LINKÖPINGS UNIVERSITET

Design and Product Development, M Sc in Engineering

300 credits

Civilingenjör i design och produktutveckling

6CDPU

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
TMKT58	Create and Understand 3D	6*	G1F	1	C
TMME07	Engineering Mechanics - Statics	6	G1X	2	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
TDDD32	User Driven Product Development	6	G2X	2	C
TMKT58	Create and Understand 3D	6*	G1F	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
TMKA05	Engineering Design Methodology	6*	G1X	2	C
TMME13	Mechanics - Dynamics	6	G1X	3	C
Period 2					
TKMJ24	Environmental Engineering	6	G1X	3	C
TMKA05	Engineering Design Methodology	6*	G1X	4	C
TMMV04	Engineering Thermodynamics	6	G1X	1	C

Semester 4 (Spring 2018)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAMS11	Probability and Statistics, first course	6	G2F	1	C
TMKT59	Computers as Design Tools	6*	G2X	3	C
TMKT97	Product Ergonomics	6	G2F	2	C
Period 2					
TEAE01	Industrial Economics, Basic Course	6	G1X	2	C
TMHL07	Solid Mechanics, basic course	6	G2X	1	C
TMKT59	Computers as Design Tools	6*	G2X	3	C
TPTE06	Industrial Placement	6	G1X	-	E

Semester 5 (Autumn 2018)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TEIM11	Industrial Marketing	6	G2X	3	C
TMKM11	Materials for Design	12*	G2X	2	C
TMPT06	Manufacturing Technology for Design and Product Development	6*	G1X	1	C
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E
Period 2					
TMKM11	Materials for Design	12*	G2X	3	C
TMKT39	Machine Elements	6	G2X	2	C
TMPT06	Manufacturing Technology for Design and Product Development	6*	G1X	1	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					
TEIO47	Industrial Project Management	6*	G2X	3	C
TMKT82	Bachelor Thesis - Product Development	18*	G2X	1	C
TSRT21	Dynamical Systems and Control	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					
TEIO47	Industrial Project Management	6*	G2X	3	C
TMKT82	Bachelor Thesis - Product Development	18*	G2X	1	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					
TAOP88	Engineering Optimization	6	G2F	1	E
TDDD90	Interactive Products	6*	A1N	1	E
TDDE18	Programming C++	6*	G2F	2	E
TDDE28	Contemporary Perspective on Value Creation	6	A1N	1	E
TEIE72	Corporate Strategies	6	A1X	4	E
TEIO19	Industrial Management	6	G2F	4	E
TEIO90	Innovation Management	6	A1N	2	E
TETS37	Basics in Logistics Management	6	G2X	4	E
TFYA88	Additive Manufacturing: Tools, Materials and Methods	6	A1N	3	E
TFYA88	Additive Manufacturing: Tools, Materials and Methods	6	A1N	3	E
TKMJ31	Biofuels for Transportation	6	A1N	1	E

Course code	Course name	Credits	Level	Timetable module	ECV
TMES09	Industrial Energy Systems	6	A1X	3	E
TMES27	Modelling of Energy Systems	6	A1N	3	E
TMKA01	Design Studio I	12*	A1X	3	E
TMKM16	Sustainable Material Selection	6	A1X	4	E
TMKM17	Polymer Materials	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
TMME64	Biomechanics, basic course	6	G2X	2	E
TMMI68	CAD and Drafting Techniques, Continued Course	6*	G2X	2	E
TMPS33	Virtual Manufacturing	6	A1N	4	E
TMPT03	Production Engineering - Continuing Course	6	G2F	2	E
TMQU03	Quality Management and Engineering	6	G2X	2	E
TPPE13	Production and Operations Management	6	G2X	1	E
TPPE16	Manufacturing Strategies	6	A1X	2	E
TMPP02	Project Course - Race Vehicle Engineering	6*	G1X	-	V
Period 2					
TDDD90	Interactive Products	6*	A1N	-	E
TDDE01	Machine Learning	6	A1N	1	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
TKMJ32	Integrated Product Service Engineering	6	A1N	3	E
TMHL63	Introduction to Computational Mechanics	6	G2X	3	E
TMHP03	Engineering Systems Design	6	A1X	4	E
TMKA01	Design Studio I	12*	A1X	2	E
TMKT81	Wood - Realisation	6	G2X	1	E

Course code	Course name	Credits	Level	Timetable module	ECV
TMKU02	Wood - Realisation	6	G2X	1	E
TMMI68	CAD and Drafting Techniques, Continued Course	6*	G2X	4	E
TMMS07	Biomechanics	6	A1X	4	E
TMMV18	Fluid Mechanics	6	A1X	2	E
TMMV54	Computational Heat Transfer	6	A1X	1	E
TMPS31	Sustainable Manufacturing	6	A1X	1	E
TMQU12	Lean Production	6	A1X	2	E
TPPE76	Operations Planning and Control	6	A1X	4	E
TSIU02	Computer Hardware and Architecture	4	G1X	2	E
TMPP02	Project Course - Race Vehicle Engineering	6*	G1X	-	V

Specialisation: Product Development - Design Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD90	Interactive Products	6*	A1N	1	C
TMKA01	Design Studio I	12*	A1X	3	C
TEIO19	Industrial Management	6	G2F	4	E
Period 2					
TDDD90	Interactive Products	6*	A1N	-	C
TMKA01	Design Studio I	12*	A1X	2	C
TKMJ32	Integrated Product Service Engineering	6	A1N	3	E
TMPS31	Sustainable Manufacturing	6	A1X	1	E

Specialisation: Product development - Engineering Design

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD90	Interactive Products	6*	A1N	1	C
TEIO19	Industrial Management	6	G2F	4	E
TMKT69	Conceptual Design - Project Course	6	A1N	4	E
TMME14	Machine Elements, Second Course	6	A1X	3	E
Period 2					
TDDD90	Interactive Products	6*	A1N	-	C
TMHL63	Introduction to Computational Mechanics	6	G2X	3	C
TMHP03	Engineering Systems Design	6	A1X	4	E
TMPS31	Sustainable Manufacturing	6	A1X	1	E

Specialisation: Product Development - Management

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD90	Interactive Products	6*	A1N	1	C
TEIO19	Industrial Management	6	G2F	4	C
TEIO90	Innovation Management	6	A1N	2	C
TEIE72	Corporate Strategies	6	A1X	4	E
TMQU03	Quality Management and Engineering	6	G2X	2	E
Period 2					
TDDD90	Interactive Products	6*	A1N	-	C
TEIE42	Industrial Sales Management	6	A1X	4	E
TEIM10	Industrial Service Development	6	A1X	2	E
TMQU12	Lean Production	6	A1X	2	E

Semester 8 (Spring 2020)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD51	Service Design and Innovation	6	A1X	4	E
TDDD57	Physical Interaction and Game Programming	6	A1N	1	E

Course code	Course name	Credits	Level	Timetable module	ECV
TDDD97	Web Programming	6	G2F	3	E
TDDE03	Design Studio II	12*	A1F	3	E
TDDE39	Physical Interaction Design and Prototyping	6	A1F	4	E
TEIE06	Corporate Planning	6*	A1X	-	E
TEIM09	International Business	6	A1X	2	E
TEIO13	Leadership and Organizational Change	6	A1X	4	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
TMKA04	Wood - Innovation	6	A1X	1	E
TMKA10	Design for sustainable everyday life	6*	A1X	3	E
TMKO01	Advanced materials and the environment	6	A1X	2	E
TMKT48	Design Optimization	6	A1X	3	E
TMKT74	Advanced CAD	6	A1X	4	E
TMMS21	Mechatronics	6	G2F	1	E
TPPE78	Quantitative Models and Analysis in Operations Management	6	A1X	1	E
TMPP02	Project Course - Race Vehicle Engineering	6*	G1X	-	V
Period 2					
TDDD12	Database Technology	6	G2F	4	E
TDDE03	Design Studio II	12*	A1F	3	E
TEAE13	Civil and Commercial Law	6	G1X	2	E
TEIE06	Corporate Planning	6*	A1X	-	E
TEIO06	Innovative Entrepreneurship	6	A1X	2	E
TGTU95	Philosophy of Science and Technology	6	G1F	4	E
TKMJ29	Resource Efficient Products	6	A1N	1	E
TMKA10	Design for sustainable everyday life	6*	A1X	3	E
TMKT57	Product Modelling	6	A1X	3	E
TMKT77	System Safety	6	A1X	4	E
TMME19	Mechanics, second course	6	A1N	1	E
TMPS27	Production Systems	6	A1X	3	E

Course code	Course name	Credits	Level	Timetable module	ECV
TMQU13	Customer Focused Product and Service Development	6	A1N	4	E
TPPE74	Design and Development of Manufacturing Operations	6	A1F	4	E
TRTE20	Norm Creative perspectives on Design, Power and Change	6	A1N	1	E
TMPP02	Project Course - Race Vehicle Engineering	6*	G1X	-	V

Specialisation: Product Development - Design Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDE03	Design Studio II	12*	A1F	3	C
TKMJ52	Applied Product Development Methodology	6*	A1N	2	C
Period 2					
TDDE03	Design Studio II	12*	A1F	3	C
TKMJ52	Applied Product Development Methodology	6*	A1N	2	C
TKMJ29	Resource Efficient Products	6	A1N	1	E

Specialisation: Product development - Engineering Design

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMMS21	Mechatronics	6	G2F	1	C
TKMJ52	Applied Product Development Methodology	6*	A1N	2	E
TMKT48	Design Optimization	6	A1X	3	E
TMKT74	Advanced CAD	6	A1X	4	E
Period 2					
TKMJ52	Applied Product Development Methodology	6*	A1N	2	E
TMKT57	Product Modelling	6	A1X	3	E
TMKT77	System Safety	6	A1X	4	E
TMPS27	Production Systems	6	A1X	3	E

Specialisation: Product Development - Management

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TEIE06	Corporate Planning	6*	A1X	-	E
TEIM09	International Business	6	A1X	2	E
TEIO13	Leadership and Organizational Change	6	A1X	4	E
TKMJ52	Applied Product Development Methodology	6*	A1N	2	E
Period 2					
TEIE06	Corporate Planning	6*	A1X	-	E
TEIM07	Industrial Market Research	6	A1X	2	E
TEIO06	Innovative Entrepreneurship	6	A1X	2	E
TEIO41	Corporate Social Responsibility	6	A1X	3	E
TKMJ52	Applied Product Development Methodology	6*	A1N	2	E
TMQU13	Customer Focused Product and Service Development	6	A1N	4	E

Semester 9 (Autumn 2020)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TEIO07	Project Based Organization and Management	6	A1X	4	E
TETS23	Purchasing	6	A1N	2	E
TKMJ46	Advanced Ecodesign	6	A1F	1	E
TMKM99	Engineering Materials and Manufacturing Technology	6	A1X	2	E
TMKO02	Engineering Materials and Manufacturing Technology	6	A1X	2	E
TMKT79	Collaborative Multidisciplinary Design Optimization	6	A1X	2	E
TMKT96	Product Visualization	6*	A1X	3	E
TMMV01	Aerodynamics	6	A1X	2	E
Period 2					
TAOP18	Supply Chain Optimization	6	A1F	1	E
TDDD61	Design - Strategy and Management	6	A1N	1	E
TDEI21	Strategic Organisational Application of IT - Workflow and Knowledge Management	6	A1X	4	E
TETS31	Logistics Strategies	6	A1X	4	E
TMKT71	Affective Engineering	6	A1X	2	E
TMKT96	Product Visualization	6*	A1X	3	E
TMPS22	Assembly Technology	6	A1N	3	E

Specialisation: Product Development - Design Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMPP03	Project Course Advanced - Design Engineering	12*	A1X	3	C
TKMJ46	Advanced Ecodesign	6	A1F	1	E
TMKT96	Product Visualization	6*	A1X	3	E
Period 2					
TMPP03	Project Course Advanced - Design Engineering	12*	A1X	-	C
TDDD61	Design - Strategy and Management	6	A1N	1	E
TMKT71	Affective Engineering	6	A1X	2	E
TMKT96	Product Visualization	6*	A1X	3	E

Specialisation: Product development - Engineering Design

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMPM03	Project Course Advanced - Design and Manufacturing Engineering	12*	A1F	3	C
TMKT79	Collaborative Multidisciplinary Design Optimization	6	A1X	2	E
Period 2					
TMPM03	Project Course Advanced - Design and Manufacturing Engineering	12*	A1F	-	C
TMKU01	Design Automation of Customized Products	6	A1X	2	E
TMPS22	Assembly Technology	6	A1N	3	E

Specialisation: Product Development - Management

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TEIM04	Industrial Market and Technology Strategies	12*	A1X	2	C/E
TMPI02	Project Course Advanced - Management	12*	A1F	3	C/E
TEIO07	Project Based Organization and Management	6	A1X	4	E
Period 2					
TEIM04	Industrial Market and Technology Strategies	12*	A1X	2	C/E
TMPI02	Project Course Advanced - Management	12*	A1F	-	C/E
TDEI19	Management Control	6	A1X	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

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