6	A1X	3	E
TMMI68	CAD and Drafting Techniques, Continued Course	6*	G2X	2	E
TMMV18	Fluid Mechanics	6	A1X	1	E
TMPT03	Production Engineering - Continuing Course	6	G2F	2	E
Period 2					
TMHP03	Engineering Systems Design	6	A1X	4	E
TMKT71	Affective Engineering	6	A1X	2	E
TMMI68	CAD and Drafting Techniques, Continued Course	6*	G2X	4	E
TMMV54	Computational Heat Transfer	6	A1X	1	E

Specialisation: Engineering materials

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAOP88	Engineering Optimization	6	G2F	1	C
TMKM17	Polymer Materials	6	A1X	2	C
TMKM99	Engineering Materials and Manufacturing Technology	6	A1X	2	C
TMKO02	Engineering Materials and Manufacturing Technology	6	A1X	2	C
TFYA95	Principles of Materials Science	6	A1X	2	E
TMHL03	Mechanics of Light Structures	6	A1X	2	E
TMKT69	Conceptual Design - Project Course	6	A1N	4	E
TMKT80	Wood - Material	6	G2X	2	E
TMME14	Machine Elements, Second Course	6	A1X	3	E
TMPT03	Production Engineering - Continuing Course	6	G2F	2	E
Period 2					
TMKM90	Engineering Materials - Deformation and Fracture	6	A1X	2	C
TMHL41	Continuum Mechanics	6	A1X	4	E
TMMV54	Computational Heat Transfer	6	A1X	1	E
TMPS31	Sustainable Manufacturing	6	A1X	1	E

Specialisation: Engineering Mechanics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMHL03	Mechanics of Light Structures	6	A1X	2	C
TAOP88	Engineering Optimization	6	G2F	1	E
TMKM99	Engineering Materials and Manufacturing Technology	6	A1X	2	E
TMKO02	Engineering Materials and Manufacturing Technology	6	A1X	2	E
TMME40	Vibration Analysis of Structures	6	A1N	3	E
TMME66	Musculoskeletal Biomechanics and Human Movements	6	G2X	2	E
TMME67	Musculoskeletal Biomechanics and Human Movements	6	A1X	2	E
TMMS11	Models of Mechanics	6*	A1X	3	E
TMMV18	Fluid Mechanics	6	A1X	1	E
Period 2					
TMHL41	Continuum Mechanics	6	A1X	4	C
TMMV54	Computational Heat Transfer	6	A1X	1	C
TMMS11	Models of Mechanics	6*	A1X	3	E
TMMS31	Biomechanical Modelling of Tissues and Systems	6	A1N	4	E

Specialisation: Logistics and Supply Chain Management

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAOP88	Engineering Optimization	6	G2F	1	C
TETS37	Basics in Logistics Management	6	G2X	4	C
TEIM11	Industrial Marketing	6	G2X	3	E
TMQU03	Quality Management and Engineering	6	G2X	2	E
TPPE16	Manufacturing Strategies	6	A1X	2	E
Period 2					
TETS27	Supply Chain Logistics	6	A1X	2	C
TMQU12	Lean Production	6	A1X	2	E
TPPE76	Operations Planning and Control	6	A1N	4	E

Specialisation: Mechatronics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAOP88	Engineering Optimization	6	G2F	1	C
TMHP02	Fluid Power Systems	6	G2X	2	C
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	4	C
Period 2					
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	3	C
TSRT06	Automatic Control, Advanced Course	6	A1N	2	C
TMME50	Flight Mechanics	6	A1X	2	E
TSFS02	Vehicle Dynamics and Control	6	A1N	1	E

Specialisation: Operations Management

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAOP88	Engineering Optimization	6	G2F	1	C
TMPS33	Virtual Manufacturing	6	A1N	4	E
TMPT03	Production Engineering - Continuing Course	6	G2F	2	E
TPPE17	Corporate Finance	6	G2X	4	E
TPPE99	Simulation in Production and Logistics	6	A1X	3	E
Period 2					
TMQU12	Lean Production	6	A1X	2	C
TPPE76	Operations Planning and Control	6	A1N	4	C
TMPS22	Assembly Technology	6	A1N	3	E
TMPS31	Sustainable Manufacturing	6	A1X	1	E

Specialisation: Production Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAOP88	Engineering Optimization	6	G2F	1	C
TMPT03	Production Engineering - Continuing Course	6	G2F	2	C
TETS37	Basics in Logistics Management	6	G2X	4	E
TMPS33	Virtual Manufacturing	6	A1N	4	E
TMQU03	Quality Management and Engineering	6	G2X	2	E
TPPE16	Manufacturing Strategies	6	A1X	2	E
Period 2					
TPPE76	Operations Planning and Control	6	A1N	4	C
TMPS22	Assembly Technology	6	A1N	3	E
TMPS31	Sustainable Manufacturing	6	A1X	1	E
TMQU12	Lean Production	6	A1X	2	E

Specialisation: Quality Management

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAOP88	Engineering Optimization	6	G2F	1	C
TMQU03	Quality Management and Engineering	6	G2X	2	C
TEIM11	Industrial Marketing	6	G2X	3	E
TETS37	Basics in Logistics Management	6	G2X	4	E
TPPE16	Manufacturing Strategies	6	A1X	2	E
Period 2					
TMQU12	Lean Production	6	A1X	2	C
TETS27	Supply Chain Logistics	6	A1X	2	E

Semester 8 (Spring 2021)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDE10	Object Oriented Programming in Java	6	G2F	1	E
TEIO13	Leadership and Organizational Change	6	A1X	4	E

Course code	Course name	Credits	Level	Timetable module	ECV
TEIO46	Technology-based Projects and Organisations	6*	G2X	4	E
TEIO94	Entrepreneurship and Idea Development	6*	G2X	4	E
TETS57	Logistics Analysis	6	A1X	2	E
TGTU91	Oral and Written Communication	6	G1F	2	E
TGTU94	Technology and Ethics	6	G1F	1	E
TKMJ10	Industrial Ecology	6	A1X	1	E
TKMJ15	Environmental Management Strategies	6	G1F	3	E
TMAL51	Aircraft Conceptual Design	6	A1F	2	E
TMAL56	Aircraft Systems Engineering	6	A1F	1	E
TMES43	Analysis and Modelling of Industrial Energy Systems	6	A1F	1	E
TMHL62	The Finite Element Method, Advanced Course	6	A1N	4	E
TMHP51	Hydraulic Servo Systems	6	A1N	3	E
TMKA04	Wood - Innovation	6	A1X	1	E
TMKO01	Advanced Materials and the Environment	6	A1N	2	E
TMKO04	Composite Materials	6*	A1N	1	E
TMKT48	Design Optimization	6	A1X	3	E
TMKT59	Computers as Design Tools	6*	G2X	3	E
TMKT74	Advanced CAD	6	A1X	4	E
TMMS30	Multi Body Dynamics and Robotics	6	A1X	1	E
TMMV08	Computational Fluid Dynamics	6	A1X	3	E
TMPS42	Production System Automation	6	A1X	1	E
TMQU31	Statistical Quality Control	6	A1X	2	E
TPPE78	Quantitative Models and Analysis in Operations Management	6	A1X	1	E
TRTE16	Basic Principles for Environmental Chemistry	6*	G1X	1	E
TSFS04	Electrical Drives	6	G2X	4	E
TSIU51	Project with Microcontroller	8*	G1X	3	E
TSRT07	Industrial Control Systems	6	A1N	2	E
TMPP02	Project Course - Race Vehicle Engineering	6*	G1X	-	V
Period 2					
TANA31	Computational Methods for Ordinary and Partial Differential Equations	6	A1N	2	E

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
TEIO46	Technology-based Projects and Organisations	6*	G2X	1	E
TEIO94	Entrepreneurship and Idea Development	6*	G2X	4	E
TETS36	Sustainable Logistics Systems	6	A1X	4	E
TETS56	Logistics and Quality in Health Care	6	A1X	2	E
TGTU95	Philosophy of Science and Technology	6	G1F	4	E
TKMJ29	Resource Efficient Products	6	A1N	1	E
TMAL06	Aircraft Conceptual Design - Project Course	6	A1X	2	E
TMHL61	Damage Mechanics and Life Analysis	6	A1X	2	E
TMHP06	Fluid Power Systems, Advanced Course	6	A1N	2	E
TMKM17	Polymer Materials	6	A1X	2	E
TMKO03	Metals for Lightweight Applications	6	A1N	3	E
TMKO04	Composite Materials	6*	A1N	4	E
TMKT57	Product Modelling	6	A1X	3	E
TMKT59	Computers as Design Tools	6*	G2X	3	E
TMKT77	System Safety	6	A1X	4	E
TMME11	Road Vehicle Dynamics	6	A1X	1	E
TMME19	Mechanics, Second Course	6	A1N	1	E
TMMV07	Computational Fluid Dynamics, advanced course	6	A1X	4	E
TMMV56	Aerodynamics, Continued Course	6	A1X	3	E
TMPS27	Production Systems	6	A1X	3	E
TMQU04	Six Sigma Quality	6	A1X	2	E
TMQU13	Customer Focused Product and Service Development	6	A1X	4	E
TPPE74	Design and Development of Manufacturing Operations	6	A1X	4	E
TRTE16	Basic Principles for Environmental Chemistry	6*	G1X	1	E
TSFS03	Vehicle Propulsion Systems	6	A1X	3	E
TSFS06	Diagnosis and Supervision	6	A1N	1	E
TSFS11	Electrical and Energy Technology	6	G2F	4	E
TSIU51	Project with Microcontroller	8*	G1X	-	E

Course code	Course name	Credits	Level	Timetable module	ECV
TMPP02	Project Course - Race Vehicle Engineering	6*	G1X	-	V

Specialisation: Aeronautical Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMAL51	Aircraft Conceptual Design	6	A1F	2	C
TMMV08	Computational Fluid Dynamics	6	A1X	3	C
TMAL56	Aircraft Systems Engineering	6	A1F	1	E
TMHL62	The Finite Element Method, Advanced Course	6	A1N	4	E
TMKO01	Advanced Materials and the Environment	6	A1N	2	E
TMMS30	Multi Body Dynamics and Robotics	6	A1X	1	E
Period 2					
TMAL06	Aircraft Conceptual Design - Project Course	6	A1X	2	C
TMHL61	Damage Mechanics and Life Analysis	6	A1X	2	E
TMKO03	Metals for Lightweight Applications	6	A1N	3	E
TMKT57	Product Modelling	6	A1X	3	E
TMME11	Road Vehicle Dynamics	6	A1X	1	E
TMMV07	Computational Fluid Dynamics, advanced course	6	A1X	4	E
TMMV56	Aerodynamics, Continued Course	6	A1X	3	E

Specialisation: Energy and Environmental Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TKMJ10	Industrial Ecology	6	A1X	1	C
Period 2					
TKMJ29	Resource Efficient Products	6	A1N	1	C

Specialisation: Engineering Design and Product Development

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMKT48	Design Optimization	6	A1X	3	C
TMKT74	Advanced CAD	6	A1X	4	C
TMKO01	Advanced Materials and the Environment	6	A1N	2	E
Period 2					
TMKT77	System Safety	6	A1X	4	C
TKMJ29	Resource Efficient Products	6	A1N	1	E
TMKT57	Product Modelling	6	A1X	3	E

Specialisation: Engineering materials

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMKO01	Advanced Materials and the Environment	6	A1N	2	C
TMKO04	Composite Materials	6*	A1N	1	C/E
TFYM04	Growth and Characterization of Nanomaterials	6*	A1F	1	E
TMHL62	The Finite Element Method, Advanced Course	6	A1N	4	E
TMKT48	Design Optimization	6	A1X	3	E
Period 2					
TMKM17	Polymer Materials	6	A1X	2	C
TMKO03	Metals for Lightweight Applications	6	A1N	3	C/E
TMKO04	Composite Materials	6*	A1N	4	C/E
TFYA21	Physical Metallurgy	6	A1F	3	E
TFYM04	Growth and Characterization of Nanomaterials	6*	A1F	1	E
TMHL61	Damage Mechanics and Life Analysis	6	A1X	2	E

Specialisation: Engineering Mechanics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMHL62	The Finite Element Method, Advanced Course	6	A1N	4	C/E
TMMV08	Computational Fluid Dynamics	6	A1X	3	C/E
TMKO01	Advanced Materials and the Environment	6	A1N	2	E
TMKO04	Composite Materials	6*	A1N	1	E
TMMS30	Multi Body Dynamics and Robotics	6	A1X	1	E
Period 2					
TMHL61	Damage Mechanics and Life Analysis	6	A1X	2	E
TMKO04	Composite Materials	6*	A1N	4	E
TMME11	Road Vehicle Dynamics	6	A1X	1	E
TMME19	Mechanics, Second Course	6	A1N	1	E
TMMV07	Computational Fluid Dynamics, advanced course	6	A1X	4	E
TMMV56	Aerodynamics, Continued Course	6	A1X	3	E

Specialisation: Logistics and Supply Chain Management

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TETS57	Logistics Analysis	6	A1X	2	C
Period 2					
TETS36	Sustainable Logistics Systems	6	A1X	4	E
TETS56	Logistics and Quality in Health Care	6	A1X	2	E
TPPE74	Design and Development of Manufacturing Operations	6	A1X	4	E

Specialisation: Mechatronics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMHP51	Hydraulic Servo Systems	6	A1N	3	C
TMMS30	Multi Body Dynamics and Robotics	6	A1X	1	E
TSFS04	Electrical Drives	6	G2X	4	E
TSRT07	Industrial Control Systems	6	A1N	2	E
Period 2					
TMHP06	Fluid Power Systems, Advanced Course	6	A1N	2	E
TMME11	Road Vehicle Dynamics	6	A1X	1	E
TSFS03	Vehicle Propulsion Systems	6	A1X	3	E
TSFS06	Diagnosis and Supervision	6	A1N	1	E
TSRT14	Sensor Fusion	6	A1N	2	E

Specialisation: Operations Management

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TPPE78	Quantitative Models and Analysis in Operations Management	6	A1X	1	C/E
TMPS42	Production System Automation	6	A1X	1	E
Period 2					
TPPE74	Design and Development of Manufacturing Operations	6	A1X	4	C
TMPS27	Production Systems	6	A1X	3	E

Specialisation: Production Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMPS42	Production System Automation	6	A1X	1	C
TMQU31	Statistical Quality Control	6	A1X	2	E
TPPE78	Quantitative Models and Analysis in Operations Management	6	A1X	1	E
Period 2					
TMPS27	Production Systems	6	A1X	3	E
TMQU04	Six Sigma Quality	6	A1X	2	E
TMQU13	Customer Focused Product and Service Development	6	A1X	4	E
TPPE74	Design and Development of Manufacturing Operations	6	A1X	4	E

Specialisation: Quality Management

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMQU31	Statistical Quality Control	6	A1X	2	C
TAMS65	Mathematical Statistics, Second Course	6*	G2F	4	E
TEIO13	Leadership and Organizational Change	6	A1X	4	E
Period 2					
TMQU04	Six Sigma Quality	6	A1X	2	C/E
TMQU13	Customer Focused Product and Service Development	6	A1X	4	C/E
TAMS65	Mathematical Statistics, Second Course	6*	G2F	2	E
TEIM07	Industrial Market Research	6	A1X	2	E
TETS56	Logistics and Quality in Health Care	6	A1X	2	E
TPPE74	Design and Development of Manufacturing Operations	6	A1X	4	E

Semester 9 (Autumn 2021)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAOP34	Large Scale Optimization	6	A1N	3	E
TBME04	Anatomy and Physiology	6	G2F	3	E
TETS23	Purchasing	6	A1N	2	E
TMHL19	Advanced Material and Computational Mechanics	6	A1X	1	E
TMKT79	Collaborative Multidisciplinary Design Optimization	6	A1X	2	E
TMMS13	Electro Hydraulic Systems	6	A1X	3	E
TMMV12	Gas Turbine Engines	6	A1X	4	E
TMPS35	Emerging Factory Technologies	6	A1N	3	E
TPPE99	Simulation in Production and Logistics	6	A1X	3	E
TSFS12	Autonomous Vehicles - Planning, Control, and Learning Systems	6	A1X	1	E
TSRT92	Modelling and Learning for Dynamical Systems	6	A1X	3	E
TSTE25	Power Electronics	6	A1X	3	E
Period 2					
TAOP18	Supply Chain Optimization	6	A1F	1	E
TETS31	Logistics Strategies	6	A1X	4	E
TKMJ32	Integrated Product Service Engineering	6	A1N	3	E
TMES51	International Energy Markets	6	A1N	1	E
TMKA11	Model-based System-of-Systems Engineering	6	A1X	3	E
TMMS20	Structural Optimization	6	A1X	1	E
TSRT08	Optimal Control	6	A1X	3	E
TSRT78	Digital Signal Processing	6	A1X	2	E
TSTE26	Powergrid and Technology for Renewable Production	6	A1X	3	E

Specialisation: Aeronautical Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMAL07	Prototype Realization - Project Course	6	A1X	-	C
TMMV12	Gas Turbine Engines	6	A1X	4	C
TMME40	Vibration Analysis of Structures	6	A1N	3	E
Period 2					
TMAL08	Aircraft Systems Engineering - Project Course	6	A1X	-	C/E
TMHL26	Aircraft Structures - Project Course	6	A1X	-	C/E
TMMV26	Aircraft Aerodynamics - Project Course	6	A1X	-	C/E
TMKA11	Model-based System-of-Systems Engineering	6	A1X	3	E
TMKM90	Engineering Materials - Deformation and Fracture	6	A1X	2	E
TMMV54	Computational Heat Transfer	6	A1X	1	E

Specialisation: Energy and Environmental Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMPE08	Project Course Advanced - Energy and Environmental Engineering	12*	A1X	-	C
Period 2					
TMPE08	Project Course Advanced - Energy and Environmental Engineering	12*	A1X	-	C
TKMJ32	Integrated Product Service Engineering	6	A1N	3	E
TMES51	International Energy Markets	6	A1N	1	E

Specialisation: Engineering Design and Product Development

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMPM05	Project Course Advanced - Design Engineering and Product Development	12*	A1F	1	C
TMKT79	Collaborative Multidisciplinary Design Optimization	6	A1X	2	E
Period 2					
TMPM05	Project Course Advanced - Design Engineering and Product Development	12*	A1F	4	C
TDDE01	Machine Learning	6	A1N	1	E
TMKU01	Design Automation of Customized Products	6	A1X	2	E

Specialisation: Engineering materials

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMPM09	Project Course Advanced - Engineering Materials	12*	A1X	-	C
TFYA88	Additive Manufacturing: Tools, Materials and Methods	6	A1N	3	E
TMHL19	Advanced Material and Computational Mechanics	6	A1X	1	E
TMMI68	CAD and Drafting Techniques, Continued Course	6*	G2X	2	E
Period 2					
TMPM09	Project Course Advanced - Engineering Materials	12*	A1X	-	C
TDDE01	Machine Learning	6	A1N	1	E
TMMI68	CAD and Drafting Techniques, Continued Course	6*	G2X	4	E

Specialisation: Engineering Mechanics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMPM07	Project Course Advanced - Applied Mechanics	12*	A1X	-	C
TMHL19	Advanced Material and Computational Mechanics	6	A1X	1	E
TMMV59	Applied Computational Fluid Dynamics	6	A1X	2	E
Period 2					
TMPM07	Project Course Advanced - Applied Mechanics	12*	A1X	-	C
TMMS20	Structural Optimization	6	A1X	1	E

Specialisation: Logistics and Supply Chain Management

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TETS38	Logistics Project	12*	A1X	4	C
TETS23	Purchasing	6	A1N	2	E
TPPE99	Simulation in Production and Logistics	6	A1X	3	E
Period 2					
TETS38	Logistics Project	12*	A1X	2	C
TAOP18	Supply Chain Optimization	6	A1F	1	E
TETS31	Logistics Strategies	6	A1X	4	E

Specialisation: Mechatronics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMPM06	Project Course Advanced - Mechatronics	12*	A1X	4	C/E
TSRT10	Automatic Control - Project Course	12*	A1F	4	C/E
TDDE18	Programming C++	6*	G2F	2	E
TMMS13	Electro Hydraulic Systems	6	A1X	3	E
TSFS12	Autonomous Vehicles - Planning, Control, and Learning Systems	6	A1X	1	E
TSRT92	Modelling and Learning for Dynamical Systems	6	A1X	3	E
Period 2					
TMPM06	Project Course Advanced - Mechatronics	12*	A1X	-	C/E
TSRT10	Automatic Control - Project Course	12*	A1F	4	C/E
TDDE01	Machine Learning	6	A1N	1	E
TDDE18	Programming C++	6*	G2F	1	E
TMKA11	Model-based System-of-Systems Engineering	6	A1X	3	E
TSRT08	Optimal Control	6	A1X	3	E

Specialisation: Operations Management

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TPPE73	Operations Management - Project Course	12*	A1X	4	C
TPPE16	Manufacturing Strategies	6	A1X	2	C/E
TMPS35	Emerging Factory Technologies	6	A1N	3	E
TPPE99	Simulation in Production and Logistics	6	A1X	3	E
Period 2					
TPPE73	Operations Management - Project Course	12*	A1X	4	C
TAOP18	Supply Chain Optimization	6	A1F	1	E

Specialisation: Production Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMPM08	Project Course Advanced - Manufacturing Engineering	12*	A1F	-	C
TMPS35	Emerging Factory Technologies	6	A1N	3	E
TPPE16	Manufacturing Strategies	6	A1X	2	E
TPPE99	Simulation in Production and Logistics	6	A1X	3	E
Period 2					
TMPM08	Project Course Advanced - Manufacturing Engineering	12*	A1F	-	C

Specialisation: Quality Management

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMQU27	Quality Management - Project Course	12*	A1X	2	C
TMQU47	Quality Engineering and Design	6	A1X	4	E
Period 2					
TMQU27	Quality Management - Project Course	12*	A1X	4	C
TEIM10	Industrial Service Development	6	A1X	2	E

Semester 10 (Spring 2022)

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

Common rules

Structure and organisation of study programmes

The contents and design of the programmes are to be continuously revised such that new knowledge is integrated into courses and specialisations. Within one programme, several study specialisations or profiles may be available. The identities of the study specialisations or profiles and the regulations governing how these may be selected are given in the syllabus and curriculum for the particular field of study and programmes.

The structure and organisation of the programmes are to follow specified criteria that are summarised in the syllabus for each programme.

- The syllabus defines the aims of the study programme.
- The curriculum, which constitutes one part of the syllabus for the field of study, gives details of the terms in which the various courses have been timetabled, and their scheduling through the academic year.
- The course syllabus specifies, among other things, the aim and contents of the course, and the prior knowledge that a student must have in order to be able to benefit from the course.

Qualification requirements

The qualification requirements specified in the Higher Education Ordinance 2007 apply to students admitted after 1 July 2007. A student who has completed components of a programme after 1 July 2007 has the right to be assessed with respect to the qualification requirements specified by the Higher Education Ordinance 2007. In addition, local regulations laid down by the faculty boards and university board apply, see
http://styrdokument.liu.se/Regelsamling/VisaBeslut/622693.

Higher Education Act Chapter 1, Section 8:

First-cycle courses and study programmes are to develop:

- the ability to make independent and critical assessments
- the ability to identify, formulate and solve problems autonomously, and
- the preparedness to deal with changes in working life.

In addition to knowledge and skills in their field of study, students shall develop the ability to:

- gather and interpret information at a scholarly level
- stay abreast of the development of knowledge, and
- communicate their knowledge to others, including those who lack specialist knowledge in the field.

Qualifications within a study programme

Qualification requirements that are specific to a study programme are given in the syllabus for that programme.

Matriculation and postponement of matriculation

A person who has been accepted for a study programme is to start their studies (matriculate) in the term that is specified in the decision about admission. The date and location of the compulsory matriculation procedure will be communicated to those admitted to the first term of the programme.

At any one admission occasion, it is possible to be admitted to only one place on a study programme. A student who has been granted a place on a study programme and who is offered and accepts a place on another study programme during a supplementary round of admission will lose the place offered for the first study programme.

Regulations concerning postponement of matriculation have been laid down in the admission regulations for Linköping University, http://styrdokument.liu.se/Regelsamling/VisaBeslut/622645.

A person who has been granted postponement must present to the admitting authority, before the term in which the studies are to be started and before the date of application, a renewed registration for the programme and a copy of the decision granting postponement.

Admission to a later part of a programme

Admission to a part of a study programme is used here to refer to admission with the purpose of completing the programme and taking a degree. Admission to a later part of a programme may take place only if sufficient resources and space on the programme are available. Furthermore, the applicant must satisfy the entry requirements for the relevant term of the programme, as specified in http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva/Tekniska_fakulteten.

Interruption in studies

Notification of an interruption in studies is to be made through the Student Portal. If such a notification is not made and if the student does not register for the first term during which the interruption is to take place, the interruption will be considered to be a withdrawal. An interruption in studies must cover a complete term, and notification of interruptions can be given for a maximum of two consecutive terms. Notification of resumption of studies is to take place at the term registration for the term that follows the interruption. If the student does not register at the term registration, this will be regarded as withdrawal from studies.

A student who is taking an interruption in studies may during this period retake examinations if he or she has re-registered for the most recent study term of the programme. A student who wishes to take another course during the interruption in studies must apply for this separately. The student is responsible that

registration for courses is carried out at the correct times in preparation for the resumption of studies.

Withdrawal from a study programme

A student who wishes to withdraw from a study programme must notify the study guidance counsellor. A student who leaves the studies without giving notification of an interruption in study and who fails to register for the immediately subsequent term is considered to have withdrawn. A student who has withdrawn may return to the study programme if a vacancy is available that is not required for students returning after an interruption in study, and not required for students who are changing their location of study and/or study programme.

Interrupting a course

The vice-chancellor's decision concerning regulations for registration, deregistration and reporting results (Dnr LiU-2015-01241) states that interruptions in study are to be recorded in Ladok. Thus, all students who do not participate in a course for which they have registered must record the interruption, such that the registration on the course can be removed. Deregistration from a course is carried out using a web-based form: www.lith.liu.se/for-studenter/kurskomplettering?l=sv.

Courses within a study programme

The curriculum for the various years of a study programme specify which courses are compulsory (o), elective (v) and voluntary (f). If a student wishes to study a different combination than the one specified in the curriculum, an application must be made to the board of studies.

Registration for programme courses

Registration for courses that are given as part of a study programme must be made during the specified period, which has been preliminarily set to 1-10 April for the autumn term, and 1-10 October for the spring term. Information about course registration is published on a webpage, sent to students by email, and disseminated at scheduled information meetings.

Registration for programme courses as single-subject courses

Admission to a programme course as a single-subject subject course may take place only if sufficient resources and space on the course are available. Furthermore, the applicant must satisfy the entry requirements for the relevant course.

Cancelled courses

Courses with few participants (fewer than 10) may be cancelled or organised in a

manner that differs from that stated in the course syllabus. The board of studies is to deliberate and decide whether a course is to be cancelled or changed from the course syllabus.

Timetabling

Courses are timetabled after a decision has been made concerning the assignment of the course to a study period. A central timetable is not drawn up for courses with fewer than five participants. Most project courses do not have a central timetable.

Study planning

Students who require support in planning their continued studies can contact the study guidance counsellor of the programme. Study planning involves the student and the study guidance counsellor together drawing up an individual plan for studies during the subsequent term. The individual plan may allow the student to deviate from the general curriculum.

Completed first-cycle courses are a precondition for successful studies at more advanced levels. For this reason, study planning is based on giving priority to courses from earlier years of study that have not been completed. If further capacity is available, new courses may be taken.

Study planning takes place on a regular basis if the student:

- does not satisfy the requirements for progression to later terms. In order for a student to be able to participate in courses from later years in such cases, a decision of exemption is required.
- does not satisfy the requirements for starting a degree project.

Other situations in which study planning may be required:

- A student has fallen behind during the early part of a study programme and has failed to complete several courses.
- A student has not satisfied the entry requirements for a degree project before term 6 of an engineering degree.
- A student has applied for admission to a later part of a programme.
- Studies have been carried out abroad.
- A study programme is to be resumed after an interruption.

In these cases the study guidance counsellor supports the student in planning the continued studies, also in situations in which the student can register for the relevant courses without the need for a special decision for the continued studies.

Part of education abroad

Students can exchange study at LiTH for study at an institute of higher education abroad, and/or work on a degree project abroad.

In the event that study (courses) at LiTH are exchanged for study abroad, the

relevant board of studies (faculty programme director) is responsible for a decision about an individual study plan, which is to be drawn up in advance, and about the final course approval and its inclusion in the qualification requirements. For this reason, students who plan to participate in an exchange should contact the faculty programme director (or equivalent) at the Dean's Office of the Institute of Technology.

Regulations for entry requirements, ranking and nomination for study abroad through LiTH's exchange agreements are specified in: http://styrdokument.liu.se/Regelsamling/VisaBeslut/622362. Special regulations apply for the compulsory study abroad within Ii (Industrial Engineering and Management – International) and Yi (Applied Physics and Electrical Engineering – International).

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.