

Study Handbook**Syllabus**

Curriculum
Courses, by
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TMS Courses**Abbreviations**[Previous academic year \(01/02\)](#)[Next academic year \(03/04\)](#)

Biotechnology

Biotechnology BIO1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1311 <u>Programming Technique with PBL</u>	4	B	26	16	-	26			3	4	
3A1501 <u>Introduction to Biotechnology</u>	4	B	36	8	-	4	1	2			including visits for study purpose
3A1502 <u>Cellbiology with Immunology</u>	4	B	42	-	-	-			3	4	
3B1700 <u>Introductory Chemistry</u>	4	B	18	24	-	22	1				
3B1711 <u>Chemical Equilibria</u>	4	B	12	22	-	25		2	3		
3B1750 <u>Organic Chemistry I</u>	5	B	18	16	-	42		2			
5B1115 <u>Mathematics 1</u>	6	B	72	24	-	-	1				
5B1116 <u>Mathematics 2</u>	6	B	72	24	-	-			3		
5C1102 <u>Mechanics, Smaller Course</u>	4	B	30	15	-	-				4	
Elective Courses											
3B1705 <u>Introductory Course in Chemistry</u>	1	A	-	-	-	-					

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Biotechnology

Biotechnology BIO2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1311 <u>Programming Technique with PBL</u>	4	B	26	16	-	26			3	4	
3A1109 <u>Biochemistry</u>	8	D	32	-	-	-				4	
3A1307 <u>Microbiology</u>	6	B	30	24	-	48		2	3		
3B1725 <u>Chemical Thermodynamics</u>	4	C	28	30	-	-	1				
3B1730 <u>Molecular Structure</u>	5	C	36	22	-	20		2	3		
3B1740 <u>Chemical Dynamics</u>	4	C	20	20	-	15			3		
3B1760 <u>Organic Chemistry 2</u>	5	C	12	22	-	54				4	
5A1225 <u>Electromagnetism and Waves</u>	5	B	38	18	-	20		2			
5B1200 <u>Differential Equations and Transforms I</u>	4	C	48	-	-	-	1				

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Biotechnology

Biotechnology BIO3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1210 Numerical Methods, Basic Course I	4	B	24	24	-	24	1	2			
3A1109 Biochemistry	8	D	-	-	-	96	1	2			
3A1503 Molecular Biotechnology	5	D	36	-	-	15		2			
3B1770 Chemical Measuring Techniques	5	C	22	4	-	12	1				
4D1023 Industrial Economy and Management, Basic Course	4	B	26	20	-	-		2			Seminars 4hSeminars 4h
Recommended Courses											
1N1109 Ethics of Biotechnology The course will be given from 02/03	5	C	24	-	-	-	1	2			6 h Seminarsindividual essay-tutorials 6 h Seminars
Elective Courses											
3A1112 Biochemical Analyses and Separation Techniques	5	D	32	-	-	30				4	
3A1308 Technical Microbiology 1	4	D	38	8	-	-			3		Study visit 8h
3A1309 Technical Microbiology 2	4	D	18	4	-	-				4	Seminars 20h
3A1504 Structure Biology	4	D	32	-	-	20				4	

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Biotechnology

Biotechnology BIO4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1N1109 Ethics of Biotechnology <i>The course will be given from 02/03</i>	5	C	24	-	-	-	1	2			6 h Seminarsindividual essay-tutorials 6 h Seminars
Elective Courses											
3A1104 Environmental Toxicology	6	D	36	14	-	-	1	2			
3A1110 Molecular Enzymology	5	D	20	-	-	24		2			6 h Seminars6 h Seminars
3A1111 Enzymatic Synthesis	5	D	20	12	-	20				4	6 h Seminars6 h Seminars
3A1205 Biochemical Technology	7	D	40	-	-	60			3	4	
3A1206 Biochemical Technology, Theory	5	D	40	10	-	-			3	4	
3A1505 Biophysical Chemistry	4	D	30	20	-	-			3		
3A1506 Drug Development	4	D	36	-	-	-			3		Study visit 8h
3A1507 Functional Genomics	4	D	24	-	-	15	1				
3A1508 Wood Biotechnology	5	D	34	-	-	-		2			
3B1231 NMR-spectroscopy	4	D	30	-	-	12		2			

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Biomolecular chemistry BIO3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3A1504 <u>Structure Biology</u>	4	D	32	-	-	20				4		
3A1509 <u>Bioinformatic</u>	4	D	32	16	-	-			3			
3B1521 <u>Organic Chemistry, Theory, Advanced Course 1</u>	5	D	12	6	-	-				4		

Biomolecular chemistry BIO4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1110 Molecular Enzymology	5	D	20	-	-	24		2			6 h Seminars6 h Seminars
3A1506 Drug Development	4	D	36	-	-	-			3		Study visit 8h
Recommended Courses											
1N1109 Ethics of Biotechnology <i>The course will be given from 02/03</i>	5	C	24	-	-	-	1	2			6 h Seminarsindividual essay-tutorials 6 h Seminars
3A1111 Enzymatic Synthesis	5	D	20	12	-	20				4	6 h Seminars6 h Seminars
3A1112 Biochemical Analyses and Separation Techniques	5	D	32	-	-	30				4	
3A1505 Biophysical Chemistry	4	D	30	20	-	-			3		
Elective Courses											
3A1507 Functional Genomics	4	D	24	-	-	15	1				
3B1231 NMR-spectroscopy	4	D	30	-	-	12		2			
3B1531 Organic Chemistry, Advanced Course	4	D	-	-	-	48	1				
3B1542 Organic Chemistry, Intermediate Course II	5	D	24	-	-	40			3		

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Environmental biotechnology BIO3

3C1345 or 3C1347

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1308 <u>Technical Microbiology 1</u>	4	D	38	8	-	-			3		Study visit 8h
3A1309 <u>Technical Microbiology 2</u>	4	D	18	4	-	-				4	Seminars 20h
3A1509 <u>Bioinformatic</u>	4	D	32	16	-	-			3		
3C1345 <u>Environmental Technology and Environmental Impact Studies</u>	4	D	32	4	-	8			3	4	
Recommended Courses											
3C1347 <u>Env. Technology and Env. Impact Studies, Larger Course</u>	8	D	32	16	-	24			3	4	
3C1355 <u>Ecology, Advanced Course</u>	4	C	21	4	-	-			3	4	

Environmental biotechnology BIO4

3C1345 or 3C1347

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1104 Environmental Toxicology	6	D	36	14	-	-	1	2			
Recommended Courses											
3B1443 Atmosphere, Aquatic and Terrestrial Chemistry	5	C	12	10	-	24				4	
Elective Courses											
1N1109 Ethics of Biotechnology The course will be given from 02/03	5	C	24	-	-	-	1	2			6 h Seminarsindividual essay-tutorials 6 h Seminars
3A1205 Biochemical Technology	7	D	40	-	-	60			3	4	

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Molecular biophysics BIO3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1504 <u>Structure Biology</u>	4	D	32	-	-	20				4	
3A1509 <u>Bioinformatic</u>	4	D	32	16	-	-			3		
Recommended Courses											
3A1112 <u>Biochemical Analyses and Separation Techniques</u>	5	D	32	-	-	30				4	

Molecular biophysics BIO4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1505 <u>Biophysical Chemistry</u>	4	D	30	20	-	-			3		
Recommended Courses											
1A14TW <u>Third World Housing</u> <i>The course is given after agreement</i>	10	D	-	-	-	-					
1N1109 <u>Ethics of Biotechnology</u> <i>The course will be given from 02/03</i>	5	C	24	-	-	-	1	2			6 h Seminarsindividual essay-tutorials 6 h Seminars
2D1220 <u>Applied Numerical Methods I</u>	4	C	42	-	-	18			3	4	
2D1225 <u>Numerical Solutions of Differential Equations</u>	4	C	26	4	-	18	1	2			
3A1110 <u>Molecular Enzymology</u>	5	D	20	-	-	24		2			6 h Seminars6 h Seminars
3B1211 <u>Quantum Chemistry and Spectroscopy</u> <i>Quantum mechanics is fun!</i>	6	D	48	8	-	8	1				
3B1231 <u>NMR-spectroscopy</u>	4	D	30	-	-	12		2			

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Molecular biotechnology BIO3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3A1112 Biochemical Analyses and Separation Techniques	5	D	32	-	-	30				4		
3A1509 Bioinformatic	4	D	32	16	-	-			3			
Recommended Courses												
3A1504 Structure Biology	4	D	32	-	-	20				4		

Molecular biotechnology BIO4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3A1506 Drug Development	4	D	36	-	-	-			3		Study visit 8h	
3A1507 Functional Genomics	4	D	24	-	-	15	1					
Recommended Courses												
1N1109 Ethics of Biotechnology <i>The course will be given from 02/03</i>	5	C	24	-	-	-	1	2			6 h Seminarsindividual essay-tutorials 6 h Seminars	
3A1110 Molecular Enzymology	5	D	20	-	-	24		2			6 h Seminars6 h Seminars	
Elective Courses												
2D1220 Applied Numerical Methods I	4	C	42	-	-	18			3	4		
3A1104 Environmental Toxicology	6	D	36	14	-	-	1	2				
3A1205 Biochemical Technology	7	D	40	-	-	60			3	4		

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Process biotechnology BIO3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1308 Technical Microbiology 1	4	D	38	8	-	-			3		Study visit 8h
3A1309 Technical Microbiology 2	4	D	18	4	-	-				4	Seminars 20h
3A1509 Bioinformatic	4	D	32	16	-	-			3		
Recommended Courses											
3A1112 Biochemical Analyses and Separation Techniques	5	D	32	-	-	30				4	

Process biotechnology BIO4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1205 Biochemical Technology	7	D	40	-	-	60			3	4	
Recommended Courses											
1N1109 Ethics of Biotechnology <i>The course will be given from 02/03</i>	5	C	24	-	-	-	1	2			6 h Seminarsindividual essay-tutorials 6 h Seminars
3A1111 Enzymatic Synthesis	5	D	20	12	-	20				4	6 h Seminars6 h Seminars
3A1507 Functional Genomics	4	D	24	-	-	15	1				
3A1508 Wood Biotechnology	5	D	34	-	-	-		2			

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Wood biotechnology, start 2002 BIO3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1509 Bioinformatic	4	D	32	16	-	-			3		

Wood biotechnology, start 2002 BIO4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1508 Wood Biotechnology	5	D	34	-	-	-		2			

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CLMFY1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2A1500 Engineering Science	5	B	24	12	-	-			3		
2D1310 Programming Technique	4	B	26	16	-	26		2	3		
5B1120 Introductory Course in Mathematics I	1	A	4	-	-	-	1				
5B1122 Mathematics 1 for Teachers	8	B	48	-	48	-	1	2			
5B1123 Mathematics 2 for Teachers	8	B	48	-	48	-			3	4	
7F1200 Technology, Communication and Learning <i>The course is given by Tom Tits, Södertälje. Läsas på Tom Tits, Södertälje 2 dagar/v</i>	5	B	8	-	12	25				4	
ICK01N Human Development, Learning and Special Education <i>Kursen ges av Lärarhögskolan i Stockholm, Institutionen för individ, omvärld och lärande Central kurs (CK)som läses på LHS</i>	10	A	16	20	25	-	1	2			

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CLMDA1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2A1500 Engineering Science	5	B	24	12	-	-			3		
2D1310 Programming Technique	4	B	26	16	-	26		2	3		
5B1120 Introductory Course in Mathematics I	1	A	4	-	-	-	1				
5B1122 Mathematics 1 for Teachers	8	B	48	-	48	-	1	2			
5B1123 Mathematics 2 for Teachers	8	B	48	-	48	-			3	4	
7F1200 Technology, Communication and Learning <i>The course is given by Tom Tits, Södertälje. Låses på Tom Tits, Södertälje 2 dagar/v</i>	5	B	8	-	12	25				4	
ICK01N Human Development, Learning and Special Education <i>Kursen ges av Lärarhögskolan i Stockholm, Institutionen för individ, omvärld och lärande Central kurs (CK)som läses på LHS</i>	10	A	16	20	25	-	1	2			

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CLMKE1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2A1500 Engineering Science	5	B	24	12	-	-			3		
2D1310 Programming Technique	4	B	26	16	-	26		2	3		
5B1120 Introductory Course in Mathematics I	1	A	4	-	-	-	1				
5B1122 Mathematics 1 for Teachers	8	B	48	-	48	-	1	2			
5B1123 Mathematics 2 for Teachers	8	B	48	-	48	-			3	4	
7F1200 Technology, Communication and Learning <i>The course is given by Tom Tits, Södertälje. Låses på Tom Tits, Södertälje 2 dagar/v</i>	5	B	8	-	12	25				4	
ICK01N Human Development, Learning and Special Education <i>Kursen ges av Lärarhögskolan i Stockholm, Institutionen för individ, omvärld och lärande Central kurs (CK)som läses på LHS</i>	10	A	16	20	25	-	1	2			

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Computer Science D1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1345 Introduction to Computer Science	11	B	54	48	-	58	1	2	3	4	
2D1347 Communication	4	B	8	-	-	6		2	3		Seminars 30h
2H1340 Electrical Circuits D	6	B	36	24	-	16			3	4	
5B1104 Calculus I, part 1	5	B	-	-	-	-	1	2			
5B1105 Calculus I, part 2	5	B	-	-	-	-		2	3		
5B1109 Linear Algebra II	5	B	60	-	-	-	1				
5B1928 Logics	4	D	-	-	-	-				4	
Elective Courses											
2E1215 Introductory Matlab Course	1	A	4	-	-	-				4	Computer 8h
5B1111 Complementary Course in Calculus	2	B	-	-	-	-					

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Computer Science

Computer Science D2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1240 Numerical Methods, Basic Course II	4	B	28	14	-	18	1	2			
2D1350 Programming Paradigms	4	B	32	-	-	20	1	2			
2D1352 Algorithms, Data Structures and Complexity	6	C	44	24	-	18			3	4	
5B1200 Differential Equations and Transforms I	4	C	48	-	-	-				4	Workshop 21h
5B1204 Discrete Mathematics	8	C	72	-	-	-			3		
5B1506 Mathematical Statistics, basic course	6	C	36	48	-	-	1	2			
5C1105 Insights in Mechanics - Modeling and Simulation	4	B	24	10	-	-				4	
Elective with											
5A1232 Optical Communication and Imaging	4	B	24	18	-	10		2			
5A1242 Physics of Microcosmos	4	B	24	18	-	-		2			

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Computer Science D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1954 <u>Program Development Project</u>	4	C	12	-	-	-			3	4	
2G1502 <u>Computer Hardware Basics</u> <i>replaces 2G1119 and 2G1129</i>	4	B	18	18	-	20	1	2			
2I1100 <u>Information Systems and Database Technology</u>	6	C	12	12	-	80	1	2			
4D1091 <u>Work Environment, Computers and Business Administration</u>	4	C	36	-	-	-	1				
Elective with											
3C1320 <u>Environment and Technology</u>	4	C	24	3	-	-			3		
3C1330 <u>Technology and Ecosystems</u>	4	B	24	3	-	-		2			

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Computer Science D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2A1170 Chaos and Self-organization	4	D	32	17	-	-	1				
2D1220 Applied Numerical Methods I	4	C	42	-	-	18			3	4	
2D1225 Numerical Solutions of Differential Equations	4	C	26	4	-	18	1	2			
2D1250 Applied Numerical Methods II	6	C	-	-	60	24			3	4	
2D1255 Numerical Solutions of Differential Equations	5	D	36	-	-	20			3	4	
2D1257 Visualization	4	C	20	-	-	10			3		
2D1258 Introduction to High Performance Computing <i>Please note that the course starts in august.</i>	5	C	40	-	-	40	1				
2D1260 The Finite Element Method	4	D	18	14	-	12		2			
2D1263 Program Construction for Scientific Computing	4	D	24	-	-	12			3	4	
2D1266 Mathematical Models, Analysis and Simulation Part I	5	C	48	-	-	26	1	2			
2D1269 Mathematical Models, Analysis and Simulation, part II <i>Not given the academic year 02/03:</i>	5	C	48	-	-	28					
2D1272 Computational Physics <i>The course will not be on the central schedule.</i>	5	D	24	-	-	-				4	
2D1285 Numerical Algorithms for Parallel Computers <i>The course will not be on the central schedule.</i>	4	D	24	-	-	-				4	
2D1290 Advanced Numerical Analysis <i>The course will not be on the central schedule.</i>	4	D	28	-	-	14				4	
2D1365 Overview of Human-computer Interaction	4	C	16	2	-	5		2			
2D1370 Functional Programming	4	C	28	-	-	26				4	
2D1373 Artificial Languages and Syntax Analysis	4	D	24	-	-	16			3		
2D1375 Implementation of Programming Languages	4	D	2	-	-	-	1	2			
2D1378 Text and Image Processing	4	B	28	28	-	-	1				

2D1381 Industrial Applications of Artificial Intelligence	4	D	36	-	-	-	1	2			
2D1387 Program System Construction Using C++	4	C	18	6	-	30	1	2			
2D1390 Internet Programming	4	C	28	-	-	26		2			
2D1392 Protocols and Principles of the Internet*	5	C	35	21	-	32		2			
2D1406 Fundamentals of Human-Computer Interaction	4	D	18	-	-	-		2			Seminars 5hSeminars 5h
2D1408 Evaluation Methods in Human-Computer Interaction* <i>The course will be given only if the number of students is large enough. Please contact the course administrator.</i>	4	D	10	19	-	-			3	4	2 h Seminars
2D1410 User Centered Program Development*	6	D	30	-	14	-			3	4	
2D1413 Advanced Graphics and Interaction	6	D	50	-	-	12	1	2			
2D1416 Computer Supported Cooperative Work	6	D	60	-	-	15			3	4	
2D1418 Language Engineering	4	D	42	-	-	12	1				
2D1420 Computer Vision, Basic Course	5	D	46	6	-	12			3		
2D1424 Geometric Computing in Image Analysis and Visualization	4	D	28	-	-	8				4	
2D1426 Robotics and Autonomous Systems*	5	D	16	-	-	60				4	
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20			3		
2D1435 Mathematical Modelling of Biological Systems <i>The course is given every second year and will not be given in 02/03.</i>	6	D	26	-	-	20					
2D1440 Advanced Algorithms	4	D	30	-	-	-		2			
2D1441 Seminars on Theoretical Computer Science	4	D	30	-	-	-				4	
2D1446 Complexity Theory <i>Not given the academic year 02/03.</i>	4	D	30	-	-	-					
2D1449 Foundations of Cryptography	4	D	30	-	-	-			3		
2D1450 Algorithmic Bioinformatics	4	D	36	-	-	-				4	
2D1464 Bigger Advanced, Individual Course in Computer Science	6	D	-	-	-	-					
2D1465 Advanced, Individual Course in Computer Science	4	D	-	-	-	-					
2D1469 Database Theory	4	D	24	24	-	-	1				
2D1470 Object Oriented Database Systems	5	D	24	24	-	-				4	
2D1482 Programming of Web Server Applications*	4	D	12	-	-	26				4	
2D1490 IP Routing in Simple Computer Networks*	5	D	32	8	-	32			3		
2D1491 IP-routing in Internet and Other Complex Networks*	5	D	32	8	-	32				4	
2D1518 Audio, Video and Multimedia Production*	5	C	30	-	-	40		2	3		
2D1520 Graphic Arts Technology, Minor Course	4	C	30	8	-	16		2			

2D1953 Graphics and Interaction Programming	4	C	30	18	-	16		3	
2E1252 Control Theory and Practice, Advanced Course	5	D	28	26	-	8		3	
2E1262 Nonlinear Control	5	D	28	28	-	8	2		
2E1340 Digital Signal Processing	5	C	26	24	-	3	2		
2E1423 Signal Theory <i>Replaces 2E1421.</i>	5	C	24	22	-	10		3	
2F1111 Speech Technology	4	D	36	14	-	6		3	
2F1212 Music Acoustics	4	D	36	12	-	8			4
2F1213 Musical Communication and Music Technology	5	D	28	8	-	12			4 Project assignment 30h
2F1300 No translation	5	D	24	12	-	12	1		
2F1400 Electroacoustics	4	D	34	12	-	8	1		
2F1410 Audio Technology	5		30	12	-	12		2	Projektuppgift 20hProjektuppgift 20h
2G1113 Operating Systems	4	C	28	10	-	-			4
2G1117 Semantics for Programming Languages	4	D	18	18	-	-	1		
2G1118 Network Programming with Java	4	D	20	10	-	16		2	
2G1120 Computer Architecture Fundamentals, Intermediate Course	4	D	18	14	-	16	1		
2G1121 Logic Programming	4	D	16	8	-	-	1		Individual work on project
2G1126 Distributed Computer Systems <i>Replaces 2G1116.</i>	10	D	48	24	-	-			4
2G1301 Theory of Distributed Systems	4	C	14	-	-	88		2	
2G1305 Internetworking	4	D	20	20	-	-			3
2G1316 Data and Computer Communication <i>Not given for Media 02/03</i>	4	D	24	18	-	4			3
2G1318 Queuing Theory and Teletraffic Systems	4	D	24	24	-	-		2	
2G1319 Communication System Design <i>Replaces 2G1303.</i>	10	D	-	-	-	-		3	4 Projektuppgift 400hProjektuppgift 400h
2G1503 System Modeling and Simulation	6	B	24	18	-	-			4
2G1511 Computer Architecture	6	D	-	-	42	12		3	4 Home study time including individual project guidance 185h
2G1915 Concurrent Programming	5	C	36	-	-	24		3	
2I1130 Cognitive Psychology <i>Under bearbetning</i>	4	B	30	12	-	-	1		
2I1140 Artificial Intelligence	6	C	36	16	-	80		3	
2I1150 Theory of Knowledge and Philosophy of Science <i>not available 02/03</i>	4	B	30	12	-	80			
2I1224 Data Warehousing* <i>Max 40 students</i>	4	D	15	10	-	30			4
2I1228 Enterprise Computing and ERP Systems	5	D	14	12	-	60		3	80h
2I1229 Knowledge Management	4	D	28	-	-	18		3	70h
2I1234 Machine Learning	4	D	36	-	-	-			4
2I1235 Agent Programming	4	D	18	-	-	80			4 60h
2I1236 Intelligent Interfaces	4	D	36	-	-	-			4

2I1242 Models and Languages for Object and Web Databases	5	D	14	12	80	60	1				
2I1251 Theory of Software Metrics <i>Not given 01/ 02.</i>	4	D	21	-	-	60					80h
2I1255 Quality Models and Standards	4	D	21	-	-	140			3	4	
2I1256 Current Problems in Software Engineering <i>Not given 01/ 02 or 02/03</i>	4	D	-	-	-	-					160h
2I1258 Large-Scale Software Engineering	5	D	21	-	-	120			3	4	60h
2I1263 Internet Application Protocols and Standards	4	B	24	-	-	20			3		120h
2I1264 Internet Programming I	4	D	2	-	-	160	1				
2I1265 Internet Programming II	4	D	2	-	-	160		2			
2I1266 Internet Programming III	4	D	-	-	-	160			3		
2I1272 Security Architecture for Open Distributed Systems*	4	D	24	-	-	36				4	100h
2I1273 Principles of Computer Security*	4	D	24	-	-	36			3		100h
2I1274 Security Protocols and Applications in Computer Network*	4	D	24	-	-	36				4	100h
2I1276 Security for Java Environment and Electronic Commerce*	4	D	12	8	8	-		2			130h
2I1278 Computer Security - Overview* <i>Max 30 students</i>	4	D	36	-	-	6	1				Other 20h
3C1355 Ecology, Advanced Course	4	C	21	4	-	-			3	4	
3C1360 Environmental Consequences, Advanced Course	4	C	18	9	-	8	1				Seminars 9hSeminars 9h
3C1395 Technology and Sustainable Development	4	C	10	9	-	-		2			
5A1210 Thermodynamics <i>Not given the academic year 02/03.</i>	4	B	30	16	-	10	1				
5A1414 Radiation Detectors and Medical Imaging Systems	5	D	24	6	-	20			3	4	
5B1201 Complex Analysis	4	C	48	-	-	-	1				
5B1202 Differential Equations and Transforms II	6	C	72	-	-	-			3	4	
5B1303 Analysis, Basic Course	6	D	-	-	66	-			3	4	
5B1305 Applied Combinatorics	4	D	-	-	42	-				4	
5B1306 Introductory Financial Mathematics	5	C	-	-	54	-				4	
5B1456 Seminar Course in Mathematics I <i>Given 02/03.</i>	5	D	36	-	-	-	1	2			
5B1457 Seminar Course in Mathematics II <i>Given 02/03.</i>	5	D	36	-	-	-			3	4	
5B1466 Fourier Analysis <i>Not given 02/03.</i>	5	D	36	-	-	-					
5B1467 Algebra, Advanced Course <i>Not given 02/03.</i>	5	D	36	-	-	-					
5B1472 Functional Analysis <i>Not given 02/03.</i>	5	D	36	-	-	-			3	4	
5B1479 Integration Theory <i>Given 02/03.</i>	5	D	36	-	-	-	1	2			
5B1750 Optimization for E and D	4	C	28	14	-	9				4	
5C1212 Computational Fluid Dynamics	5	D	-	-	50	10			3		
5C1213 Applied Computational Fluid Dynamics	2	D	-	-	10	14				4	

7E1101 Medical Engineering, Basic Course	4	C	24	-	-	-	1				
7E1110 Quality and Regulatory Aspects on Medical Devices*	2	D	20	-	-	-			3	4	
7E1112 Implants and Biomaterials*	4	D	25	-	-	-			3	4	
7E1113 Medical Instrumentation and Signal Processing*	4	D	30	-	-	6			3	4	
7E1114 Radiation Physics and Biology*	4	D	40	-	-	-				4	
7E1115 Engineering in Intensive Care and Anesthesia*	4	D	12	-	-	-			3	4	30 + 10h (field work with oral and written report)
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1				

*The course has limited participation

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Computer Science

Computer Science D5

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1020 Master Project in Numerical Analysis	20	D	-	-	-	-					
2D1021 Master Project in Computer Science	20	D	-	-	-	-					
2D1024 Master Project in Human - Computer Interaction	20	D	-	-	-	-					
2D1025 Master Project in Biomedical Engineering	20	D	-	-	-	-					

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Autonomous Systems D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Elective Courses												
2D1420 Computer Vision, Basic Course	5	D	46	6	-	12			3			
2D1424 Geometric Computing in Image Analysis and Visualization	4	D	28	-	-	8				4		
2E1350 Adaptive Signal Processing	4	D	24	14	-	-			3			
2E1423 Signal Theory <i>Replaces 2E1421.</i>	5	C	24	22	-	10			3			
2I1140 Artificial Intelligence	6	C	36	16	-	80			3			
5B1750 Optimization for E and D	4	C	28	14	-	9				4		

Autonomous Systems D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1220 Applied Numerical Methods I	4	C	42	-	-	18			3	4	
2D1365 Overview of Human-computer Interaction	4	C	16	2	-	5		2			
2D1381 Industrial Applications of Artificial Intelligence	4	D	36	-	-	-	1	2			
2D1424 Geometric Computing in Image Analysis and Visualization	4	D	28	-	-	8				4	
2D1426 Robotics and Autonomous Systems*	5	D	16	-	-	60				4	
2D1431 Machine Learning	4	D	32	-	-	20		2			
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20			3		
2D1435 Mathematical Modelling of Biological Systems <i>The course is given every second year and will not be given in 02/03.</i>	6	D	26	-	-	20					
2E1200 Automatic Control, General Course	4	C	24	26	-	12	1				
2E1200 Automatic Control, General Course	4	C	24	26	-	12		2			
2E1252 Control Theory and Practice, Advanced Course	5	D	28	26	-	8			3		
2E1262 Nonlinear Control	5	D	28	28	-	8		2			

2E1340 Digital Signal Processing	5	C	26	24	-	3	2		
2E1350 Adaptive Signal Processing	4	D	24	14	-	-	3		
2G1915 Concurrent Programming	5	C	36	-	-	24	3		
2I1130 Cognitive Psychology <i>Under bearbetning</i>	4	B	30	12	-	-	1		
7E1101 Medical Engineering, Basic Course	4	C	24	-	-	-	1		

*The course has limited participation

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Biomedical Engineering D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1200 Cellular and Molecular Biology*_	10	C	80	-	-	8			3	4	
7E1201 Neuroscience*_	5	C	60	-	-	30				4	

*The course has limited participation

Biomedical Engineering D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1202 Systems Biology*_	5	C	32	-	-	25		2			24 h Seminars24 h Seminars
Elective Courses											
2D1266 Mathematical Models, Analysis and Simulation Part I	5	C	48	-	-	26	1	2			
2D1420 Computer Vision, Basic Course	5	D	46	6	-	12			3		
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20			3		
2D1435 Mathematical Modelling of Biological Systems <i>The course is given every second year and will not be given in 02/03.</i>	6	D	26	-	-	20					
2D1450 Algorithmic Bioinformatics	4	D	36	-	-	-				4	
2F1510 Pattern Recognition	4	D	24	24	-	-	1				
5A1352 Complex Systems	4	D	24	-	-	-	1				

*The course has limited participation

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Computer Security D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2I1272 Security Architecture for Open Distributed Systems*	4	D	24	-	-	36				4	100h
2I1273 Principles of Computer Security*	4	D	24	-	-	36			3		100h
2I1274 Security Protocols and Applications in Computer Network*	4	D	24	-	-	36				4	100h
Recommended Courses											
2I1263 Internet Application Protocols and Standards	4	B	24	-	-	20			3		120h

*The course has limited participation

Computer Security D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
2D1392 Protocols and Principles of the Internet*_	5	C	35	21	-	32		2			
2D1440 Advanced Algorithms	4	D	30	-	-	-		2			
2G1301 Theory of Distributed Systems	4	C	14	-	-	88		2			
2I1263 Internet Application Protocols and Standards	4	B	24	-	-	20			3		120h
2I1276 Security for Java Environment and Electronic Commerce*_	4	D	12	8	8	-		2			130h
Elective Courses											
2F1111 Speech Technology	4	D	36	14	-	6			3		

*The course has limited participation

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Computer Based Systems D1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2E1215 Introductory Matlab Course	1	A	4	-	-	-				4	Computer 8h

Computer Based Systems D2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2E1235 Signals and Systems, part II	7	C	30	24	-	-				4	Computer 10h
5B1209 Signals and Systems, part I	5	C	-	-	-	-		2			

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Computer Systems D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1373 Artificial Languages and Syntax Analysis	4	D	24	-	-	16			3		
2D1426 Robotics and Autonomous Systems*	5	D	16	-	-	60				4	
2G1113 Operating Systems	4	C	28	10	-	-				4	
2G1316 Data and Computer Communication <i>Not given for Media 02/03</i>	4	D	24	18	-	4			3		
2G1503 System Modeling and Simulation	6	B	24	18	-	-				4	

*The course has limited participation

Computer Systems D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2G1120 Computer Architecture Fundamentals, Intermediate Course	4	D	18	14	-	16	1				
2G1126 Distributed Computer Systems <i>Replaces 2G1116.</i>	10	D	48	24	-	-				4	
2G1511 Computer Architecture	6	D	-	-	42	12			3	4	Home study time including individual project guidance 185h
Elective Courses											
2B1511 Modern Digital Construction with VHDL	5	D	30	-	-	40	1	2			
2D1258 Introduction to High Performance Computing <i>Please note that the course starts in august.</i>	5	C	40	-	-	40	1				
2D1263 Program Construction for Scientific Computing	4	D	24	-	-	12			3	4	
2D1375 Implementation of Programming Languages	4	D	2	-	-	-	1	2			
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20			3		
2G1114 Parallel Computer Systems	5	D	48	-	-	-		2			

2G1117 Semantics for Programming Languages	4	D	18	18	-	-	1				
2G1118 Network Programming with Java	4	D	20	10	-	16		2			
2G1120 Computer Architecture Fundamentals, Intermediate Course	4	D	18	14	-	16	1				
2G1121 Logic Programming	4	D	16	8	-	-	1				Individual work on project
2G1126 Distributed Computer Systems <i>Replaces 2G1116.</i>	10	D	48	24	-	-				4	
2G1301 Theory of Distributed Systems	4	C	14	-	-	88		2			
2G1318 Queuing Theory and Teletraffic Systems	4	D	24	24	-	-		2			
2G1511 Computer Architecture	6	D	-	-	42	12			3	4	Home study time including individual project guidance 185h
2G1915 Concurrent Programming	5	C	36	-	-	24			3		

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Informationsfilosofi D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1N1103 Human and Machine Rationality <i>The course will be given from 02/03</i>	6	D	24	12	-	-	1				
1N1104 Aesthetics and Technology <i>The course will be given from 02/03</i>	6	C	24	12	-	-		2			
1N1107 Information Analysis <i>The course will be given from 02/03</i>	5	C	20	10	-	-				4	
1N1108 Computer- and Information Ethics <i>The course will be given from 02/03</i>	5	C	20	10	-	-			3		
Elective Courses											
1H1601 Mathematics and Reality	5	C	20	10	-	-		2			
1H1604 Philosophy of Risk	5	C	18	-	-	-		2			12 h Seminars 12 h Seminars
2D1400 Interactive Media for Computer Scientists	5	D	-	-	-	-					
2D1406 Fundamentals of Human-Computer Interaction	4	D	18	-	-	-		2			Seminars 5h Seminars 5h
2D1410 User Centered Program Development*	6	D	30	-	14	-			3	4	
2D1418 Language Engineering	4	D	42	-	-	12	1				
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20			3		
2D1441 Seminars on Theoretical Computer Science	4	D	30	-	-	-				4	
2I1229 Knowledge Management	4	D	28	-	-	18			3		70h
2I1234 Machine Learning	4	D	36	-	-	-				4	
2I1236 Intelligent Interfaces	4	D	36	-	-	-				4	

*The course has limited participation

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Information Systems and Computer Base Technology D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
211224 Data Warehousing* <i>Max 40 students</i>	4	D	15	10	-	30				4	
211228 Enterprise Computing and ERP Systems	5	D	14	12	-	60			3		80h
211229 Knowledge Management	4	D	28	-	-	18			3		70h
Elective Courses											
211140 Artificial Intelligence	6	C	36	16	-	80			3		
211236 Intelligent Interfaces	4	D	36	-	-	-				4	
211251 Theory of Software Metrics <i>Not given 01/ 02.</i>	4	D	21	-	-	60					80h
211258 Large-Scale Software Engineering	5	D	21	-	-	120			3	4	60h
211263 Internet Application Protocols and Standards	4	B	24	-	-	20			3		120h
211272 Security Architecture for Open Distributed Systems*	4	D	24	-	-	36				4	100h
211273 Principles of Computer Security*	4	D	24	-	-	36			3		100h
211274 Security Protocols and Applications in Computer Network*	4	D	24	-	-	36				4	100h

*The course has limited participation

Information Systems and Computer Base Technology D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
211224 Data Warehousing* <i>Max 40 students</i>	4	D	15	10	-	30				4		
211228 Enterprise Computing and ERP Systems	5	D	14	12	-	60			3		80h	
211229 Knowledge Management	4	D	28	-	-	18			3		70h	
211242 Models and Languages for Object and Web Databases	5	D	14	12	80	60	1					
Elective Courses												
211140 Artificial Intelligence	6	C	36	16	-	80			3			

211236 Intelligent Interfaces	4	D	36	-	-	-				4	
211251 Theory of Software Metrics <i>Not given 01/ 02.</i>	4	D	21	-	-	60					80h
211256 Current Problems in Software Engineering <i>Not given 01/ 02 or 02/03</i>	4	D	-	-	-	-					160h
211258 Large-Scale Software Engineering	5	D	21	-	-	120			3	4	60h
211263 Internet Application Protocols and Standards	4	B	24	-	-	20			3		120h
211264 Internet Programming I	4	D	2	-	-	160	1				
211265 Internet Programming II	4	D	2	-	-	160		2			
211266 Internet Programming III	4	D	-	-	-	160			3		
211272 Security Architecture for Open Distributed Systems*	4	D	24	-	-	36				4	100h
211273 Principles of Computer Security*	4	D	24	-	-	36			3		100h
211274 Security Protocols and Applications in Computer Network*	4	D	24	-	-	36				4	100h
211276 Security for Java Environment and Electronic Commerce*	4	D	12	8	8	-		2			130h
211278 Computer Security - Overview* <i>Max 30 students</i>	4	D	36	-	-	6	1				Other 20h

*The course has limited participation

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Computer Science

Intelligent Interactive Systems D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2I1140 Artificial Intelligence	6	C	36	16	-	80			3		
2I1234 Machine Learning	4	D	36	-	-	-				4	
2I1235 Agent Programming	4	D	18	-	-	80				4	60h
2I1236 Intelligent Interfaces	4	D	36	-	-	-				4	
Recommended Courses											
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20			3		
2I1263 Internet Application Protocols and Standards	4	B	24	-	-	20			3		120h

Intelligent Interactive Systems D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
2D1365 Overview of Human-computer Interaction	4	C	16	2	-	5		2			
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20			3		
2I1130 Cognitive Psychology <i>Under bearbetning</i>	4	B	30	12	-	-	1				
2I1150 Theory of Knowledge and Philosophy of Science <i>not available 02/03</i>	4	B	30	12	-	80					
2I1263 Internet Application Protocols and Standards	4	B	24	-	-	20			3		120h
2I1264 Internet Programming I	4	D	2	-	-	160	1				
2I1265 Internet Programming II	4	D	2	-	-	160		2			

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Communication Systems D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2G1113 Operating Systems	4	C	28	10	-	-				4	
2G1305 Internetworking	4	D	20	20	-	-			3		
2G1316 Data and Computer Communication	4	D	24	18	-	4			3		
Not given for Media 02/03											

Communication Systems D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2G1319 Communication System Design <i>Replaces 2G1303.</i>	10	D	-	-	-	-			3	4	Projektuppgift 400hProjektuppgift 400h	
2G1711 Communication System Design	12	D	-	-	-	-			3	4		
2G1712 Communication System Design	16	D	-	-	-	-			3	4		
2G1713 Communication System Design	20	D	-	-	-	-			3	4		
Elective Courses												
2G1120 Computer Architecture <i>Fundamentals, Intermediate Course</i>	4	D	18	14	-	16	1					
2G1301 Theory of Distributed Systems	4	C	14	-	-	88		2				
2G1318 Queuing Theory and Teletraffic Systems	4	D	24	24	-	-		2				
2G1330 Wireless and Mobile Network Architectures	5	D	10	-	-	-				4		
2G1331 Management of Network and Networked Systems	4	D	20	-	-	20	1					
2G1915 Concurrent Programming	5	C	36	-	-	24			3			

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Human-Computer Interaction D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2D1953 Graphics and Interaction Programming	4	C	30	18	-	16			3			
Elective Courses												
4K1401 History of Technology, a General Survey	4	B	12	-	-	-			3		Seminars 12h	

Human-Computer Interaction D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1406 <u>Fundamentals of Human-Computer Interaction</u>	4	D	18	-	-	-		2			Seminars 5hSeminars 5h
2D1408 <u>Evaluation Methods in Human-Computer Interaction*</u> <i>The course will be given only if the number of students is large enough. Please contact the course administrator.</i>	4	D	10	19	-	-			3	4	2 h Seminars
2D1410 <u>User Centered Program Development*</u>	6	D	30	-	14	-			3	4	
2D1416 <u>Computer Supported Cooperative Work</u>	6	D	60	-	-	15			3	4	
2I1130 <u>Cognitive Psychology</u> <i>Under bearbetning</i>	4	B	30	12	-	-	1				
Elective Courses											
2D1378 <u>Text and Image Processing</u>	4	B	28	28	-	-	1				
2D1381 <u>Industrial Applications of Artificial Intelligence</u>	4	D	36	-	-	-	1	2			
2D1413 <u>Advanced Graphics and Interaction</u>	6	D	50	-	-	12	1	2			
2D1418 <u>Language Engineering</u>	4	D	42	-	-	12	1				
2D1420 <u>Computer Vision, Basic Course</u>	5	D	46	6	-	12			3		
2D1518 <u>Audio, Video and Multimedia Production*</u>	5	C	30	-	-	40		2	3		
2I1150 <u>Theory of Knowledge and Philosophy of Science</u> <i>not available 02/03</i>	4	B	30	12	-	80					

*The course has limited participation

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Computer Science

D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1370 Functional Programming	4	C	28	-	-	26				4	
2D1373 Artificial Languages and Syntax Analysis	4	D	24	-	-	16			3		
2D1450 Algorithmic Bioinformatics	4	D	36	-	-	-				4	
2D1470 Object Oriented Database Systems	5	D	24	24	-	-				4	
2D1482 Programming of Web Server Applications*	4	D	12	-	-	26				4	
2G1113 Operating Systems	4	C	28	10	-	-				4	
2I1140 Artificial Intelligence	6	C	36	16	-	80			3		
5B1305 Applied Combinatorics	4	D	-	-	42	-				4	

*The course has limited participation

D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1370 Functional Programming	4	C	28	-	-	26				4	
2D1373 Artificial Languages and Syntax Analysis	4	D	24	-	-	16			3		
2D1375 Implementation of Programming Languages	4	D	2	-	-	-	1	2			
2D1381 Industrial Applications of Artificial Intelligence	4	D	36	-	-	-	1	2			
2D1387 Program System Construction Using C++	4	C	18	6	-	30	1	2			
2D1390 Internet Programming	4	C	28	-	-	26		2			
2D1392 Protocols and Principles of the Internet*	5	C	35	21	-	32		2			
2D1418 Language Engineering	4	D	42	-	-	12	1				
2D1431 Machine Learning	4	D	32	-	-	20		2			
2D1440 Advanced Algorithms	4	D	30	-	-	-		2			
2D1450 Algorithmic Bioinformatics	4	D	36	-	-	-				4	

2D1469 Database Theory	4	D	24	24	-	-	1				
2D1470 Object Oriented Database Systems	5	D	24	24	-	-				4	
2D1482 Programming of Web Server Applications*_	4	D	12	-	-	26				4	
2D1490 IP Routing in Simple Computer Networks*_	5	D	32	8	-	32			3		
2D1491 IP-routing in Internet and Other Complex Networks*_	5	D	32	8	-	32				4	
2G1113 Operating Systems	4	C	28	10	-	-				4	
2G1117 Semantics for Programming Languages	4	D	18	18	-	-	1				
2G1301 Theory of Distributed Systems	4	C	14	-	-	88		2			
2G1915 Concurrent Programming	5	C	36	-	-	24			3		
2I1140 Artificial Intelligence	6	C	36	16	-	80			3		
5B1305 Applied Combinatorics	4	D	-	-	42	-				4	

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Computer Science

Soft Ware Technology D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2I1251 Theory of Software Metrics Not given 01/ 02.	4	D	21	-	-	60					80h
2I1255 Quality Models and Standards	4	D	21	-	-	140			3	4	
2I1258 Large-Scale Software Engineering	5	D	21	-	-	120			3	4	60h
Recommended Courses											
2D1410 User Centered Program Development*	6	D	30	-	14	-			3	4	
2I1228 Enterprise Computing and ERP Systems	5	D	14	12	-	60			3		80h

*The course has limited participation

Soft Ware Technology D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2I1251 Theory of Software Metrics <i>Not given 01/ 02.</i>	4	D	21	-	-	60					80h
2I1255 Quality Models and Standards	4	D	21	-	-	140			3	4	
2I1258 Large-Scale Software Engineering	5	D	21	-	-	120			3	4	60h
Recommended Courses											
2D1410 User Centered Program Development*	6	D	30	-	14	-			3	4	
2I1228 Enterprise Computing and ERP Systems	5	D	14	12	-	60			3		80h
2I1256 Current Problems in Software Engineering <i>Not given 01/ 02 or 02/03</i>	4	D	-	-	-	-					160h
Elective Courses											
2I1278 Computer Security - Overview* <i>Max 30 students</i>	4	D	36	-	-	6	1				Other 20h

*The course has limited participation

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Computer Science

Theoretical Computer Science D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Elective Courses												
2D1373 Artificial Languages and Syntax Analysis	4	D	24	-	-	16			3			
2D1450 Algorithmic Bioinformatics	4	D	36	-	-	-				4		
2E1423 Signal Theory <i>Replaces 2E1421.</i>	5	C	24	22	-	10			3			
2I1140 Artificial Intelligence	6	C	36	16	-	80			3			
5B1305 Applied Combinatorics	4	D	-	-	42	-				4		
5B1750 Optimization for E and D	4	C	28	14	-	9				4		

Theoretical Computer Science D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1373 Artificial Languages and Syntax Analysis	4	D	24	-	-	16			3		
2D1440 Advanced Algorithms	4	D	30	-	-	-		2			
2D1441 Seminars on Theoretical Computer Science	4	D	30	-	-	-				4	
2D1446 Complexity Theory <i>Not given the academic year 02/03.</i>	4	D	30	-	-	-					
2D1449 Foundations of Cryptography	4	D	30	-	-	-			3		
2D1450 Algorithmic Bioinformatics	4	D	36	-	-	-				4	
2E1423 Signal Theory <i>Replaces 2E1421.</i>	5	C	24	22	-	10			3		
2G1117 Semantics for Programming Languages	4	D	18	18	-	-	1				
2G1121 Logic Programming	4	D	16	8	-	-	1				Individual work on project
2G1301 Theory of Distributed Systems	4	C	14	-	-	88		2			
2G1915 Concurrent Programming	5	C	36	-	-	24			3		
2I1140 Artificial Intelligence	6	C	36	16	-	80			3		
5B1305 Applied Combinatorics	4	D	-	-	42	-				4	
5B1467 Algebra, Advanced Course <i>Not given 02/03.</i>	5	D	36	-	-	-					

5B1475 Combinatorics, Advanced Course <i>Not given 02/03.</i>	5	D	36	-	-	-					
5B1750 Optimization for E and D	4	C	28	14	-	9				4	

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Electrical Engineering

Electrical Engineering E1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2A1800 Electrical Circuit Analysis	5	B	-	-	-	-			3		
2B1520 Electronics	8	C	-	-	-	-	1				
2D1343 Computer Science	8	B	40	26	-	26		2	3		
2U1700 Project Course in Electrical Engineering	5	B	12	-	-	50			3	4	
5B1115 Mathematics 1	6	B	-	-	-	-	1				
5B1116 Mathematics 2	6	B	-	-	-	-		2			
5B1117 Mathematics 3	6	B	-	-	-	-				4	
5C1102 Mechanics, Smaller Course	4	B	30	15	-	-		2			
Elective Courses											
2E1215 Introductory Matlab Course	1	A	4	-	-	-			3		Computer 8h

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Electrical Engineering

Electrical Engineering E2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2A1810 Electromagnetic Theory EA	4	C	24	24	-	-	1				
2A1820 Electromagnetic Theory EB	4	C	24	24	-	-			3		
2B1100 Physics part 1, Thermodynamics and Wave Physics	4	B	-	-	-	-			3		
2B1520 Electronics	8	C	-	-	-	-				4	
2D1240 Numerical Methods, Basic Course II	4	B	28	14	-	18	1	2			
2D1343 Computer Science	8	B	4	-	-	-	1				
2E1117 Measurement Technology <i>2 cr are studied during the second year and 3 cr during the third year. Part 2 is given for the first time the academic year 02/03.</i>	5	C	10	6	-	8			3		Räknestuga 4h
2E1313 Signals and Systems, part II <i>Replaces 2E1311.</i>	5	C	30	24	-	4				4	Computer 10h
5B1209 Signals and Systems, part I	5	C	-	-	-	-		2			
5B1501 Probability Theory and Statistics	4	C	24	36	-	-		2			

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Electrical Engineering

Electrical Engineering E3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1101 Physics part 2, Material Physics	4	B	-	-	-	-	1				
2C1240 Electric Power Systems	4	C	28	22	-	7		2			
2E1117 Measurement Technology <i>2 cr are studied during the second year and 3 cr during the third year. Part 2 is given for the first time the academic year 02/03.</i>	5	C	10	8	-	12	1	2			Räknestuga 8h
2E1211 Automatic Control, General Course E	4	C	24	26	-	12		2			
5B1307 Linear Algebra, Basic Course	4	D	48	14	-	-	1				
Elective Courses											
2B1430 Design of Digital Integrated Circuits - LSI	5	C	20	8	-	32				4	
2B1455 Anatomy of EDA CAD-tools	5	D	-	-	-	-			3		
2C1114 Wind Power Systems	4	C	52	10	-	4			3	4	
2C1116 Power Systems, Advanced Course	5	D	72	-	-	-				4	
2D1220 Applied Numerical Methods I	4	C	42	-	-	18			3	4	
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1334 Database Technology	4	C	24	20	-	12			3		
2E1126 Measurement Systems, Project Course	4	C	6	-	-	50			3		
2E1135 Micro System Technology*	5	D	28	-	-	40				4	Industry Site Visit 4h
3C1320 Environment and Technology	4	C	24	3	-	-			3		
4D1024 Industrial Economy and Management, Basic Course	4	B	26	20	4	-			3		
5A1320 Introduction to Quantum Mechanics	4	C	30	24	-	-			3	4	
5A1340 Thermodynamics and Statistical Mechanics, Basic Course	4	C	30	24	-	-				4	

*The course has limited participation

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Electrical Engineering

Electrical Engineering E4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2A1131 Plasma Physics <i>Intermediate level</i>	4	C	48	-	-	-	1	2			
2A1133 Plasma Physics, Enlarged Course <i>Intermediate level</i>	6	C	60	-	-	-	1	2	3		
2A1140 Accelerator and Radiation Technology	4	D	36	-	-	4			3		
2A1141 Accelerator and Radiation Course, Extended Course	6	D	48	-	-	4			3	4	
2A1145 Electromagnetic Waves in Dispersive Media	4	D	24	-	-	-			3		
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
2A1160 Space Physics	3	D	12	-	-	-	1				
2A1170 Chaos and Self-organization	4	D	32	17	-	-	1				
2A1830 Applied Antenna Theory	5	D	-	-	54	14			3	4	
2B1211 Physics of Electronic Materials <i>Intermediate level</i>	5	C	40	24	-	8	1				
2B1230 Power Semiconductor Devices	5	D	40	-	-	-			3		Project 40h
2B1240 VLSI-technology II	5	D	24	-	-	32				4	
2B1245 Advanced VLSI-Devices	5	D	20	-	-	32				4	
2B1310 Microwave Engineering <i>Intermediate level</i>	5	C	36	18	-	10		2			
2B1322 Fibre Optical Communication <i>Intermediate level</i>	5	D	28	14	-	8			3		
2B1325 Photonics	5	D	38	-	-	8				4	
2B1423 ASIC-design Methodology with High-level Languages	5	D	24	-	-	48				4	
2B1427 Design of Digital Integrated Circuits - VLSI	5	D	20	8	-	32			3		
2B1429 System Modelling	5	D	20	8	-	32			3		
2B1430 Design of Digital Integrated Circuits - LSI	5	C	20	8	-	32				4	
2B1453 Design of Fault-tolerant Systems	4	D	-	-	-	-				4	
2B1455 Anatomy of EDA CAD-tools	5	D	-	-	-	-			3		
2B1511 Modern Digital Construction with VHDL <i>Intermediate level</i>	5	D	30	-	-	40	1	2			

2B1600 Radio Electronics	5	D	26	16	-	12			4	
2B1700 Advanced Semiconductor Materials	5	D	34	-	-	16			4	
2C1111 System Planning	4	D	60	-	-	-			3	
2C1112 Power Systems, Basic Course	4	C	-	-	-	-	1			
2C1113 Power Systems, Advanced Course	6	D	72	-	-	-			4	
2C1114 Wind Power Systems	4	C	52	10	-	4			3	4
2C1116 Power Systems, Advanced Course	5	D	72	-	-	-			4	
2C1130 Electrotechnical Design, Basic Course <i>Intermediate level</i>	4	C	32	-	-	4		2		Projects 16h
2C1131 Electrotechnical Design, Advanced Course	5	C	20	-	-	8			3	Projects 50h
2C1132 High-voltage Engineering	5	C	20	-	-	8			4	Projects 50h
2C1140 Electrical Machines and Drives, Basic Course <i>Intermediate level</i>	4	C	28	20	-	16	1			
2C1146 Power Electronics <i>Intermediate level</i>	4	D	28	20	-	10		2		The course will be given in english during period 2 and in english during period 3.
2C1146 Power Electronics <i>Intermediate level</i>	4	D	28	20	-	10			3	The course will be given in english during period 2 and in english during period 3.
2C1147 Power Converter Control	5	D	28	20	-	4			4	Projektuppgift 4h
2C1148 Analysis of Electrical Machines	5	D	28	20	-	4			3	
2C1149 Electric Traction	4	C	36	-	-	-			4	
2C1223 Industrial Information and Control Systems <i>Intermediate level</i>	4	C	36	10	-	3		2		
2C1224 Management of Technology	5	D	32	20	-	-	1			
2C1228 Industrial Information Systems, Systems Engineering*	5	D	24	-	-	-			3	
2C1229 Industrial Information Systems, Case Studies*	5	D	16	-	-	-			4	
2D1220 Applied Numerical Methods I	4	C	42	-	-	18			3	4
2D1274 Computational Electromagnetics <i>Not on the central schedule.</i>	5	D	24	-	-	12	1	2		
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12			4	
2D1334 Database Technology	4	C	24	20	-	12			3	
2D1365 Overview of Human-computer Interaction <i>Intermediate level</i>	4	C	16	2	-	5		2		
2D1406 Fundamentals of Human-Computer Interaction	4	D	18	-	-	-		2		Seminars 5hSeminars 5h
2D1410 User Centered Program Development*	6	D	30	-	14	-			3	4
2D1420 Computer Vision, Basic Course	5	D	46	6	-	12			3	
2D1424 Geometric Computing in Image Analysis and Visualization	4	D	28	-	-	8			4	
2D1426 Robotics and Autonomous Systems*	5	D	16	-	-	60			4	
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20			3	

2E1126 Measurement Systems, Project Course	4	C	6	-	-	50			3		
2E1135 Micro System Technology*	5	D	28	-	-	40			4	Industry Site Visit 4h	
2E1241 Automatic Control, Project Course*	5	D	4	-	-	50			4		
2E1252 Control Theory and Practice, Advanced Course <i>Intermediate level</i>	5	D	28	26	-	8			3		
2E1262 Nonlinear Control <i>Intermediate level</i>	5	D	28	28	-	8		2			
2E1333 Optimal Filtering <i>Given every second year. Given 02/03.</i>	4	D	-	-	24	-	1				
2E1340 Digital Signal Processing <i>Intermediate level</i>	5	C	26	24	-	3		2			
2E1350 Adaptive Signal Processing	4	D	24	14	-	-			3		
2E1366 Project Course in Signal Processing/Digital Communication	6	D	12	-	-	50			4		
2E1380 Seminars in Signals, Sensors and Systems	2	D	-	-	-	-			3	4	Seminars 12h
2E1431 Communication Theory <i>Intermediate level</i>	6	C	40	36	-	8	1	2			
2E1435 Advanced Communication Theory	4	D	26	24	-	-			3		
2E1511 Radio Communication, Basic Course <i>Intermediate level</i>	4	D	24	24	-	8	1				
2E1512 Wireless Networks*	8	D	30	24	-	12				4	
2F1111 Speech Technology	4	D	36	14	-	6			3		
2F1212 Music Acoustics	4	D	36	12	-	8				4	
2F1213 Musical Communication and Music Technology	5	D	28	8	-	12				4	Project assignment 30h
2F1300 No translation	5	D	24	12	-	12	1				
2F1400 Electroacoustics	4	D	34	12	-	8	1				
2F1410 Audio Technology	5		30	12	-	12		2			Projektuppgift 20h Projektuppgift 20h
2F1510 Pattern Recognition <i>Intermediate level</i>	4	D	24	24	-	-	1				
2F1521 Speech Signal Processing	4	D	24	24	-	-		2			
2F1532 Information Theory and Source Coding, Accel Program Course <i>Replaces 2F1531.</i> <i>Under bearbetning</i>	5	D	36	12	-	-			3		
2G1113 Operating Systems	4	C	28	10	-	-				4	
2G1114 Parallel Computer Systems	5	D	48	-	-	-		2			
2G1117 Semantics for Programming Languages	4	D	18	18	-	-	1				
2G1118 Network Programming with Java	4	D	20	10	-	16		2			
2G1120 Computer Architecture Fundamentals, Intermediate Course <i>Intermediate level</i>	4	D	18	14	-	16	1				
2G1121 Logic Programming	4	D	16	8	-	-	1				Individual work on project
2G1126 Distributed Computer Systems <i>Replaces 2G1116.</i>	10	D	48	24	-	-				4	
2G1301 Theory of Distributed Systems <i>Intermediate level</i>	4	C	14	-	-	88		2			
2G1305 Internetworking <i>Intermediate level</i>	4	D	20	20	-	-			3		

2G1316 Data and Computer Communication <i>Not given for Media 02/03</i>	4	D	24	18	-	4		3		
2G1318 Queuing Theory and Teletraffic Systems <i>Intermediate level</i>	4	D	24	24	-	-		2		
2G1319 Communication System Design <i>Replaces 2G1303.</i>	10	D	-	-	-	-		3	4	Projektuppgift 400hProjektuppgift 400h
2G1330 Wireless and Mobile Network Architectures	5	D	10	-	-	-			4	
2G1331 Management of Network and Networked Systems	4	D	20	-	-	20	1			
2G1511 Computer Architecture	6	D	-	-	42	12		3	4	Home study time including individual project guidance 185h
2G1915 Concurrent Programming <i>Intermediate level</i>	5	C	36	-	-	24		3		
2H1250 Electromagnetic Field Theory <i>Intermediate level</i>	5	C	-	-	72	-	1	2		
2H1255 Electromagnetic Wave Propagation	5	D	36	30	-	-		3	4	
2H1260 Antenna Theory	5	D	26	24	-	18		3		
2I1130 Cognitive Psychology <i>Under bearbetning</i>	4	B	30	12	-	-	1			
3C1320 Environment and Technology	4	C	24	3	-	-		3		
4D1024 Industrial Economy and Management, Basic Course <i>Intermediate level</i>	4	B	26	20	4	-		3		
5A1320 Introduction to Quantum Mechanics	4	C	30	24	-	-		3	4	
5A1340 Thermodynamics and Statistical Mechanics, Basic Course	4	C	30	24	-	-			4	
5A1412 Atomic Nuclei - Radiation - Energy	5	B	24	-	-	15	2	3		
5A1414 Radiation Detectors and Medical Imaging Systems	5	D	24	6	-	20		3	4	
7E1101 Medical Engineering, Basic Course	4	C	24	-	-	-	1			
7E1110 Quality and Regulatory Aspects on Medical Devices*	2	D	20	-	-	-		3	4	
7E1112 Implants and Biomaterials*	4	D	25	-	-	-		3	4	
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1			

*The course has limited participation

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Electrical Engineering

Electrical Engineering E5

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1020 Master Project in Numerical Analysis	20	D	-	-	-	-					
2D1021 Master Project in Computer Science	20	D	-	-	-	-					
2D1024 Master Project in Human - Computer Interaction	20	D	-	-	-	-					
2D1025 Master Project in Biomedical Engineering	20	D	-	-	-	-					

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Electrical Engineering

Biomedicinsk elektroteknik E3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2D1385 Software Engineering	4	C	24	12	-	18			3		
2E1423 Signal Theory <i>Replaces 2E1421.</i>	5	C	24	22	-	10			3		
5B1750 Optimization for E and D	4	C	28	14	-	9				4	
7E1200 Cellular and Molecular Biology*	10	C	80	-	-	8			3	4	
7E1201 Neuroscience*	5	C	60	-	-	30				4	

*The course has limited participation

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Elektronik E3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2B1211 <u>Physics of Electronic Materials</u>	5	C	40	24	-	8	1				
2B1216 <u>Microelectronics</u>	5	C	24	-	-	12			3		
2B1430 <u>Design of Digital Integrated Circuits - LSI</u>	5	C	20	8	-	32				4	
2B1515 <u>Analog Electronics, Advanced Course</u>	5	C	30	14	-	20			3		Project work
2E1423 <u>Signal Theory</u> <i>Replaces 2E1421.</i>	5	C	24	22	-	10			3		
2G1502 <u>Computer Hardware Basics</u> <i>replaces 2G1119 and 2G1129</i>	4	B	18	18	-	20			3	4	

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Elektroteknik E3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2B1211 Physics of Electronic Materials	5	C	40	24	-	8	1				
2C1115 Power Systems, Basic Course	5	C	32	32	-	4			3		
2C1133 Electrotechnical Modelling	5	C	40	-	-	-				4	
2E1423 Signal Theory <i>Replaces 2E1421.</i>	5	C	24	22	-	10			3		
5A1301 Mathematical Methods in Physics, Course I	4	C	-	54	-	-			3		
5A1301 Mathematical Methods in Physics, Course I	4	C	-	54	-	-	1	2			
5B1201 Complex Analysis	4	C	48	-	-	-	1				

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Systemteknik E3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2C1115 Power Systems, Basic Course	5	C	32	32	-	4			3		
2D1385 Software Engineering	4	C	24	12	-	18			3		
2E1282 Modelling of Dynamical Systems	4	C	24	24	-	12				4	
2E1423 Signal Theory <i>Replaces 2E1421.</i>	5	C	24	22	-	10			3		
2G1502 Computer Hardware Basics <i>replaces 2G1119 and 2G1129</i>	4	B	18	18	-	20			3	4	
5B1750 Optimization for E and D	4	C	28	14	-	9				4	

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Wireless Systems E3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2D1385 Software Engineering	4	C	24	12	-	18			3		
2E1423 Signal Theory <i>Replaces 2E1421.</i>	5	C	24	22	-	10			3		
2E1511 Radio Communication, Basic Course	4	D	24	24	-	8	1				
2G1316 Data and Computer Communication <i>Not given for Media 02/03</i>	4	D	24	18	-	4			3		
2G1502 Computer Hardware Basics <i>replaces 2G1119 and 2G1129</i>	4	B	18	18	-	20			3	4	
5B1750 Optimization for E and D	4	C	28	14	-	9				4	

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Vehicle Engineering

Vehicle Engineering T1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1310 Programming Technique	4	B	26	16	-	36	1	2			
4B1051 Perspective of Vehicle Engineering	6	B	52	8	-	12	1	2	3		Project work Study visits in period 2, 8h Period 3 Lectures 4h Self studies Tutorials 24h
5A1225 Electromagnetism and Waves	5	B	38	18	-	20				4	
5B1115 Mathematics 1	6	B	72	28	-	-	1				
5B1116 Mathematics 2	6	B	72	28	-	-		2			
5B1117 Mathematics 3	6	B	72	28	-	-			3		
5C1103 Mechanics, Basic Course	6	B	48	27	-	-			3	4	

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Vehicle Engineering

Vehicle Engineering T2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1240 Numerical Methods, Basic Course II	4	B	28	14	-	18			3	4	
4C1095 Strength of Materials and Solid Mechanics, Basic Course	8	B	52	52	-	2	1	2			
4C1096 Strength of Materials and Solid Mechanics, Advanced Course	4	C	36	14	-	4			3		
5B1202 Differential Equations and Transforms II	6	C	72	29	-	-			3	4	
5B1501 Probability Theory and Statistics	4	C	24	36	-	-				4	
5B1760 Linear and Quadratic Programming	4	C	32	16	-	-		2			
5C1111 Mechanics, Continuation Course	4	C	30	15	-	-	1				
5C1201 Fluid Mechanics with Thermodynamics, for T	8	C	44	50	-	9	1	2	3		

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Vehicle Engineering

Vehicle Engineering T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2E1200 Automatic Control, General Course	4	C	24	26	-	12		2			
3C1330 Technology and Ecosystems	4	B	24	3	-	-	1				
4B1111 Fundamentals of Noise and Vibration Control T	4	C	31	32	-	4		2			
4F1222 Electrical Engineering, Basic Course T	6	B	18	27	-	26		2	3		
4F1531 Machine Elements, basic course for I and T	4	B	24	40	-	-	1				
4H1057 Engineering Materials	4	B	24	-	-	15	1				
Elective Courses											
2C1111 System Planning	4	D	60	-	-	-			3		
2C1114 Wind Power Systems	4	C	52	10	-	4			3	4	
2D1250 Applied Numerical Methods II	6	C	-	-	60	24			3	4	
2D1263 Program Construction for Scientific Computing	4	D	24	-	-	12			3	4	
2D1522 Computer Technology and Communication*	4	C	30	-	-	20				4	
3C1395 Technology and Sustainable Development	4	C	10	9	-	-		2			
3D1112 Fibre Technology	4	D	26	-	-	15				4	
3E1324 Polymer Materials - Properties and Applications	4	C	30	12	-	10				4	
4A1601 Heat Transfer	4	C	24	24	-	20			3		
4A1603 Energy Technology	4	C	48	12	-	-				4	
4B1120 Signal Analysis with Applications	5	D	-	28	-	24				4	
4D1026 Industrial Economy and Management, Basic Course	4	B	26	20	-	-		2			4 h Seminars4 h Seminars
4D1094 Work Science	2	B	12	-	-	-		2			
4E1102 Lightweight Structures and FEM I	5	C	64	-	-	22			3	4	
4E1300 Development and Implementation Project	6	D	-	-	-	-	1	2	3	4	
4E1401 Introduction to Naval Architecture	5	C	46	10	-	10			3	4	
4F1241 Microcomputer, Sensors and Actuators	6	C	18	26	-	29				4	

4F1242 Introduction to Microcomputer Systems	4	C	12	22	-	14			4	
4F1244 Motion Control <i>The course will not be given until further notice.</i>	4	D	30	-	-	12			4	
4F1244 Motion Control <i>The course will not be given until further notice.</i>	4	D	30	-	-	12			4	
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-		3	4	One day field trip.
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-			4	
4F1642 Modelling and Computer Support in Mechanical Design	4	C	24	36	-	-		3		
4G1134 Effective Production	6	D	25	35	-	-		3	4	
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-			4	
4H1202 Mechanical Metallurgy I	6	D	24	12	-	48		3	4	Home assignments
4H1204 Experimental Methods in Materials Science	5	D	10	10	-	48		3	4	
4H1504 Processing of Ceramic Materials	4	C	12	-	-	18		3		
4K1107 Production of Electronics I	4	C	36	-	-	8		3		
4K1201 Computer Aided Design and Manufacturing, Introductory course	5	C	48	-	-	24			4	Graded exercise
4K1401 History of Technology, a General Survey	4	B	12	-	-	-		3		Seminars 12h
4M1332 Materials Processing	4	D	22	20	-	20		3		
4M1335 Materials Processing, Laboratory Course	5	D	26	32	-	47		3	4	
4M1336 Physics for Materials Processing	5	C	16	16	-	-		3		Home assignments 60h
4M1345 Powder Processing and Materials Forming	4	D	30	-	-	-			4	Home assignments 80h
5B1538 Reliability Theory	6	D	-	-	72	-		3	4	
5B1540 Probability Theory	5	D	24	30	-	-			4	
5B1722 Applied Optimization	4	C	30	14	-	-		3		
5C1121 Analytical Mechanics	4	C	48	-	-	-		3		
5C1203 Fluid Mechanics, General Course Compulsory within competenceprogram Fluid Mechanics.	4	C	-	24	24	3			4	
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4			4	4 h Seminars4 h Seminars
9E1131 Information Searching for B, I, M, T	1	B	-	-	-	-		3	4	
9E1300 Technical English, Lower Intermediate Level*	4	B	-	-	56	-		3	4	
9E1301 Technical English, Intermediate*	6	B	-	-	56	-		3	4	
9E1320 German, Elementary Level*	4	B	-	-	56	-		3	4	
9E1322 German, Advanced Beginner's Level*	4	B	-	56	56	-		3	4	
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	18	-	-		3	4	E-learning exercises
9E1330 French, Elementary Level*	4	B	-	-	56	-		3	4	
9E1332 French, Advanced Beginner's Level*	4	B	-	-	56	-		3	4	

9E1334 Technical French, Intermediate Level*_	6	B	-	-	-	-			3	4	
9E1342 Spanish, Elementary Level*_	4	B	-	-	56	-			3	4	
9E1346 Spanish, Advanced Beginner's Level*_	4	B	-	-	56	-			3	4	
9E1348 Technical Spanish, Intermediate Level*_	6	B	-	-	56	-			3	4	
9E1350 Italian, Elementary Level*_	4	B	-	-	56	-			3	4	
9E1360 Communicative Swedish*_	4	B	-	-	56	-			3	4	

*The course has limited participation

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Vehicle Engineering T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2A1140 Accelerator and Radiation Technology	4	D	36	-	-	4			3		
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
2A1160 Space Physics	3	D	12	-	-	-	1				
2C1111 System Planning	4	D	60	-	-	-			3		
2C1114 Wind Power Systems	4	C	52	10	-	4			3	4	
2D1225 Numerical Solutions of Differential Equations	4	C	26	4	-	18	1	2			
2D1250 Applied Numerical Methods II	6	C	-	-	60	24			3	4	
2D1255 Numerical Solutions of Differential Equations	5	D	36	-	-	20			3	4	
2D1257 Visualization	4	C	20	-	-	10			3		
2D1258 Introduction to High Performance Computing <i>Please note that the course starts in august.</i>	5	C	40	-	-	40	1				
2D1260 The Finite Element Method	4	D	18	14	-	12		2			
2D1263 Program Construction for Scientific Computing	4	D	24	-	-	12			3	4	
2D1266 Mathematical Models, Analysis and Simulation Part I	5	C	48	-	-	26	1	2			
2D1269 Mathematical Models, Analysis and Simulation, part II <i>Not given the academic year 02/03:</i>	5	C	48	-	-	28					
2D1297 Advanced Individual Course in Scientific Computing	4	D	-	-	-	-	1	2	3	4	
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1334 Database Technology	4	C	24	20	-	12			3		
2D1354 Algorithms and Complexity	4	C	30	18	-	-	1	2			
2D1385 Software Engineering	4	C	24	12	-	18				4	
2D1420 Computer Vision, Basic Course	5	D	46	6	-	12			3		
2D1426 Robotics and Autonomous Systems*_	5	D	16	-	-	60				4	

2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20			3		
2D1520 Graphic Arts Technology, Minor Course	4	C	30	8	-	16		2			
2D1521 Communication and Information*_	5	C	21	-	-	-			3		Seminars 24h
2D1522 Computer Technology and Communication*_	4	C	30	-	-	20				4	
2E1241 Automatic Control, Project Course*_	5	D	4	-	-	50				4	
2E1262 Nonlinear Control	5	D	28	28	-	8		2			
2E1291 Chemical Process Control	4	C	20	28	-	8			3		
2F1400 Electroacoustics	4	D	34	12	-	8	1				
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		Study visit 2x4h, Exercises
3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	21	-	-	6				4	Project work 20h
3C1355 Ecology, Advanced Course	4	C	21	4	-	-			3	4	
3C1360 Environmental Consequences, Advanced Course	4	C	18	9	-	8	1				Seminars 9hSeminars 9h
3C1365 Environmental Consequences, Advanced Course II	4	D	15	15	-	40	1	2			Field exercises
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2			
3C1380 Environmental Management	4	D	21	3	-	8			3	4	Project work 8h
3C1385 Biology	4	C	30	6	-	6	1				Field exercise 8h
3C1395 Technology and Sustainable Development	4	C	10	9	-	-		2			
3E1360 Mechanical Properties of Polymers, Minor Course	4	C	24	16	-	12	1				
3E1361 Polymer Processing, Minor Course	4	C	24	8	-	18		2			
4A1140 Energy Systems and Models	4	D	-	-	-	-				4	
4A1341 Introductory Airbreathing Propulsion	4	C	21	24	-	8		2			
4A1344 Airbreathing Propulsion, Intermediate Course I	4	D	40	-	-	-			3		Project work 6h
4A1346 Rocket Propulsion	4	D	36	10	-	-				4	Project work 6h
4A1347 Airbreathing Propulsion for High Speed Flight	4	D	27	10	-	6				4	
4A1605 Sustainable Power Generation	6	D	30	48	-	18	1	2			
4A1607 Sustainable Energy Utilization	6	D	-	-	72	16	1	2			
4A1609 Applied Energy Technology - Project Course	6	D	12	-	-	-			3	4	Project 78h
4A1610 Energy Management	4	D	50	-	-	-				4	
4A1611 Renewable Energy Technology	4	D	-	-	52	-		2			Study visit 8h
4A1613 Energy and Environment	4	D	45	-	-	-			3	4	
4A1620 Combustion Theory	4	C	18	18	-	15	1	2	3	4	
4A1621 Modelling of Thermodynamic Systems	4	D	16	-	-	32	1	2	3	4	The course is given upon agreement
4A1623 Applied Refrigeration and Heat Pump Technology	4	D	24	24	-	16			3	4	
4A1625 Cooling of Electronics	4	D	48	-	-	12			3		

4A1626 Applied Heat and Power Technology	4	D	30	12	-	8			3	4	Project assignment 8h
4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3		Study visits 12h
4A1628 Advanced Nuclear Reactor Engineering	4	D	42	-	-	-				4	Study visits 18h
4A1629 Fluid Machinery	4	C	30	18	-	12	1	2			
4A1630 Thermal Fluid Machinery	4	D	36	12	-	12			3		
4B1127 Vibroacoustics	5	D	-	56	-	8	1	2			
4B1131 Experimental Structure Dynamics	5	D	-	58	-	12		2	3		
4B1136 Flow Acoustics	4	D	-	36	-	8			3		
4B1141 Sound and Vibration, Projekt Course	5	D	-	48	-	12			3	4	Study tour to industry 40h
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	59	7	1	2			7 h Projektuppgift 7 h Projektuppgift
4B1313 Rail Vehicle Dynamics	5	D	-	-	36	24			3		
4B1420 Ground Vehicle Engineering, Basic Course	6	C	36	36	-	-	1	2			
4B1425 Ground Vehicle Dynamics, Basic Course*	7	D	33	60	-	-			3	4	
4C1110 Material Mechanics	4	D	52	-	-	3	1				
4C1111 Fracture Mechanics and Fatigue	4	D	48	-	-	4				4	
4C1116 Dynamic Problems in Solid Mechanics	4	D	42	-	-	8			3	4	
4C1118 Non-linear Theory of Elasticity	2	D	12	12	-	-				4	
4C1119 Finite Element Method, Project Course	2	D	8	-	-	-			3		
4D1027 Industrial Economics and Management, Basic Course	4	B	26	20	-	-		2			Seminars 4hSeminars 4h
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	
4D1060 Industrial Development	4	C	40	8	-	-			3		
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4D1075 Work Organization and Leadership*	4	C	24	24	-	-			3		
4D1090 Work Science, General Course	4	B	-	-	-	-	1	2	3	4	Literature course
4D1092 Man - Machine System	4	C	24	8	-	4			3		
4D1093 Psychology for Engineers <i>Replaces 4D1088 Technical Work Psychology</i>	4	C	24	4	-	4		2			
4D1094 Work Science	2	B	12	-	-	-		2			
4D1170 Advanced Production and Product Development	4	D	36	12	-	-		2			
4D1174 Management and Analysis of Innovations and Technology	4	D	38	-	-	-		2			Seminars 10hSeminars 10h
4E1124 Fibre Composites I: materials and processes	4	D	40	-	-	5	1				
4E1126 Structural Design and Optimisation	4	D	36	-	-	12			3		
4E1140 Flight Dynamics and Aeroelasticity	4	D	30	-	-	18			3		
4E1150 Biomechanics and Neurronics	4	D	36	-	-	6				4	
4E1201 Elements of Aeronautics	5	C	72	-	-	4			3	4	

4E1231 Flight Mechanics	4	D	30	-	-	18	1				
4F1131 Microcomputers in Embedded Systems* <i>Limited attendance: 25</i>	5	D	-	36	-	36			3		
4F1141 Project Work in Mechatronics* <i>Limited attendance due to limited number of available projects</i>	4	C	-	-	-	-	1	2	3	4	No scheduled hours
4F1244 Motion Control <i>The course will not be given until further notice.</i>	4	D	30	-	-	12				4	
4F1340 Introduction to Fluid Power	4	C	24	24	-	9	1				
4F1343 Fluid Systems and Machines	4	C	24	24	-	12				4	
4F1430 Combustion Engines, general course*	4	C	48	-	-	12	1				
4F1540 Tribology	4	C	18	9	-	5				4	
4F1540 Tribology	4	C	18	9	-	5	1				
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-				4	
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4F1631 Intermediate Machine Design Course	7	D	4	84	-	-			3	4	
4F1640 Industrial Design* <i>Limited number of participants.</i>	4	C	24	36	-	-			3		
4F1640 Industrial Design* <i>Limited number of participants.</i>	4	C	24	36	-	-		2			
4F1641 Environmentally Adapted Product Design	4	C	24	20	-	16		2			
4F1643 Eco Design Project*	4	C	-	-	-	-	1	2	3	4	
4G1161 Quality	6	C	40	16	-	-	1				
4G1230 Introductory Welding Technology	4	C	24	18	-	12	1				
4G1231 Intermediate Welding Technology	4	D	24	24	-	12	1	2			
4G1246 Enlarged Welding Technology for EWE <i>Course is given upon agreement</i>	4	D	25	25	-	10	1	2	3	4	
4G1540 Laser Metrology Methods and Non Destructive Testing	4	C	28	22	-	4		2			
4G1541 Measurement Technology & Statistics f Manufact. Processes	4	D	30	-	-	8			3		
4G1634 Manufacturing Engineering, Basic Course	6	C	32	20	-	12	1	2			
4K1107 Production of Electronics I	4	C	36	-	-	8			3		
4K1109 Principles for Product Integrated Manufacturing Systems Design	4	C	12	12	-	4	1				
4K1131 Assembly Systems	4	C	24	20	-	12		2			
4K1202 Modelling and Interaction in CAD/CAM* <i>Maximum of 20 participants. Students of "Computer Systems for Design and Manufacturing" will have priority.</i>	5	D	-	36	-	24	1				3 Programming tasks, periods 1, 2
4K1405 Environmental History	4	B	12	-	-	-				4	12 h Seminars
4K1409 History of Industry	4	B	12	-	-	-	1	2			Seminars 12h, Study visit 10h
4K1601 Wood Material Science, Basic Course	5	C	36	24	-	32			3	4	
4K1602 Industrial Wood Processing, Basic Course	4	C	26	16	-	16	1				

4M1051 Project	4	D	-	160	-	-	1	2	3	4	
4M1342 Space Systems and Technology	4	D	36	-	-	-		2			
4M1343 Materials Processing, Project Support	4	D	72	48	-	40	1	2	3	4	
4M1344 Metrology in Materials Processing	4	D	16	-	-	80	1				Seminars 16h
4M1345 Powder Processing and Materials Forming	4	D	30	-	-	-				4	Home assignments 80h
4M1346 Simulation and Modelling	4	D	10	80	-	-			3		
4M1370 Solidification Processing	4	D	36	24	-	-		2	3		
5A1414 Radiation Detectors and Medical Imaging Systems	5	D	24	6	-	20			3	4	
5A1416 Radiation Sources for Therapy	2	D	8	-	-	-				4	2 compulsory studyvisits
5A1590 Technical Photography	5	D	20	-	-	36			3	4	
5B1310 Applied and Industrial Mathematics	5	D	26	-	-	-	1	2			
5B1550 Applied Mathematical Statistics	5	D	-	-	60	-			3		
5B1555 Computer Intensive Methods in Mathematical Statistics	5	D	-	-	48	-				4	
5B1574 Portfolio Theory and Risk Management	4	D	30	12	-	-	1				
5B1742 Mathematical Systems Theory	4	D	32	16	-	-	1				
5B1814 Applied Mathematical Programming - Linear Problems	4	D	18	12	-	-		2			Projektuppgift 18h
5B1816 Applied Mathematical Programming - Nonlinear Problems	4	D	18	12	-	-			3		Projektuppgift 18h
5B1822 Mathematical Systems Theory, Advanced Course	4	D	24	24	-	6		2			
5B1852 Mathematical Economics	4	D	32	16	-	-		2			
5B1872 Optimal Control Theory	4	D	32	16	-	-			3		
5C1122 Continuum Mechanics	4	C	42	-	-	-	1				
5C1123 Mathematical Methods of Mechanics, General Course	4	D	36	-	-	-		2			
5C1125 Mathematical Methods of Mechanics, Intermediate Course	2	D	-	-	-	-			3		
5C1205 Compressible Flow, General Course	4	D	-	-	42	6	1				
5C1207 Boundary Layer Theory and Thermal Convection	5	D	-	-	38	9		2	3		
5C1208 Fluid Mechanics, Intermediate Course	2	D	-	-	20	-	1				
5C1210 Experimental Methods in Fluid Mechanics	4	D	-	-	28	9				4	
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4				4	4 h Seminars4 h Seminars
5C1213 Applied Computational Fluid Dynamics	2	D	-	-	10	14				4	
5C1400 Nonlinear Dynamics in Mechanics	5	C	24	-	-	-			3		
5C1860 FEM Modelling	5	D	33	-	-	-		2			44 h Workshop
5C1902 Advanced Dynamics of Complex Systems	4	D	24	-	-	-	1				
5C1904 Advanced Modern Mechanics	4	D	24	-	-	-		2			

5C1980 Mechanics in Research and Industry <i>The course runs the entire academic year. A few lectures during fall.</i>	4	C	24	-	-	37	1	2	3	4	
5C1992 Turbulence	4,5	D	-	-	36	3			3	4	
7E1101 Medical Engineering, Basic Course	4	C	24	-	-	-	1				
7E1110 Quality and Regulatory Aspects on Medical Devices*	2	D	20	-	-	-			3	4	
7E1112 Implants and Biomaterials*	4	D	25	-	-	-			3	4	
7E1113 Medical Instrumentation and Signal Processing*	4	D	30	-	-	6			3	4	
7E1114 Radiation Physics and Biology*	4	D	40	-	-	-				4	
7E1115 Engineering in Intensive Care and Anesthesia*	4	D	12	-	-	-			3	4	30 + 10h (field work with oral and written report)
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1				
7E1200 Cellular and Molecular Biology*	10	C	80	-	-	8			3	4	
7E1202 Systems Biology*	5	C	32	-	-	25		2			24 h Seminars 24 h Seminars
9E1131 Information Searching for B, I, M, T	1	B	-	-	-	-	1	2			3 laborations on all together 12 hours, 1 written examination and 1 written report. The course is given regularly throughout the academic year, please refer to the web page for the course.
9E1131 Information Searching for B, I, M, T	1	B	-	-	-	-			3	4	
9E1300 Technical English, Lower Intermediate Level*	4	B	-	-	56	-	1	2			
9E1301 Technical English, Intermediate*	6	B	-	-	56	-	1	2			
9E1304 Technical English, Advanced Level*	6	C	-	-	56	-			3	4	
9E1304 Technical English, Advanced Level*	6	C	-	-	56	-	1	2			
9E1320 German, Elementary Level*	4	B	-	56	56	-	1	2			
9E1322 German, Advanced Beginner's Level*	4	B	-	-	56	-	1	2			
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	18	-	-	1	2			E-learning exercises
9E1326 Technical German, Advanced Level*	6	C	-	-	56	-	1	2			
9E1326 Technical German, Advanced Level*	6	C	-	-	56	-			3	4	
9E1330 French, Elementary Level*	4	B	-	-	56	-	1	2			
9E1332 French, Advanced Beginner's Level*	4	B	-	-	56	-	1	2			
9E1334 Technical French, Intermediate Level*	6	B	-	-	56	-	1	2			
9E1342 Spanish, Elementary Level*	4	B	-	-	56	-	1	2			
9E1346 Spanish, Advanced Beginner's Level*	4	B	-	-	56	-	1	2			
9E1350 Italian, Elementary Level*	4	B	-	-	56	-	1	2			

9E1352 Italian, Advanced Beginner's Level*_	4	B	-	-	56	-			3	4	
9E1360 Communicative Swedish*_	4	B	-	-	56	-	1	2			

*The course has limited participation

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Vehicle Engineering

Business Development and Media Technology T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
4D1026 Industrial Economy and Management, Basic Course	4	B	26	20	-	-		2			4 h Seminars4 h Seminars
9E1300 Technical English, Lower Intermediate Level*_	4	B	-	-	56	-			3	4	
9E1301 Technical English, Intermediate*_	6	B	-	-	56	-			3	4	
9E1304 Technical English, Advanced Level*_	6	C	-	-	56	-			3	4	

*The course has limited participation

Business Development and Media Technology T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1521 Communication and Information	5	C	21	-	-	-	1				Seminars 24
2D1550 Market Systems <i>Only open to AFM-students</i>	5	C	-	-	-	-	1				Seminars 40h
2D1551 Consumer Markets <i>Open only to AFM-students.</i>	5	C	-	-	-	-	1				Seminars 40h
2D1552 Media Management <i>Open only for AFM-students.</i>	10	C	72	56	-	-	1	2	3	4	Only open for AFM-students.
2D1553 Media Production <i>Only open for AFM-students.</i>	10	C	40	-	-	110		2			Only open for AFM-students.
2D1555 Information Technology and Organizations	5	D	39	-	-	-				4	
Elective Courses											
2D1334 Database Technology	4	C	24	20	-	12			3		
2D1524 Image Processing and Reprographic Methods* <i>Limited number of participants</i>	6	C	50	16	-	24	1				

*The course has limited participation

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Vehicle Engineering

Advanced Materials T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4H1610 <u>Advanced Materials</u>	4	C	18	-	-	6			3		Study visit 18h Seminars	
4H1611 <u>Materials Optimisation and Design</u>	5	C	18	18	-	12				4	Study visits 10h	
Elective Courses												
4H1504 <u>Processing of Ceramic Materials</u>	4	C	12	-	-	18			3			

Advanced Materials T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1612 High Temperature Materials	7	D	18	12	-	6	1				Study visit 8h Seminars 10h Project assignment 100h
Elective Courses											
4H1404 Corrosion and Surface Protection, General Course	4	C	16	12	-	12	1				
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-			3		
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18		2			

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Vehicle Engineering

Biomedical Engineering T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1200 Cellular and Molecular Biology*_	10	C	80	-	-	8			3	4	
7E1201 Neuroscience*_	5	C	60	-	-	30				4	

*The course has limited participation

Biomedical Engineering T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1				
7E1202 Systems Biology*_	5	C	32	-	-	25		2			24 h Seminars24 h Seminars
Elective Courses											
2D1435 Mathematical Modelling of Biological Systems <i>The course is given every second year and will not be given in 02/03.</i>	6	D	26	-	-	20					

*The course has limited participation

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Vehicle Engineering

Computer Systems for Design and Manufacturing T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
4K1201 Computer Aided Design and Manufacturing, Introductory course	5	C	48	-	-	24				4	Graded exercise

Computer Systems for Design and Manufacturing T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				
4K1202 Modelling and Interaction in CAD/CAM* <i>Maximum of 20 participants. Students of "Computer Systems for Design and Manufacturing" will have priority.</i>	5	D	-	36	-	24	1				3 Programming tasks, periods 1, 2
4K1203 Computer Systems for Design and Manufacturing, advanced course <i>Maximum of 20 participants. Students of "Computer Systems for Design and Manufacturing" will have priority.</i>	12	D	-	68	-	60		2	3	4	4 Programming Projects, periods 2, 3, 4
Elective Courses											
4F1131 Microcomputers in Embedded Systems*	5	D	-	36	-	36		2			
4K1103 Manufacturing Automation II	6	C	28	32	-	17	1	2			

*The course has limited participation

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Vehicle Engineering

Energy Technology T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4A1601 Heat Transfer	4	C	24	24	-	20			3		
4A1603 Energy Technology	4	C	48	12	-	-				4	

Energy Technology T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4A1605 Sustainable Power Generation	6	D	30	48	-	18	1	2			
4A1607 Sustainable Energy Utilization	6	D	-	-	72	16	1	2			
4A1609 Applied Energy Technology - Project Course	6	D	12	-	-	-			3	4	Project 78h
Elective Courses											
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
4A1140 Energy Systems and Models	4	D	-	-	-	-				4	
4A1610 Energy Management	4	D	50	-	-	-				4	
4A1611 Renewable Energy Technology	4	D	-	-	52	-		2			Study visit 8h
4A1613 Energy and Environment	4	D	45	-	-	-			3	4	
4A1620 Combustion Theory	4	C	18	18	-	15	1	2	3	4	
4A1621 Modelling of Thermodynamic Systems	4	D	16	-	-	32	1	2	3	4	The course is given upon agreement
4A1622 Thermal Comfort and Indoor Climate	4	D	24	24	-	12			3	4	
4A1623 Applied Refrigeration and Heat Pump Technology	4	D	24	24	-	16			3	4	
4A1624 Numerical Methods in Energy Technology	4	D	24	12	-	12				4	
4A1625 Cooling of Electronics	4	D	48	-	-	12			3		
4A1626 Applied Heat and Power Technology	4	D	30	12	-	8			3	4	Project assignment 8h
4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3		Study visits 12h
4A1629 Fluid Machinery	4	C	30	18	-	12	1	2			



4A1630 Thermal Fluid Machinery	4	D	36	12	-	12			3		
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Vehicle Engineering

Aeronautics and Astronautics T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1102 <u>Lightweight Structures and FEM I</u>	5	C	64	-	-	22			3	4	
4E1201 <u>Elements of Aeronautics</u>	5	C	72	-	-	4			3	4	

Aeronautics and Astronautics T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1131 Aircraft and Lightweight Design	6	D	8	60	-	12			3	4	
4E1140 Flight Dynamics and Aeroelasticity	4	D	30	-	-	18			3		
4E1212 Aerodynamics	6	D	50	10	-	14	1	2			
4E1231 Flight Mechanics	4	D	30	-	-	18	1				
Elective Courses											
4A1341 Introductory Airbreathing Propulsion	4	C	21	24	-	8		2			
4A1346 Rocket Propulsion	4	D	36	10	-	-				4	Project work 6h
4A1347 Airbreathing Propulsion for High Speed Flight	4	D	27	10	-	6				4	
4B1131 Experimental Structure Dynamics	5	D	-	58	-	12		2	3		
4E1125 Fibre Composites II, Analysis and Design	4	D	48	-	-	6		2			

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Vehicle Engineering

Automotive Engineering T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1120 <u>Signal Analysis with Applications</u>	5	D	-	28	-	24				4	
4F1242 <u>Introduction to Microcomputer Systems</u>	4	C	12	22	-	14				4	
Elective Courses											
4E1102 <u>Lightweight Structures and FEM I</u>	5	C	64	-	-	22			3	4	

Automotive Engineering T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1420 <u>Ground Vehicle Engineering, Basic Course</u>	6	C	36	36	-	-	1	2			
4B1425 <u>Ground Vehicle Dynamics, Basic Course</u> *_	7	D	33	60	-	-			3	4	
4F1430 <u>Combustion Engines, general course</u> *_	4	C	48	-	-	12	1				
Elective Courses											
4B1131 <u>Experimental Structure Dynamics</u>	5	D	-	58	-	12		2	3		
4F1131 <u>Microcomputers in Embedded Systems</u> *_	5	D	-	36	-	36		2			
4F1131 <u>Microcomputers in Embedded Systems</u> *_ <i>Limited attendance: 25</i>	5	D	-	36	-	36			3		

*The course has limited participation

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Internal Combustion Engines T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
4F1241 Microcomputer, Sensors and Actuators	6	C	18	26	-	29				4	

Internal Combustion Engines T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1420 <u>Ground Vehicle Engineering, Basic Course</u>	6	C	36	36	-	-	1	2			
4F1430 <u>Combustion Engines, general course*</u>	4	C	48	-	-	12	1				
4F1431 <u>Combustion Engines, Advanced Course*</u>	6	D	56	-	-	32		2	3		
4F1460 <u>Combustion Engines, Project Course</u>	6	D	-	18	-	-			3	4	
Elective Courses											
4B1131 <u>Experimental Structure Dynamics</u>	5	D	-	58	-	12		2	3		
4F1141 <u>Project Work in Mechatronics*</u> <i>Limited attendance due to limited number of available projects</i>	4	C	-	-	-	-	1	2	3	4	No scheduled hours

*The course has limited participation

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Vehicle Engineering

Solid Mechanics T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4C1117 Design Applications of Solid Mechanics*_	4	D	16	6	-	-				4	Estimated time for project: 90h	
Elective Courses												
4C1112 Theory of Elasticity_	4	D	26	26	-	-			3			
4C1116 Dynamic Problems in Solid Mechanics_	4	D	42	-	-	8			3	4		

*The course has limited participation

Solid Mechanics T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1114 Finite Element Method	4	D	-	49	-	8		2			
Elective Courses											
3E1324 Polymer Materials - Properties and Applications	4	C	30	12	-	10				4	
3E1360 Mechanical Properties of Polymers, Minor Course	4	C	24	16	-	12	1				
4B1313 Rail Vehicle Dynamics	5	D	-	-	36	24			3		
4B1420 Ground Vehicle Engineering, Basic Course	6	C	36	36	-	-	1	2			
4C1110 Material Mechanics	4	D	52	-	-	3	1				
4C1111 Fracture Mechanics and Fatigue	4	D	48	-	-	4				4	
4C1116 Dynamic Problems in Solid Mechanics	4	D	42	-	-	8			3	4	
4C1118 Non-linear Theory of Elasticity	2	D	12	12	-	-				4	
4C1119 Finite Element Method, Project Course	2	D	8	-	-	-			3		
4E1125 Fibre Composites II, Analysis and Design	4	D	48	-	-	6		2			
4F1540 Tribology	4	C	18	9	-	5	1				
4F1540 Tribology	4	C	18	9	-	5				4	
4G1230 Introductory Welding Technology	4	C	24	18	-	12	1				

4H1202 Mechanical Metallurgy I	6	D	24	12	-	48			3	4	Home assignments
4H1203 Mechanical Metallurgy II	4,5	C	24	12	-	24			3	4	Home assignments
4H1205 Mechanical Properties of Materials	4	C	20	18	-	6		2			Study visit 4hStudy visit 4h Study visit 4h
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18		2			
5A1301 Mathematical Methods in Physics, Course I	4	C	-	54	-	-	1	2			
5C1122 Continuum Mechanics	4	C	42	-	-	-	1				
5C1123 Mathematical Methods of Mechanics, General Course	4	D	36	-	-	-		2			
5C1125 Mathematical Methods of Mechanics, Intermediate Course	2	D	-	-	-	-			3		
5C1208 Fluid Mechanics, Intermediate Course	2	D	-	-	20	-	1				
5C1902 Advanced Dynamics of Complex Systems	4	D	24	-	-	-	1				

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Industrial Economics and Management T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1026 Industrial Economy and Management, Basic Course	4	B	26	20	-	-		2			4 h Seminars4 h Seminars
4D1028 Industrial Economics and Management, Advanced Course	4	C	26	20	-	-				4	4 h Seminars4 h Seminars
Elective with											
4D1060 Industrial Development	4	C	40	8	-	-			3		
4D1075 Work Organization and Leadership*_	4	C	24	24	-	-			3		
4K1101 Control Systems	4	C	18	28	-	12				4	
Elective Courses											
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	

*The course has limited participation

Industrial Economics and Management T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1035 <u>Advanced Industrial Economics and Management</u>	12	D	68	72	-	-		2	3	4	Roll-play 16h
Elective with											
4D1070 <u>Industrial Project Management</u>	4	C	32	-	-	-	1				Seminars 2hSeminars 2h
4F1630 <u>Introduction to Machine Design</u>	5	C	24	36	-	-	1	2			
4K1102 <u>Manufacturing Automation I</u>	4	C	20	24	-	12	1				
Elective Courses											
4D1062 <u>Industrial Marketing</u> <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4D1070 <u>Industrial Project Management</u>	4	C	32	-	-	-	1				Seminars 2hSeminars 2h
4D1152 <u>Industrial Marketing, Advanced Course</u> <i>Open only to IEO-students.</i>	4	D	36	12	-	-	1				



4K1103 Manufacturing Automation II	6	C	28	32	-	17	1	2			
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Industrial Engineering T3

T-students have to choose either 4M1320 or 4G1634 for INP and TIP.

Students have to choose either 4M1320 or 4G1634 for M1 and M2.												
Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-					4	
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-					4	
4G1161 Quality	6	C	40	16	-	-				3		
Elective Courses												
4G1632 Materials Processing II	4	C	29	30	-	13					4	
4G1635 Materials Processing II, Laboratory Course	5	D	29	30	-	37					4	
4M1320 Manufacturing Technology	4	C	22	20	-	20					4	Preparatory course 20h Computer work 20h Home assignments 20h

Industrial Engineering T4

T-students have to choose either 4M1320 or 4G1634 for INP and TIP.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1146 <u>Advanced Industrial Engineering</u>	12	D	67	22	-	-	1	2			Projektuppgift 120h
4G1161 <u>Quality</u>	6	C	40	16	-	-	1				
Elective with											
4G1634 <u>Manufacturing Engineering, Basic Course</u>	6	C	32	20	-	12	1	2			
Elective Courses											
3C1340 <u>Environmental Technology, Advanced Course</u>	4	D	36	6	-	-			3		Study visit 2x4h, Exercises
3C1360 <u>Environmental Consequences, Advanced Course</u>	4	C	18	9	-	8	1				Seminars 9hSeminars 9h
4D1062 <u>Industrial Marketing</u> <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4D1093 <u>Psychology for Engineers</u> <i>Replaces 4D1088 Technical Work Psychology</i>	4	C	24	4	-	4		2			
4G1053 <u>Materials Processing, Project Support</u>	4	D	72	48	-	40		2	3	4	Home assignments 48h

4G1170 Intelligent Machining, Advanced Course	4	D	36	20	-	-	2	3	4	
4G1243 Advanced Welding Technology, Modulus 1	4	D	20	20	-	20		3		
4G1244 Advanced Welding Technology, Modulus 2	4	D	20	20	-	20		3		
4G1245 Advanced Welding Technology, Modulus 3	4	D	20	20	-	20			4	
4G1246 Enlarged Welding Technology for EWE <i>Course is given upon agreement</i>	4	D	25	25	-	10	1	2	3	4
4G1540 Laser Metrology Methods and Non-Destructive Testing	4	C	28	22	-	4		2		
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1			
4M1320 Manufacturing Technology	4	C	22	20	-	20			4	Preparatory course 20h Computer work 20h Home assignments 20h

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Integrated Product Development T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1075 Work Organization and Leadership*_	4	C	24	24	-	-			3		
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-				4	
Elective Courses											
4F1242 Introduction to Microcomputer Systems	4	C	12	22	-	14				4	

*The course has limited participation

Integrated Product Development T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-		2			
4F1760 Integrated Product Development, Advanced Course	20	D	-	180	-	-	1	2	3	4	
Elective Courses											
4F1131 Microcomputers in Embedded Systems*	5	D	-	36	-	36		2			
4F1641 Environmentally Adapted Product Design	4	C	24	20	-	16		2			
4F1642 Modelling and Computer Support in Mechanical Design	4	C	24	36	-	-			3		

*The course has limited participation

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Sound and Vibrations T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1120 <u>Signal Analysis with Applications</u>	5	D	-	28	-	24				4	

Sound and Vibrations T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1127 <u>Vibroacoustics</u>	5	D	-	56	-	8	1	2			
4B1131 <u>Experimental Structure Dynamics</u>	5	D	-	58	-	12		2	3		
4B1136 <u>Flow Acoustics</u>	4	D	-	36	-	8			3		
4B1141 <u>Sound and Vibration, Projekt Course</u>	5	D	-	48	-	12			3	4	Study tour to industry 40h
9E1131 <u>Information Searching for B, I, M, T</u>	1	B	-	-	-	-			3	4	

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Lightweight Structures T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1102 <u>Lightweight Structures and FEM I</u>	5	C	64	-	-	22			3	4	
Elective Courses											
4E1201 <u>Elements of Aeronautics</u>	5	C	72	-	-	4			3	4	

Lightweight Structures T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1124 <u>Fibre Composites I: materials and processes</u>	4	D	40	-	-	5	1				
4E1125 <u>Fibre Composites II, Analysis and Design</u>	4	D	48	-	-	6		2			
4E1126 <u>Structural Design and Optimisation</u>	4	D	36	-	-	12			3		
4E1131 <u>Aircraft and Lightweight Design</u>	6	D	8	60	-	12			3	4	
4E1150 <u>Biomechanics and Neuronics</u>	4	D	36	-	-	6				4	
Elective Courses											
4B1304 <u>Railway Systems and Rail Vehicles</u>	6	C	-	-	59	7	1	2			7 h Projektuppgift7 h Projektuppgift
4B1420 <u>Ground Vehicle Engineering, Basic Course</u>	6	C	36	36	-	-	1	2			
4E1212 <u>Aerodynamics</u>	6	D	50	10	-	14	1	2			
4F1630 <u>Introduction to Machine Design</u>	5	C	24	36	-	-	1	2			
5B1722 <u>Applied Optimization</u>	4	C	30	14	-	-			3		
9E1300 <u>Technical English, Lower Intermediate Level*</u>	4	B	-	-	56	-	1	2			
9E1301 <u>Technical English, Intermediate*</u>	6	B	-	-	56	-	1	2			
9E1304 <u>Technical English, Advanced Level*</u>	6	C	-	-	56	-	1	2			
9E1325 <u>Technical German, Intermediate Level, E-learning</u>	6	B	-	18	-	-	1	2			E-learning exercises
9E1326 <u>Technical German, Advanced Level*</u>	6	C	-	-	56	-	1	2			

9E1334 <u>Technical French, Intermediate</u> Level*_	6	B	-	-	56	-	1	2			
9E1348 <u>Technical Spanish, Intermediate</u> Level*_	6	B	-	-	56	-			3	4	

*The course has limited participation

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Naval systems T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1102 <u>Lightweight Structures and FEM I</u>	5	C	64	-	-	22			3	4	
4E1401 <u>Introduction to Naval Architecture</u>	5	C	46	10	-	10			3	4	

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Machine Elements T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-			3	4	One day field trip.

Machine Elements T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1540 Tribology	4	C	18	9	-	5				4	
4F1540 Tribology	4	C	18	9	-	5	1				
4F1560 Advanced Machine Elements	12	D	-	120	-	-			3	4	
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4K1132 Modularisation of Products <i>Some parts of the course are outlined in 4K1131 Assembly Systems and 4K1104 Manufacturing Systems, advanced course.</i>	4	C	24	20	-	-			3		
Elective Courses											
4C1114 Finite Element Method	4	D	-	49	-	8		2			

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Machine Design T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1530 <u>Function Analysis and Optimization in Mechanical Engineering</u>	5	C	-	60	-	-			3	4	One day field trip.
Elective Courses											
4C1112 <u>Theory of Elasticity</u>	4	D	26	26	-	-			3		
4F1241 <u>Microcomputer, Sensors and Actuators</u>	6	C	18	26	-	29				4	
4F1242 <u>Introduction to Microcomputer Systems</u>	4	C	12	22	-	14				4	
4F1343 <u>Fluid Systems and Machines</u>	4	C	24	24	-	12				4	
4F1642 <u>Modelling and Computer Support in Mechanical Design</u>	4	C	24	36	-	-			3		
4K1201 <u>Computer Aided Design and Manufacturing, Introductory course</u>	5	C	48	-	-	24				4	Graded exercise
5C1121 <u>Analytical Mechanics</u>	4	C	48	-	-	-			3		

Machine Design T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4F1640 Industrial Design*_	4	C	24	36	-	-	1				
4F1660 Advanced Machine Design	12	D	4	114	-	-			3	4	
Elective Courses											
3E1360 Mechanical Properties of Polymers, Minor Course	4	C	24	16	-	12	1				
3E1361 Polymer Processing, Minor Course	4	C	24	8	-	18		2			
4C1114 Finite Element Method	4	D	-	49	-	8		2			
4F1131 Microcomputers in Embedded Systems*_	5	D	-	36	-	36		2			
4F1131 Microcomputers in Embedded Systems*_	5	D	-	36	-	36			3		
Limited attendance: 25											

4F1141 Project Work in Mechatronics* <i>Limited attendance due to limited number of available projects</i>	4	C	-	-	-	-	1	2	3	4	No scheduled hours
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-				4	
4F1641 Environmentally Adapted Product Design	4	C	24	20	-	16		2			
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				

*The course has limited participation

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Materials Science T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4H1104 Diffusion and Phase Equilibria	6	D	18	18	-	42	1	2			
4H1113 Powder Metallurgy	4	D	18	18	-	12		2			
4H1301 Material Design	4	D	-	2	-	10			3	4	
4H1404 Corrosion and Surface Protection, General Course	4	C	16	12	-	12	1				
Elective with											
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-			3		
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18		2			
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1610 Advanced Materials	4	C	18	-	-	6			3		Study visit 18h Seminars
4H1702 Current Research Topics in Materials Chemistry	4	D	20	4	-	8				4	
4H1703 Materials Chemistry	4	D	20	4	-	8				4	
4H1802 Artificial Materials	4	D	20	4	-	6	1				
5A1304 Mathematical Methods in Physics	6	C	-	78	-	-	1	2			
5A1370 Solid State Theory	4	D	36	-	-	-	1				
Elective Courses											
4H1803 Physics of Nanostructured Materials	4	D	20	4	-	6				4	

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Mechanics T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
5C1121 Analytical Mechanics	4	C	48	-	-	-			3		
Elective Courses											
5C1203 Fluid Mechanics, General Course <i>Compulsory within competenceprogram Fluid Mechanics.</i>	4	C	-	24	24	3				4	

Mechanics T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5C1122 Continuum Mechanics	4	C	42	-	-	-	1				
5C1123 Mathematical Methods of Mechanics, General Course	4	D	36	-	-	-		2			
5C1125 Mathematical Methods of Mechanics, Intermediate Course	2	D	-	-	-	-			3		
5C1205 Compressible Flow, General Course	4	D	-	-	42	6	1				
5C1207 Boundary Layer Theory and Thermal Convection	5	D	-	-	38	9		2	3		
5C1208 Fluid Mechanics, Intermediate Course	2	D	-	-	20	-	1				
5C1209 Compressible Flow, Intermediate Course	2	D	-	-	22	6		2			
5C1210 Experimental Methods in Fluid Mechanics	4	D	-	-	28	9				4	
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4				4	4 h Seminars4 h Seminars
5C1212 Computational Fluid Dynamics	5	D	-	-	50	10			3		
5C1213 Applied Computational Fluid Dynamics	2	D	-	-	10	14				4	
5C1902 Advanced Dynamics of Complex Systems	4	D	24	-	-	-	1				
5C1904 Advanced Modern Mechanics	4	D	24	-	-	-		2			
5C1992 Turbulence	4,5	D	-	-	36	3			3	4	

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Mechatronics T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-			3	4	One day field trip.
Elective Courses											
4F1241 Microcomputer, Sensors and Actuators	6	C	18	26	-	29				4	
4F1242 Introduction to Microcomputer Systems	4	C	12	22	-	14				4	

Mechatronics T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1132 <u>Microcomputers in Embedded Systems</u>	5	D	-	36	-	36	1				
4F1142 <u>Motion Control and Real-time Implementation*</u>	5	D	22	10	-	30		2		4	
4F1162 <u>Mechatronics, Advanced Course II</u>	15	D	-	116	-	80		2	3	4	

*The course has limited participation

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Vehicle Engineering

Environmental Management T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		Study visit 2x4h, Exercises	

Environmental Management T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3C1360 Environmental Consequences, Advanced Course	4	C	18	9	-	8	1				Seminars 9hSeminars 9h
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2			
3C1390 Environmental Management, Larger Course	8	D	36	3	-	24			3	4	Project work, field exercise
Elective Courses											
3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	21	-	-	6				4	Project work 20h
3C1365 Environmental Consequences, Advanced Course II	4	D	15	15	-	40	1	2			Field exercises
3C1387 Environmental Systems Analysis	4	C	22	15	-	6		2			

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Vehicle Engineering

Paper Technology T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3D1107 Paper Technology	6	D	42	-	-	56			3	4	2 days studytrip	
Elective Courses												
3D1112 Fibre Technology	4	D	26	-	-	15				4		

Paper Technology T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1520 <u>Graphic Arts Technology, Minor Course</u>	4	C	30	8	-	16		2			
3D1113 <u>Paper Physics</u>	4	D	20	-	-	20	1				
3D1114 <u>Paper Processes Technology</u>	4	D	20	-	-	20			3		
3D1117 <u>Paper Technology, project</u>	4	D	-	-	-	-			3	4	Project work
3D1163 <u>Pulp Technology, M</u> <i>Under bearbetning</i>	4	D	20	-	-	24	1				

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Vehicle Engineering

Publiceringsteknik T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2D1521 Communication and Information*_	5	C	21	-	-	-			3		Seminars 24h	
2D1522 Computer Technology and Communication*_	4	C	30	-	-	20				4		
2D1526 Publishing Technology, General Course	6	C	60	-	-	20			3		30h; A one week study tour is made in period 4.	

*The course has limited participation

Publiceringsteknik T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1515 Machinery and Materials in Graphic Arts Technology	6	C	50	12	-	12		2			
2D1517 XML for Publishing*_	5	D	30	-	-	40	1	2			
2D1518 Audio, Video and Multimedia Production*_	5	C	30	-	-	40		2	3		
2D1524 Image Processing and Reprographic Methods*_ <i>Limited number of participants</i>	6	C	50	16	-	24	1				
2D1527 Publishing Technology, Advanced Course	10	D	100	50	-	32			3	4	50h
Elective Courses											
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1334 Database Technology	4	C	24	20	-	12			3		

*The course has limited participation

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Naval Architecture T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
4B1127 Vibroacoustics	5	D	-	56	-	8	1	2			
4C1111 Fracture Mechanics and Fatigue	4	D	48	-	-	4				4	
4C1112 Theory of Elasticity	4	D	26	26	-	-			3		
4C1114 Finite Element Method	4	D	-	49	-	8		2			
4C1116 Dynamic Problems in Solid Mechanics	4	D	42	-	-	8			3	4	
4F1430 Combustion Engines, general course*	4	C	48	-	-	12	1				
4G1230 Introductory Welding Technology	4	C	24	18	-	12	1				
5A1301 Mathematical Methods in Physics, Course I	4	C	-	54	-	-	1	2			
5B1832 Systems Engineering	8	D	56	28	-	12	1	2			
5C1208 Fluid Mechanics, Intermediate Course	2	D	-	-	20	-	1				
5C1212 Computational Fluid Dynamics	5	D	-	-	50	10			3		
5C1213 Applied Computational Fluid Dynamics	2	D	-	-	10	14				4	

*The course has limited participation

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Vehicle Engineering

Rail Vehicles and Railway Systems T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1304 <u>Railway Systems and Rail Vehicles</u>	6	C	-	-	59	7	1	2			7 h Projektuppgift7 h Projektuppgift
4B1313 <u>Rail Vehicle Dynamics</u>	5	D	-	-	36	24			3		
Elective with											
2C1149 <u>Electric Traction</u>	4	C	36	-	-	-				4	
4B1127 <u>Vibroacoustics</u>	5	D	-	56	-	8	1	2			
Elective Courses											
1C1206 <u>Railway Track Engineering</u>	5	D	33	-	-	-			3		Workshop 44h
1H1206 <u>Planning of Railroad Traffic</u>	5	C	-	-	72	-	1				
4C1116 <u>Dynamic Problems in Solid Mechanics</u>	4	D	42	-	-	8			3	4	
4F1540 <u>Tribology</u>	4	C	18	9	-	5				4	
4F1540 <u>Tribology</u>	4	C	18	9	-	5	1				
4F1630 <u>Introduction to Machine Design</u>	5	C	24	36	-	-	1	2			
5B1722 <u>Applied Optimization</u>	4	C	30	14	-	-			3		

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Vehicle Engineering

Systems Engineering T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4		
4D1026 Industrial Economy and Management, Basic Course	4	B	26	20	-	-		2			4 h Seminars4 h Seminars	
5B1538 Reliability Theory	6	D	-	-	72	-			3	4		
5B1722 Applied Optimization	4	C	30	14	-	-			3			
Elective Courses												
2D1220 Applied Numerical Methods I	4	C	42	-	-	18			3	4		
2D1250 Applied Numerical Methods II	6	C	-	-	60	24			3	4		

Systems Engineering T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
5B1832 Systems Engineering	8	D	56	28	-	12	1	2			
Elective Courses											
1H1204 Logistics	5	C	6	-	-	-	1	2			15 h SeminarsProject-course, 15 h Seminars
1H1206 Planning of Railroad Traffic	5	C	-	-	72	-	1				
1H1212 Logistics, Advanced Course	5	D	4	-	-	-			3		12 h SeminarsProject-course, 12 h Seminars
1H1401 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3		6 h Seminars6 h Seminars
5B1550 Applied Mathematical Statistics	5	D	-	-	60	-			3		
5B1852 Mathematical Economics	4	D	32	16	-	-		2			

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Materials Processing T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1134 Effective Production	6	D	25	35	-	-			3	4	
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4	
4G1161 Quality	6	C	40	16	-	-			3		
Elective Courses											
4G1632 Materials Processing II	4	C	29	30	-	13				4	
4G1635 Materials Processing II, Laboratory Course	5	D	29	30	-	37				4	
4H1251 Metal Forming - Fundamentals	6	C	36	36	-	18			3	4	
4M1320 Manufacturing Technology	4	C	22	20	-	20				4	Preparatory course 20h Computer work 20h Home assignments 20h

Materials Processing T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1051 <u>Project Assignment, Materials Processing</u> <i>Under bearbetning</i>	4	D	-	160	-	-		2	3	4	Projektuppgift 160h Projektuppgift 160h
4G1053 <u>Materials Processing, Project Support</u>	4	D	72	48	-	40		2	3	4	Home assignments 48h
Elective with											
4G1230 <u>Introductory Welding Technology</u>	4	C	24	18	-	12	1				
4G1570 <u>Metrology & Quality for the Manufacturing Industry</u>	4	D	36	24	-	-		2	3		
4G1634 <u>Manufacturing Engineering, Basic Course</u>	6	C	32	20	-	12	1	2			
4G1670 <u>Materials Forming</u>	4	D	18	12	-	18		2	3		
4M1370 <u>Solidification Processing</u>	4	D	36	24	-	-		2	3		
Elective Courses											
4C1110 <u>Material Mechanics</u>	4	D	52	-	-	3	1				
4F1630 <u>Introduction to Machine Design</u>	5	C	24	36	-	-	1	2			

4G1170 Intelligent Machining, Advanced Course	4	D	36	20	-	-	2	3	4	
4G1243 Advanced Welding Technology, Modulus 1	4	D	20	20	-	20		3		
4G1244 Advanced Welding Technology, Modulus 2	4	D	20	20	-	20		3		
4G1245 Advanced Welding Technology, Modulus 3	4	D	20	20	-	20			4	
4G1246 Enlarged Welding Technology for EWE <i>Course is given upon agreement</i>	4	D	25	25	-	10	1	2	3	4
4G1541 Measurement Technology & Statistics f Manufact. Processes	4	D	30	-	-	8		3		
4M1320 Manufacturing Technology	4	C	22	20	-	20			4	Preparatory course 20h Computer work 20h Home assignments 20h
4M1341 Foundry Processing	4	D	12	-	-	-	1			Seminarier 24h Other 28h

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Vehicle Engineering

Assembly Systems T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1026 Industrial Economy and Management, Basic Course	4	B	26	20	-	-		2			4 h Seminars4 h Seminars
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4	
4G1161 Quality	6	C	40	16	-	-			3		
4K1201 Computer Aided Design and Manufacturing, Introductory course	5	C	48	-	-	24				4	Graded exercise

Assembly Systems T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1634 Manufacturing Engineering, Basic Course	6	C	32	20	-	12	1	2			
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				
4K1104 Manufacturing Systems, advanced course	12	D	50	48	-	28		2	3	4	
4K1109 Principles for Product Integrated Manufacturing Systems Design	4	C	12	12	-	4	1				

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Vehicle Engineering

Wood Technology T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4K1601 Wood Material Science, Basic Course	5	C	36	24	-	32			3	4	

Wood Technology T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4K1602 Industrial Wood Processing, Basic Course	4	C	26	16	-	16	1				
4K1603 Wood Technology, Advanced Course	10	D	48	24	-	36		2	3	4	
Elective Courses											
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				

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Industrial Engineering and Management

Industrial Engineering and Management I1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1310 Programming Technique	4	B	26	16	-	36			3	4	
4D1111 Engineering <i>The course is subject to revision. Some parts of the course might be changed.</i>	5	B	42	-	-	-			3		Seminars 20h
4D1123 Industrial Economics and Management, Basic Course	6	B	56	28	-	8	1	2			
5B1135 Mathematics 1, I	6	B	36	-	36	-	1				
5B1136 Mathematics 2, I	6	B	36	-	36	-		2			
5B1230 Mathematics IV	6	C	36	36	-	-				4	
5C1103 Mechanics, Basic Course	6	B	48	27	-	-			3	4	
Recommended Courses											
5B1120 Introductory Course in Mathematics I <i>The course is taught during the introductory-period in August.</i>	1	A	4	-	-	-	1				

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Industrial Engineering and Management

Industrial Engineering and Management I2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1210 Numerical Methods, Basic Course I	4	B	24	24	-	24			3	4	
4D1124 Industrial Economics and Management, Advanced Course	4	C	42	-	-	-	1				Seminars 6h
4D1160 Economics With Focus on Microeconomic Theory	4	C	40	8	-	-		2			
5B1230 Mathematics IV	6	C	36	36	-	-	1				

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Industrial Engineering and Management

Industrial Engineering and Management I3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1114 Knowledge Formation I <i>The course is subject to revision. Some parts of the course might be changed.</i>	4	C	18	-	-	10			3		Seminars 10h
Elective with											
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4D1152 Industrial Marketing, Advanced Course <i>Open only to IEO-students.</i>	4	D	36	12	-	-	1				
4D1162 Management Control: Strategic and Behavioural Perspectives	4	C	32	-	-	-		2			Seminars 6h
4D1164 Cost Management and Performance Measurement	4	D	32	-	-	-				4	Seminars 6h
4D1168 Industrial Dynamics	4	C	40	-	-	-	1				Seminars 8h
4D1170 Advanced Production and Product Development	4	D	36	12	-	-		2			
4D1174 Management and Analysis of Innovations and Technology	4	D	38	-	-	-		2			Seminars 10hSeminars 10h
4D1176 Internet Economics	4	C	36	12	-	-				4	
Elective Courses											
5B1574 Portfolio Theory and Risk Management	4	D	30	12	-	-	1				

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Industrial Engineering and Management I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1117 Knowledge Formation II	4	C	28	-	-	-	1				
Elective with											
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	
4D1051 Commercial Law	4	C	22	14	-	-		2			
4D1056 Intellectual Property Law	4	D	30	-	-	-				4	Seminars 6h
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4D1070 Industrial Project Management	4	C	32	-	-	-	1				Seminars 2hSeminars 2h
4D1141 Leadership	4	C	24	20	-	-	1				Role-play 4h
4D1152 Industrial Marketing, Advanced Course <i>Open only to IEO-students.</i>	4	D	36	12	-	-	1				
4D1162 Management Control: Strategic and Behavioural Perspectives	4	C	32	-	-	-		2			Seminars 6h
4D1164 Cost Management and Performance Measurement	4	D	32	-	-	-				4	Seminars 6h
4D1166 Finance	4	C	30	18	-	-		2			
4D1168 Industrial Dynamics	4	C	40	-	-	-	1				Seminars 8h
4D1170 Advanced Production and Product Development	4	D	36	12	-	-		2			
4D1174 Management and Analysis of Innovations and Technology	4	D	38	-	-	-		2			Seminars 10hSeminars 10h
4D1176 Internet Economics	4	C	36	12	-	-				4	
4D1178 Work Science and Economics	4	C	36	12	-	-		2			Seminars 4h
4D1500 Intrapreneurship	5	C	16	10	-	-				4	
4D1505 Create a Business Opportunity	5	C	34	-	-	-	1				
4G1161 Quality	6	C	40	16	-	-	1				
4G1161 Quality	6	C	40	16	-	-			3		
5B1306 Introductory Financial Mathematics	5	C	-	-	54	-				4	
Elective Courses											



5B1574 Portfolio Theory and Risk Management	4	D	30	12	-	-	1				
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Biotechnology and Industrial Engineering I2

Final Curriculum yet to be decided, by the latest April 1st 2002

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3A1115 Biochemistry	4	D	32	-	-	-					4	
3A1501 Introduction to Biotechnology	4	B	36	8	-	4	1	2				including visits for study purpose
3A1502 Cellbiology with Immunology	4	B	42	-	-	-				3	4	
3B1700 Introductory Chemistry	4	B	18	24	-	22	1					
3B1711 Chemical Equilibria	4	B	12	22	-	25		2	3			
3B1750 Organic Chemistry I	5	B	18	16	-	42		2				
4D1124 Industrial Economics and Management, Advanced Course	4	C	42	-	-	-					4	Seminars 6h

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Industrial Engineering and Management

Energy Systems and Industrial Engineering I2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3C1330 Technology and Ecosystems	4	B	24	3	-	-		2			
4A1112 Applied Thermodynamics	6	C	48	48	-	-	1	2			Math exercises
4A1601 Heat Transfer	4	C	24	24	-	20			3		
4A1603 Energy Technology	4	C	48	12	-	-				4	
5B1501 Probability Theory and Statistics	4	C	24	36	-	-			3		

Energy Systems and Industrial Engineering I3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2C1111 System Planning	4	D	60	-	-	-			3		
4A1140 Energy Systems and Models	4	D	-	-	-	-				4	
4A1607 Sustainable Energy Utilization	6	D	-	-	72	16	1	2			
4F1221 Electrical Engineering, Basic Course, B	4	B	12	18	-	14		2			

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Energy Technology and Industrial Engineering I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4A1144 <u>Energytechnology - Business - Leadership</u>	8	D	12	24	-	4			3	4	
4D1143 <u>Technology - Business - Leadership</u>	4	D	28	-	-	-		2			Seminars 4h

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Industrial Engineering and Management

Integrated Production and Industrial Engineering I2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1035 <u>Strength of Materials and Solid Mechanics, Basic Course</u>	6	B	42	42	-	2		2	3		4 written assignments
4F1221 <u>Electrical Engineering, Basic Course, B</u>	4	B	12	18	-	14		2			
4F1531 <u>Machine Elements, basic course for I and T</u>	4	B	24	40	-	-				4	
4K1101 <u>Control Systems</u>	4	C	18	28	-	12				4	
5B1501 <u>Probability Theory and Statistics</u>	4	C	24	36	-	-			3		

Integrated Production and Industrial Engineering I3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3C1330 Technology and Ecosystems	4	B	24	3	-	-		2				
4G1634 Manufacturing Engineering, Basic Course	6	C	32	20	-	12	1	2				
4H1057 Engineering Materials	4	B	24	-	-	15	1					
4K1111 Production Automation	5	C	44	-	-	-			3			
4K1211 Computer Aided Design and Manufacturing, Introductory Course II	4	C	48	-	-	24				4	Graded exercise	

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Chemical Technology and Industrial Engineering I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1145 Technology - Business - Leadership	12	D	52	-	-	-		2	3	4	Seminars 100h
Elective with											
3C1422 Industrial Energy Processes	5	D	20	20	-	-	1	2			
3C1524 Chemical Engineering	6	D	-	-	-	-		2			
3C1621 Process Chemistry	5	D	24	84	-	-			3		

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Industrial Engineering and Management

Communication Systems and Industrial Engineering 12

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 <u>Applied Computer Science</u>	4	B	30	14	-	20	1	2			
2D1385 <u>Software Engineering</u>	4	C	24	12	-	18				4	
2G1317 <u>Data and Computer Communication</u>	5	D	34	18	-	26		2	3		
3C1330 <u>Technology and Ecosystems</u>	4	B	24	3	-	-		2			

Communication Systems and Industrial Engineering 13

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1540 Digital Electronics	6	C	28	18	-	24	1				
2G1113 Operating Systems	4	C	28	10	-	-				4	
2G1305 Internetworking	4	D	20	20	-	-			3		
2G1318 Queuing Theory and Teletraffic Systems	4	D	24	24	-	-		2			
2G1502 Computer Hardware Basics <i>replaces 2G1119 and 2G1129</i>	4	B	18	18	-	20			3	4	
5B1506 Mathematical Statistics, basic course	6	C	36	48	-	-	1	2			

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Industrial Engineering and Management

Mechanical and Industrial Engineering I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1421 Ground Vehicle Engineering, Basic Course	4	C	30	24	-	-	1	2			
4D1145 Technology - Business - Leadership	12	D	52	-	-	-		2	3	4	Seminars 100h
4F1431 Combustion Engines, Advanced Course*	6	D	56	-	-	32		2	3		

*The course has limited participation

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Industrial Engineering and Management

Mechatronics and Industrial Engineering I2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1035 <u>Strength of Materials and Solid Mechanics, Basic Course</u>	6	B	42	42	-	2		2	3		4 written assignments
4F1222 <u>Electrical Engineering, Basic Course T</u>	6	B	18	27	-	26		2	3		
4F1242 <u>Introduction to Microcomputer Systems</u>	4	C	12	22	-	14				4	
4F1531 <u>Machine Elements, basic course for I and T</u>	4	B	24	40	-	-				4	
5B1501 <u>Probability Theory and Statistics</u>	4	C	24	36	-	-			3		

Mechatronics and Industrial Engineering I3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 <u>Applied Computer Science</u>	4	B	30	14	-	20	1	2			
2E1200 <u>Automatic Control, General Course</u>	4	C	24	26	-	12	1				
3C1330 <u>Technology and Ecosystems</u>	4	B	24	3	-	-		2			
4F1132 <u>Microcomputers in Embedded Systems</u>	5	D	-	36	-	36			3		
4F1142 <u>Motion Control and Real-time Implementation*</u>	5	D	22	10	-	30				4	
5C1112 <u>Mechanics, Continuation Course</u>	4	C	30	15	-	-		2			

*The course has limited participation

Mechatronics and Industrial Engineering I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1161 Mechatronics-Economics-Leadership	15	D	-	116	-	80		2	3	4	

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Production and Industrial Engineering I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1143 Technology - Business - Leadership	4	D	28	-	-	-		2			Seminars 4h
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				
4K1108 Manufacturing Systems, Continuation Course I	5	D	30	30	-	17		2	3		
4K1110 Production - Business - Leadership	8	D	-	-	18	-			3	4	Project work

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Industrial Engineering and Management

Program Design and Industrial Engineering I2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 <u>Applied Computer Science</u>	4	B	30	14	-	20	1	2			
2D1334 <u>Database Technology</u>	4	C	24	20	-	12			3		
2D1385 <u>Software Engineering</u>	4	C	24	12	-	18				4	
3C1330 <u>Technology and Ecosystems</u>	4	B	24	3	-	-		2			
5B1501 <u>Probability Theory and Statistics</u>	4	C	24	36	-	-			3		

Program Design and Industrial Engineering I3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1540 Digital Electronics	6	C	28	18	-	24	1				
2D1390 Internet Programming	4	C	28	-	-	26		2			
2D1406 Fundamentals of Human-Computer Interaction	4	D	18	-	-	-		2			Seminars 5hSeminars 5h
2D1953 Graphics and Interaction Programming	4	C	30	18	-	16			3		
2D1954 Program Development Project	4	C	12	-	-	-			3	4	
2G1502 Computer Hardware Basics <i>replaces 2G1119 and 2G1129</i>	4	B	18	18	-	20			3	4	
2I1130 Cognitive Psychology <i>Under bearbetning</i>	4	B	30	12	-	-	1				

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Program Development and Industrial Engineering I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1460 Software Design - Business - Leadership	8	D	12	-	-	-			3	4	Seminars 12h
4D1143 Technology - Business - Leadership	4	D	28	-	-	-		2			Seminars 4h

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Industrial Engineering and Management

Radio Communication Systems and Industrial Engineering I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1145 Technology - Business - Leadership	12	D	52	-	-	-		2	3	4	Seminars 100h

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Industrial Engineering and Management

Telecommunication Systems and Industrial Engineering I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2G1320 Communication - Business - Leadership <i>replaces 2G1303</i>	10	D	50	20	-	20			3	4	80 h Projektuppgift80 h Projektuppgift
4D1143 Technology - Business - Leadership	4	D	28	-	-	-		2			Seminars 4h

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Information and Communication Technology

Information and Communication Technology IT1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1550 Digital Electronics	6	B	36	24	-	16			3	4	
2G1501 Communication Systems	6	D	30	18	-	12				4	
2I1026 Introduction to Information Technology	5	B	32	-	-	36	1	2			
2I1027 Computer Science, Basic Course	6	B	25	21	-	44		2	3		
5B1115 Mathematics 1	6	B	42	-	21	-	1				
5B1116 Mathematics 2	6	B	42	-	21	-			3		
5B1118 Discrete Mathematics	5	B	60	-	-	-		2			

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Information and Communication Technology

Information and Communication Technology IT2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1120 Introductory Physics	4	B	-	-	-	-		2			
2B1350 Electromagnetism and Waves	4	B	-	-	-	-			3		
2G1502 Computer Hardware Basics <i>replaces 2G1119 and 2G1129</i>	4	B	-	-	-	-	1				
2G1512 Computer Science II	6	C	30	30	-	30	1	2			+ individual work approximately 150h
5B1506 Mathematical Statistics, basic course	6	C	36	48	-	-	1	2			

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Information and Communication Technology

Information and Communication Technology IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
6B3022 IT Project	5	C	46	8	-	-			3	4	
9E1363 Written and spoken communication	4	B	-	-	42	-			3	4	

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Information and Communication Technology

Electronic and Computer Systems - Computer Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2G1507 Computer Communication, Advanced Course	6	C	-	-	-	-				4	Programming project, 2 credits

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Electronic and Computer Systems - Electronic Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2G1507 Computer Communication, Advanced Course	6	C	-	-	-	-				4	Programming project, 2 credits

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Information and Communication Technology

Electronic and Computer Systems - Embedded Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Elective with												
2G1507 Computer Communication, Advanced Course	6	C	-	-	-	-				4	Programming project, 2 credits	

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Electronic and Computer Systems IT2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1552 Analog Electronics	6	C	-	-	-	-			3		
2G1503 System Modeling and Simulation	6	B	24	18	-	-				4	
5B1209 Signals and Systems, part I	5	C	-	-	-	-				4	

Electronic and Computer Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1430 <u>Design of Digital Integrated Circuits - LSI</u>	5	C	-	-	-	-	1	2			
2B1512 <u>Digital Design with HDL</u>	6	D	30	-	-	60	1	2			
2E1313 <u>Signals and Systems, part II</u> <i>Replaces 2E1311.</i>	5	C	-	-	-	-	1				
2G1504 <u>Operating Systems</u>	4	C	-	-	-	-			3		
Recommended Courses											
2E1423 <u>Signal Theory</u> <i>Replaces 2E1421.</i>	5	C	-	-	-	-			3		
2G1505 <u>Theory of Automata</u>	4	D	16	16	-	-	1				
2G1508 <u>Compilers and Virtual Machines</u>	4	C	30	24	-	6		2			

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Information and Communication Technology

Information Systems - Interactive Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2I1042	5	C	-	-	-	-	1	2			
2I1235 Agent Programming	4	D	18	-	-	80				4	60h
2I1236 Intelligent Interfaces	4	D	36	-	-	-				4	

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Information Systems - Management of Information Technology and Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
211040 Knowledge and Software Reuse	4	C	18	18	-	40				4	
211224 Data Warehousing* <i>Max 40 students</i>	4	D	15	10	-	30				4	
211258 Large-Scale Software Engineering	5	D	21	-	-	120			3	4	60h

*The course has limited participation

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Information Systems - Software Engineering and Security IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
211041 Software Evolution and Maintenance <i>This course is a part-time course (75%), meaning that you accomplish 4 credits within 6 weeks.</i>	4	C	21	16	-	9	1	2			group counselling 1h
211258 Large-Scale Software Engineering	5	D	21	-	-	120			3	4	60h
211274 Security Protocols and Applications in Computer Network*_	4	D	24	-	-	36				4	100h

*The course has limited participation

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Information Systems IT2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2I1029 Human-Computer Interaction	4	B	-	-	-	-				4	
2I1030 Introduction to Computer Security <i>Under bearbetning</i>	4	B	24	-	-	-			3	4	
2I1034 Object Oriented Analysis and Design	4	C	-	-	-	-			3		
5B1928 Logics	4	D	32	-	16	-				4	

Information Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2I1033 IT in Organisations and Databases	8	C	24	18	-	200	1	2			
2I1034 Object Oriented Analysis and Design	4	C	24	-	9	3				4	3 h Seminars3 h Seminars
2I1130 Cognitive Psychology <i>Under bearbetning</i>	4	B	30	12	-	-	1				
2I1140 Artificial Intelligence	6	C	36	16	-	80			3		

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Information and Communication Technology

Computer and Communication Systems - Computer Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2B1512 Digital Design with HDL	6	D	30	-	-	60	1	2			

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Information and Communication Technology

Computer and Communication Systems - Wireless Systems IT2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1552 Analog Electronics	6	C	-	-	-	-			3		
2G1503 System Modeling and Simulation	6	B	24	18	-	-				4	
5B1209 Signals and Systems, part I	5	C	-	-	-	-				4	

Computer and Communication Systems - Wireless Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2E1313 Signals and Systems, part II <i>Replaces 2E1311.</i>	5	C	-	-	-	-	1				
2E1423 Signal Theory <i>Replaces 2E1421.</i>	5	C	-	-	-	-			3		
2G1507 Computer Communication, Advanced Course	6	C	-	-	-	-				4	Programming project, 2 credits
Elective with											
2B1512 Digital Design with HDL	6	D	30	-	-	60	1	2			
2G1510 Computer Architecture Fundamentals, Intermediate Course	5	C	18	12	-	4		2			Seminar 4h

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Computer and Communication Systems IT2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2G1503 System Modeling and Simulation	6	B	24	18	-	-				4	
2G1504 Operating Systems	4	C	24	18	-	-			3		
5B1928 Logics	4	D	32	-	16	-				4	

Computer and Communication Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2G1504 Operating Systems	4	C	-	-	-	-			3		
2G1506 Programming with Processes <i>same as 2G1915, Concurrent Programming</i>	5	C	-	-	-	-	1				
2G1507 Computer Communication, Advanced Course	6	C	-	-	-	-				4	Programming project, 2 credits
2G1508 Compilers and Virtual Machines	4	C	30	24	-	6		2			
2G1510 Computer Architecture Fundamentals, Intermediate Course	5	C	18	12	-	4		2			Seminar 4h
Recommended Courses											
2G1505 Theory of Automata	4	D	16	16	-	-	1				
2I1034 Object Oriented Analysis and Design	4	C	24	-	9	3				4	3 h Seminars3 h Seminars

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Information and Communication Technology

Microelectronics - Semiconductor technology IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2B1512 Digital Design with HDL	6	D	30	-	-	60	1	2			

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Information and Communication Technology

Microelectronics - Circuit Design IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2B1512 Digital Design with HDL	6	D	30	-	-	60	1	2			
2G1507 Computer Communication, Advanced Course	6	C	-	-	-	-				4	Programming project, 2 credits

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Information and Communication Technology

Microelectronics IT2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1252 Semiconductor Devices	6	C	-	-	-	-				4	
2B1552 Analog Electronics	6	C	-	-	-	-			3		
5B1209 Signals and Systems, part I	5	C	-	-	-	-				4	

Microelectronics IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1311 Microwave Engineering, Minor Course	4	C	-	-	-	-		2			
2B1430 Design of Digital Integrated Circuits - LSI	5	C	-	-	-	-	1	2			
2B1515 Analog Electronics, Advanced Course	5	C	-	-	-	-			3		
2E1313 Signals and Systems, part II <i>Replaces 2E1311.</i>	5	C	-	-	-	-	1				
2E1423 Signal Theory <i>Replaces 2E1421.</i>	5	C	-	-	-	-			3		

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Chemical Engineering

Chemical Engineering K1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1310 Programming Technique	4	B	26	16	-	36		2	3		
3B1700 Introductory Chemistry	4	B	18	24	-	22	1				
3B1711 Chemical Equilibria	4	B	12	22	-	25		2	3		
3B1750 Organic Chemistry I	5	B	18	16	-	42		2			
3C1451 Introduction to Chemical Engineering	7	B	36	26	-	-				4	Field Exercise 1 day, Plant Trip 1 day
5B1115 Mathematics 1	6	B	72	24	-	-	1				
5B1116 Mathematics 2	6	B	72	24	-	-			3		
5C1102 Mechanics, Smaller Course	4	B	30	15	-	-				4	
Elective Courses											
3B1705 Introductory Course in Chemistry	1	A	-	-	-	-					

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Chemical Engineering

Chemical Engineering K2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1210 Numerical Methods, Basic Course I	4	B	24	24	-	24			3	4	
2D1310 Programming Technique	4	B	26	16	-	26		2	3		
3A1108 Biotechnology	4	B	36	-	-	-				4	
3B1720 Chemical Thermodynamics	5	C	28	30	-	20	1				
3B1730 Molecular Structure	5	C	36	22	-	20		2	3		
3B1740 Chemical Dynamics	4	C	20	20	-	15			3		
3B1760 Organic Chemistry 2	5	C	12	22	-	54				4	
5A1225 Electromagnetism and Waves	5	B	38	18	-	20		2			
5B1200 Differential Equations and Transforms I	4	C	48	-	-	-	1				
Recommended Courses											
3C1921 Oral and Written Presentation for Chemists	4	B	-	-	-	-				4	

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Chemical Engineering K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3B1770 Chemical Measuring Techniques	5	C	22	4	-	12	1				
3C1616 Reaction and Separation Engineering	7	C	28	30	-	36		2	3		Seminars 16h16 hour Seminars 16h
3C1715 Transport Phenomena and Engineering Thermodynamics	7	C	28	40	-	12	1	2			Seminars 6h, Computer 12h
3E1200 Polymer Technology with Cellulose Technology	5	C	34	25	-	-		2			
Elective Courses											
3A1115 Biochemistry	4	D	32	-	-	-				4	
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1511 Organic Chemistry, Advanced Course 1	9	D	12	6	-	-				4	
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		Study visit 2x4h, Exercises
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	8			3	4	
3C1347 Env. Technology and Env. Impact Studies, Larger Course	8	D	32	16	-	24			3	4	
3C1355 Ecology, Advanced Course	4	C	21	4	-	-			3	4	
3C1360 Environmental Consequences, Advanced Course	4	C	18	9	-	8	1				Seminars 9hSeminars 9h
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2			
3C1383 Risk Management	4	C	16	30	-	-	1				
3C1387 Environmental Systems Analysis	4	C	22	15	-	6		2			
3C1395 Technology and Sustainable Development	4	C	10	9	-	-		2			
3C1626 Chemical Engineering, Laboratory Course	4	D	2	-	80	-			3		
3C1723 Transport Phenomena, advanced course	5	7,	18	12	-	-				4	6 h Seminars, 12 h Computer6 h Seminars, 12 h Computer
3C1786 Pharmaceutical Bioscience	4	C	28	-	-	4			3		
3C1921 Oral and Written Presentation for Chemists	4	B	-	-	-	-		2	3		

3D1058 Wood Chemistry and Wood Biotechnology	4	D	26	-	-	15			3		
3D1112 Fibre Technology	4	D	26	-	-	15				4	
3E1120 Mechanical Properties of Materials	5	C	30	15	-	12				4	
3E1142 Polymer Physics	5	D	18	18	-	45			3		
3U1101 Oral and Written Presentation for Chemists	4	B	-	-	-	-					
5B1301 Mathematics, Advanced Course, Partial Differential Equations	4	D	-	-	42	-				4	
9E1230 Information Searching	1	B	-	-	-	-	1	2	3	4	A total of 12h (3x4h), a written examination and a written report. The course is scheduled several times per year

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Chemical Engineering

Chemical Engineering K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2B1263 Surface Physics, Basic Course	4	D	36	-	-	-		2			
2B1700 Advanced Semiconductor Materials	5	D	34	-	-	16				4	
2B1750 Smart Electronic Materials	4	C	18	10	-	8	1				
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
2D1320 Applied Computer Science	4	B	30	14	-	20	1	2			
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1334 Database Technology	4	C	24	20	-	12			3		
2D1354 Algorithms and Complexity	4	C	30	18	-	-	1	2			
2D1385 Software Engineering	4	C	24	12	-	18				4	
2E1200 Automatic Control, General Course	4	C	24	26	-	12		2			
2E1241 Automatic Control, Project Course*	5	D	4	-	-	50				4	
2E1252 Control Theory and Practice, Advanced Course	5	D	28	26	-	8			3		
3A1104 Environmental Toxicology	6	D	36	14	-	-	1	2			
3A1111 Enzymatic Synthesis	5	D	20	12	-	20				4	6 h Seminars6 h Seminars
3B1122 Analytical Separation Methods	4	D	28	20	-	-				4	Literature study
3B1211 Quantum Chemistry and Spectroscopy <i>Quantum mechanics is fun!</i>	6	D	48	8	-	8	1				
3B1223 Molecular Thermodynamics	4	D	24	4	-	-			3		
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1301 Nuclear Chemistry	5	D	30	-	-	20		2			
3B1321 Radical Chemistry	5	D	30	-	-	-			3		
3B1451 Bio-inorganic Chemistry	5	D	20	6	-	15				4	
3B1456 Inorganic Materials Chemistry	5	D	20	6	-	15				4	
3B1511 Organic Chemistry, Advanced Course 1	9	D	12	6	-	-				4	
3B1531 Organic Chemistry, Advanced Course	4	D	-	-	-	48	1				

3B1542 Organic Chemistry, Intermediate Course II	5	D	24	-	-	40		3		
3B1650 Molecular Simulations Using a Computer	5	D	14	10	-	40		3		
3B1655 Optical Processes and Properties	5	D	10	10	-	-			4	
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-		3		Study visit 2x4h, Exercises
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	8		3	4	
3C1347 Env. Technology and Env. Impact Studies, Larger Course	8	D	32	16	-	24		3	4	
3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	21	-	-	6			4	Project work 20h
3C1355 Ecology, Advanced Course	4	C	21	4	-	-		3	4	
3C1360 Environmental Consequences, Advanced Course	4	C	18	9	-	8	1			Seminars 9hSeminars 9h
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2		
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2		
3C1383 Risk Management	4	C	16	30	-	-	1			
3C1387 Environmental Systems Analysis	4	C	22	15	-	6		2		
3C1395 Technology and Sustainable Development	4	C	10	9	-	-		2		
3C1524 Chemical Engineering	6	D	12	18	-	16		2		
3C1651 Environmental Catalysis	4	D	30	-	-	-		3		Seminars 18h
3C1723 Transport Phenomena, advanced course	5	7,	18	12	-	-			4	6 h Seminars, 12 h Computer6 h Seminars, 12 h Computer
3D1059 The Chemistry of Pulping and Bleaching	5	D	26	-	-	-		2		Seminars 24h
3D1115 Pulp and Paper Processes	6	D	40	-	-	48	1	2		
3D1116 Pulp and Paper Processes, Minor Course	4	D	20	-	-	-	1	2		
3D1118 Paper Chemistry	4	D	26	15	-	-			3	
3D1164 Pulp Technology	4	D	24	-	-	-			3	24 h Seminars24 h Seminars
4K1105 Manufacturing Systems and Automation	4	C	14	24	-	12		2		
5A1490 Laser Chemistry	4	D	24	-	-	12		2		
5A1491 Femtochemistry	5	D	36	-	-	-			3	
7E1101 Medical Engineering, Basic Course	4	C	24	-	-	-	1			
7E1110 Quality and Regulatory Aspects on Medical Devices*	2	D	20	-	-	-			3	4
7E1112 Implants and Biomaterials*	4	D	25	-	-	-			3	4
7E1113 Medical Instrumentation and Signal Processing*	4	D	30	-	-	6			3	4
7E1114 Radiation Physics and Biology*	4	D	40	-	-	-				4
7E1115 Engineering in Intensive Care and Anesthesia*	4	D	12	-	-	-			3	4
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1			
7E1200 Cellular and Molecular Biology*	10	C	80	-	-	8			3	4
7E1202 Systems Biology*	5	C	32	-	-	25		2		24 h Seminars24 h Seminars

9E1230 Information Searching	1	B	-	-	-	-	1	2	3	4	A total of 12h (3x4h), a written examination and a written report. The course is scheduled several times per year
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*The course has limited participation

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Business Development and Media Technology K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1521 Communication and Information	5	C	21	-	-	-	1				Seminars 24
2D1550 Market Systems <i>Only open to AFM-students</i>	5	C	-	-	-	-	1				Seminars 40h
2D1551 Consumer Markets <i>Open only to AFM-students.</i>	5	C	-	-	-	-	1				Seminars 40h
2D1552 Media Management <i>Open only for AFM-students.</i>	10	C	72	56	-	-	1	2	3	4	Only open for AFM-students.
2D1553 Media Production <i>Only open for AFM-students.</i>	10	C	40	-	-	110		2			Only open for AFM-students.
2D1555 Information Technology and Organizations	5	D	39	-	-	-				4	
Elective Courses											
2D1524 Image Processing and Reprographic Methods* <i>Limited number of participants</i>	6	C	50	16	-	24	1				

*The course has limited participation

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Biomedical Engineering K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1200 Cellular and Molecular Biology*_	10	C	80	-	-	8			3	4	
7E1201 Neuroscience*_	5	C	60	-	-	30				4	

*The course has limited participation

Biomedical Engineering K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1				
7E1202 Systems Biology*_	5	C	32	-	-	25		2			24 h Seminars 24 h Seminars

*The course has limited participation

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Cellulosic Materials, start vt 02 K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3D1058 Wood Chemistry and Wood Biotechnology	4	D	26	-	-	15			3		
3D1112 Fibre Technology	4	D	26	-	-	15				4	
3E1120 Mechanical Properties of Materials	5	C	30	15	-	12				4	
Recommended Courses											
3B1102 Analytical Chemistry	4	C	16	-	-	16			3		
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	

Cellulosic Materials, start vt 02 K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3D1115 Pulp and Paper Processes	6	D	40	-	-	48	1	2			
Recommended Courses											
2E1291 Chemical Process Control	4	C	20	28	-	8			3		
3A1508 Wood Biotechnology	5	D	34	-	-	-		2			
3B1102 Analytical Chemistry	4	C	16	-	-	16			3		
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1511 Organic Chemistry, Advanced Course 1	9	D	12	6	-	-				4	
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
3B1531 Organic Chemistry, Advanced Course	4	D	-	-	-	48	1				
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	
3C1422 Industrial Energy Processes	5	D	20	20	-	-	1	2			
3C1524 Chemical Engineering	6	D	12	18	-	16		2			

3C1723 Transport Phenomena, advanced course	5	7,	18	12	-	-				4	6 h Seminars, 12 h Computer6 h Seminars, 12 h Computer
3D1058 Wood Chemistry and Wood Biotechnology	4	D	26	-	-	15				3	
3D1059 The Chemistry of Pulping and Bleaching	5	D	26	-	-	-			2		Seminars 24h
3D1113 Paper Physics	4	D	20	-	-	20	1				
3D1114 Paper Processes Technology	4	D	20	-	-	20				3	
3D1117 Paper Technology, project	4	D	-	-	-	-				3	4 Project work
3D1164 Pulp Technology	4	D	24	-	-	-				3	24 h Seminars24 h Seminars
3E1120 Mechanical Properties of Materials	5	C	30	15	-	12				4	
3E1142 Polymer Physics	5	D	18	18	-	45				3	
Elective Courses											
3D1114 Paper Processes Technology	4	D	20	-	-	20				3	

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Chemical Engineering

Chemistry, start vt 02 K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3B1102 Analytical Chemistry	4	C	16	-	-	16			3		
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	
Elective with											
3A1115 Biochemistry	4	D	32	-	-	-				4	
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
Recommended Courses											
3B1223 Molecular Thermodynamics	4	D	24	4	-	-			3		
3B1321 Radical Chemistry	5	D	30	-	-	-			3		
3B1443 Atmosphere, Aquatic and Terrestrial Chemistry	5	C	12	10	-	24				4	
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
5B1301 Mathematics, Advanced Course, Partial Differential Equations	4	D	-	-	42	-				4	

Chemistry, start vt 02 K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3B1102 Analytical Chemistry	4	C	16	-	-	16			3			
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4		
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4		
Elective with												
3A1115 Biochemistry	4	D	32	-	-	-				4		
3B1121 Organic and Biochemical Analytical Separations	5	D	28	20	-	36				4		
3B1211 Quantum Chemistry and Spectroscopy <i>Quantum mechanics is fun!</i>	6	D	48	8	-	8	1					

3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3	
3B1301 Nuclear Chemistry	5	D	30	-	-	20		2		
3B1451 Bio-inorganic Chemistry	5	D	20	6	-	15			4	
3B1511 Organic Chemistry, Advanced Course 1	9	D	12	6	-	-			4	
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-			4	
Recommended Courses										
3B1121 Organic and Biochemical Analytical Separations	5	D	28	20	-	36			4	
3B1211 Quantum Chemistry and Spectroscopy <i>Quantum mechanics is fun!</i>	6	D	48	8	-	8	1			
3B1223 Molecular Thermodynamics	4	D	24	4	-	-			3	
3B1231 NMR-spectroscopy	4	D	30	-	-	12		2		
3B1321 Radical Chemistry	5	D	30	-	-	-			3	
3B1443 Atmosphere, Aquatic and Terrestrial Chemistry	5	C	12	10	-	24			4	
3B1451 Bio-inorganic Chemistry	5	D	20	6	-	15			4	
3B1542 Organic Chemistry, Intermediate Course II	5	D	24	-	-	40			3	
5B1301 Mathematics, Advanced Course, Partial Differential Equations	4	D	-	-	42	-			4	

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Chemical Engineering

Computational chemical engineering, start vt 02 K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 Applied Computer Science	4	B	30	14	-	20	1	2			
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
3B1223 Molecular Thermodynamics	4	D	24	4	-	-			3		
5A1340 Thermodynamics and Statistical Mechanics, Basic Course	4	C	30	24	-	-				4	
5B1301 Mathematics, Advanced Course, Partial Differential Equations	4	D	-	-	42	-				4	
5B1304 Mathematics, Extended Course	5	D	-	-	54	-			3	4	
Elective with											
3B1223 Molecular Thermodynamics	4	D	24	4	-	-			3		
5A1340 Thermodynamics and Statistical Mechanics, Basic Course	4	C	30	24	-	-				4	
Recommended Courses											
2E1291 Chemical Process Control	4	C	20	28	-	8			3		
3A1115 Biochemistry	4	D	32	-	-	-				4	
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	

Computational chemical engineering, start vt 02 K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1225 Numerical Solutions of Differential Equations	4	C	26	4	-	18	1	2			
3B1211 Quantum Chemistry and Spectroscopy <i>Quantum mechanics is fun!</i>	6	D	48	8	-	8	1				
Elective Courses											
3C1654 Computational project in Chemical Engineering <i>Under bearbetning</i>	5	D	-	-	-	-				4	100 h Projektuppgift100 h Projektuppgift

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Chemical Engineering

Chemical engineering, start vt 02 K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2E1291 Chemical Process Control	4	C	20	28	-	8			3		
3C1621 Process Chemistry	5	D	36	72	-	-			3		
3C1626 Chemical Engineering, Laboratory Course	4	D	2	-	80	-			3		
3C1723 Transport Phenomena, advanced course	5	7,	18	12	-	-				4	6 h Seminars, 12 h Computer6 h Seminars, 12 h Computer
Recommended Courses											
3B1102 Analytical Chemistry	4	C	16	-	-	16			3		
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	8			3	4	
3C1347 Env. Technology and Env. Impact Studies, Larger Course	8	D	32	16	-	24			3	4	
3E1120 Mechanical Properties of Materials	5	C	30	15	-	12				4	

Chemical engineering, start vt 02 K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
3C1422 <u>Industrial Energy Processes</u>	5	D	20	20	-	-	1	2			
3C1524 <u>Chemical Engineering</u>	6	D	12	18	-	16		2			
3C1633 <u>Chemical Reaction Engineering</u>	6	D	16	24	-	34	1	2			
3C1651 <u>Environmental Catalysis</u>	4	D	30	-	-	-			3		Seminars 18h
3C1781 <u>Chemical Engineering in Fine and Specialty Chemicals</u>	5	D	20	12	56	27	1				8h industry visit
3C1823 <u>Applied Electrochemistry</u>	5	D	32	16	-	15			3		
3C1941 <u>Chemical Engineering, Design Course</u>	10	D	40	120	-	-				4	

Recommended Courses

3B1102 Analytical Chemistry	4	C	16	-	-	16			3		
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	8			3	4	
3C1347 Env. Technology and Env. Impact Studies, Larger Course	8	D	32	16	-	24			3	4	
3E1120 Mechanical Properties of Materials	5	C	30	15	-	12				4	

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Chemical Engineering

Chemical Engineering, start vt 03 K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
2E1291 Chemical Process Control	4	C	20	28	-	8			3		
3C1621 Process Chemistry	5	D	36	72	-	-			3		
3C1626 Chemical Engineering, Laboratory Course	4	D	2	-	80	-			3		
3C1651 Environmental Catalysis	4	D	30	-	-	-			3		Seminars 18h
3C1723 Transport Phenomena, advanced course	5	7,	18	12	-	-				4	6 h Seminars, 12 h Computer6 h Seminars, 12 h Computer
3C1823 Applied Electrochemistry	5	D	32	16	-	15			3		
5B1301 Mathematics, Advanced Course, Partial Differential Equations	4	D	-	-	42	-				4	
5B1304 Mathematics, Extended Course	5	D	-	-	54	-			3	4	
Recommended Courses											
2D1263 Program Construction for Scientific Computing	4	D	24	-	-	12			3	4	
3B1102 Analytical Chemistry	4	C	16	-	-	16			3		
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
3B1650 Molecular Simulations Using a Computer	5	D	14	10	-	40			3		
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	8			3	4	
3C1347 Env. Technology and Env. Impact Studies, Larger Course	8	D	32	16	-	24			3	4	
3E1120 Mechanical Properties of Materials	5	C	30	15	-	12				4	
5C1212 Computational Fluid Dynamics	5	D	-	-	50	10			3		

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Pharmaceuticals and Fine Chemicals Technology, start vt 02 K3

For informationen about the courses 3FG150 and 3FK070 please contact the dept. of Chemical Engineering

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3B1242 <u>Technical Surface Colloid Chemistry</u>	4	D	32	6	-	12			3		
3B1521 <u>Organic Chemistry, Theory, Advanced Course 1</u>	5	D	12	6	-	-				4	
3C1786 <u>Pharmaceutical Bioscience</u>	4	C	28	-	-	4			3		
Recommended Courses											
3A1115 <u>Biochemistry</u>	4	D	32	-	-	-				4	
3C1626 <u>Chemical Engineering, Laboratory Course</u>	4	D	2	-	80	-			3		

Pharmaceuticals and Fine Chemicals Technology, start vt 02 K4

For informationen about the courses 3FG150 and 3FK070 please contact the dept. of Chemical Engineering

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3C1781 Chemical Engineering in Fine and Specialty Chemicals	5	D	20	12	56	27	1				8h industry visit
3C1784 Pharmaceutical Technology <i>Lectures are given in Stockholm (KTH) and laboratory work in Uppsala (Biomedical centre).</i>	5	D	32	10	-	25			3		
Recommended Courses											
3A1115 Biochemistry	4	D	32	-	-	-				4	
3A1116 Biochemistry, Laboration Course	4	D	-	-	-	96	1				
3A1305 Microbiology, General Course	6	D	36	16	-	54	1	2			
3B1102 Analytical Chemistry	4	C	16	-	-	16			3		
3B1531 Organic Chemistry, Advanced Course	4	D	-	-	-	48	1				
3C1626 Chemical Engineering, Laboratory Course	4	D	2	-	80	-			3		
4K1105 Manufacturing Systems and Automation	4	C	14	24	-	12		2			

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Material Chemistry, start vt 03 K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3E1120 Mechanical Properties of Materials	5	C	30	15	-	12				4	
Elective with											
3B1456 Inorganic Materials Chemistry	5	D	20	6	-	15				4	
3D1058 Wood Chemistry and Wood Biotechnology	4	D	26	-	-	15			3		
3D1112 Fibre Technology	4	D	26	-	-	15				4	
3E1142 Polymer Physics	5	D	18	18	-	45			3		
Recommended Courses											
2B1216 Microelectronics	5	C	24	-	-	12			3		
2B1700 Advanced Semiconductor Materials	5	D	34	-	-	16				4	
2B1770 Solid State Physics, General Course	6	D	54	-	-	30			3	4	
3B1102 Analytical Chemistry	4	C	16	-	-	16			3		
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1511 Organic Chemistry, Advanced Course 1	9	D	12	6	-	-				4	
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	
3C1723 Transport Phenomena, advanced course	5	7,	18	12	-	-				4	6 h Seminars, 12 h Computer6 h Seminars, 12 h Computer
3C1823 Applied Electrochemistry	5	D	32	16	-	15			3		
3D1114 Paper Processes Technology	4	D	20	-	-	20			3		
3D1164 Pulp Technology	4	D	24	-	-	-			3		24 h Seminars24 h Seminars
3E1143 Surface Coatings Chemistry	5	D	30	-	-	28				4	
3E1144 Mechanical Properties and Testing of Polymers	5	D	30	12	-	12			3		
3E1145 Polymer Process Engineering I	5	D	30	10	-	28				4	
3E1146 Biopolymers	5	D	20	6	-	25			3		
3E1370 Polymers in engineering design II	4	D	18	24	-	8				4	
4H1504 Processing of Ceramic Materials	4	C	12	-	-	18			3		

4H1610 Advanced Materials	4	C	18	-	-	6			3	Study visit 18h Seminars
4H1703 Materials Chemistry	4	D	20	4	-	8			4	

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Chemical Engineering

Environmental Management, start vt 02 K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	
3C1347 Env. Technology and Env. Impact Studies, Larger Course	8	D	32	16	-	24			3	4	

Environmental Management, start vt 02 K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2			
3C1380 Environmental Management	4	D	21	3	-	8			3	4	Project work 8h
3C1387 Environmental Systems Analysis	4	C	22	15	-	6		2			
Recommended Courses											
3A1104 Environmental Toxicology	6	D	36	14	-	-	1	2			
3B1443 Atmosphere, Aquatic and Terrestrial Chemistry	5	C	12	10	-	24				4	
3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	21	-	-	6				4	Project work 20h
3C1365 Environmental Consequences, Advanced Course II	4	D	15	15	-	40	1	2			Field exercises
3C1383 Risk Management	4	C	16	30	-	-	1				
3C1390 Environmental Management, Larger Course	8	D	36	3	-	24			3	4	Project work, field exercise
3C1651 Environmental Catalysis	4	D	30	-	-	-			3		Seminars 18h

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Molecular Design, start vt 03 K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective with											
3A1115 Biochemistry	4	D	32	-	-	-				4	
3B1102 Analytical Chemistry	4	C	16	-	-	16			3		
3B1223 Molecular Thermodynamics	4	D	24	4	-	-			3		
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	
Recommended Courses											
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
3A1504 Structure Biology	4	D	32	-	-	20				4	
3B1312 Nuclear Fuel Cycle	4	D	16	-	-	6			3		Project
3B1443 Atmosphere, Aquatic and Terrestrial Chemistry	5	C	12	10	-	24				4	
3B1451 Bio-inorganic Chemistry	5	D	20	6	-	15				4	
3B1456 Inorganic Materials Chemistry	5	D	20	6	-	15				4	
3B1511 Organic Chemistry, Advanced Course 1	9	D	12	6	-	-				4	
3B1542 Organic Chemistry, Intermediate Course II	5	D	24	-	-	40			3		
3B1542 Organic Chemistry, Intermediate Course II	5	D	24	-	-	40			3		
3B1650 Molecular Simulations Using a Computer	5	D	14	10	-	40			3		
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	8			3	4	
3C1347 Env. Technology and Env. Impact Studies, Larger Course	8	D	32	16	-	24			3	4	
3C1784 Pharmaceutical Technology <i>Lectures are given in Stockholm (KTH) and laboratory work in Uppsala (Biomedical centre).</i>	5	D	32	10	-	25			3		
3C1823 Applied Electrochemistry	5	D	32	16	-	15			3		
3D1058 Wood Chemistry and Wood Biotechnology	4	D	26	-	-	15			3		

5A1351 Non-equilibrium Statistical Mechanics	4	D	24	-	-	-				4	
5A1355 Molecular Biophysics <i>The course is given by the Department of Biophysics, Stockholm University. The instruction takes place at the Arrhenius laboratories, Frescati.</i>	8	D	60	24	-	-				4	
5A1491 Femtochemistry	5	D	36	-	-	-				3	
5B1301 Mathematics, Advanced Course, Partial Differential Equations	4	D	-	-	42	-				4	
5B1550 Applied Mathematical Statistics	5	D	-	-	60	-				3	
5B1550 Applied Mathematical Statistics	5	D	-	-	60	-				3	

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Chemical Engineering

Polymer Technology, start vt 02 K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3E1120 Mechanical Properties of Materials	5	C	30	15	-	12				4	
3E1142 Polymer Physics	5	D	18	18	-	45			3		
Recommended Courses											
3B1102 Analytical Chemistry	4	C	16	-	-	16			3		
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	

Polymer Technology, start vt 02 K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3E1141 <u>Polymer Chemistry</u>	5	D	18	18	-	45	1				
3E1147 <u>Polymeric Materials: Structure and Properties</u>	5	D	18	18	-	45		2			
Recommended Courses											
3B1102 <u>Analytical Chemistry</u>	4	C	16	-	-	16			3		
3B1242 <u>Technical Surface Colloid Chemistry</u>	4	D	32	6	-	12			3		
3B1511 <u>Organic Chemistry, Advanced Course 1</u>	9	D	12	6	-	-				4	
3B1521 <u>Organic Chemistry, Theory, Advanced Course 1</u>	5	D	12	6	-	-				4	
3B1531 <u>Organic Chemistry, Advanced Course</u>	4	D	-	-	-	48	1				
3D1112 <u>Fibre Technology</u>	4	D	26	-	-	15				4	
3E1120 <u>Mechanical Properties of Materials</u>	5	C	30	15	-	12				4	
3E1143 <u>Surface Coatings Chemistry</u>	5	D	30	-	-	28				4	
3E1144 <u>Mechanical Properties and Testing of Polymers</u>	5	D	30	12	-	12			3		
3E1145 <u>Polymer Process Engineering I</u>	5	D	30	10	-	28				4	



3E1146 Biopolymers	5	D	20	6	-	25		3	
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Chemical Engineering

Process and Environmental Biotechnology, start vt 02 K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3A1115 Biochemistry	4	D	32	-	-	-					4	
Recommended Courses												
2E1291 Chemical Process Control	4	C	20	28	-	8				3		
3B1102 Analytical Chemistry	4	C	16	-	-	16				3		
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-					4	
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	8				3	4	
3C1723 Transport Phenomena, advanced course	5	7,	18	12	-	-					4	6 h Seminars, 12 h Computer6 h Seminars, 12 h Computer
Elective Courses												
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	8				3	4	

Process and Environmental Biotechnology, start vt 02 K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1205 Biochemical Technology	7	D	40	-	-	60			3	4	
3A1305 Microbiology, General Course	6	D	36	16	-	54	1	2			
3A1308 Technical Microbiology 1	4	D	38	8	-	-			3		Study visit 8h
Recommended Courses											
2E1291 Chemical Process Control	4	C	20	28	-	8			3		
3A1104 Environmental Toxicology	6	D	36	14	-	-	1	2			
3A1112 Biochemical Analyses and Separation Techniques	5	D	32	-	-	30				4	
3A1116 Biochemistry, Laboration Course	4	D	-	-	-	96	1				
3A1309 Technical Microbiology 2	4	D	18	4	-	-				4	Seminars 20h
3A1503 Molecular Biotechnology	5	D	36	-	-	15		2			
3B1102 Analytical Chemistry	4	C	16	-	-	16			3		

3B1511 Organic Chemistry, Advanced Course 1	9	D	12	6	-	-			4	
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-			4	
3B1531 Organic Chemistry, Advanced Course	4	D	-	-	-	48	1			
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	8			3	4
3C1524 Chemical Engineering	6	D	12	18	-	16		2		
3C1723 Transport Phenomena, advanced course	5	7,	18	12	-	-			4	6 h Seminars, 12 h Computer 6 h Seminars, 12 h Computer
Elective Courses										
3C1781 Chemical Engineering in Fine and Specialty Chemicals	5	D	20	12	56	27	1			8h industry visit

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Surveying

Surveying L1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1B1032 Ecology	4	B	24	20	-	-				4	Field excursions 8h, Workshop 3h
1F1335 Economic Analysis* <i>Non-Surveying students are referred to 1F1385.</i>	5	B	24	36	-	-			3		
1F1440 Civil and Public Law* <i>Non-Surveying students are referred to 1F1446.</i>	5	B	24	40	-	-		2			
1F1453 Real Estate Planning, Basic Course	5	B	42	22	-	-	1				
2D1311 Programming Technique with PBL	4	B	19	12	-	42			3	4	
5B1124 Calculus LV, part 1	5	B	-	-	-	-		2			
5B1125 Calculus LV, part 2	5	B	-	-	-	-			3		
5B1128 Linear Algebra LV	4	B	-	-	-	-	1				
5B1220 Differential Equations and Transforms LV	4	C	-	-	-	-				4	
Recommended Courses											
5B1120 Introductory Course in Mathematics I <i>The course is taught during the introductory-period in August.</i>	1	A	4	-	-	-	1				

*The course has limited participation

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Surveying

Surveying L2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1B1034 <u>Land Engineering and Construction</u>	10	B	40	54	-	24	1	2			Field-exercises
1E1110 <u>Surveying, Remote Sensing and Mapping</u> <i>Field-exercises may be scheduled after the end of the term</i>	9	C	34	26	-	32			3	4	80 h Field excursions 80 h Field excursions
1E1601 <u>GIS, Databases and Cartography</u>	8	C	38	16	-	40			3	4	
1F1386 <u>Microeconomics</u>	4	B	24	24	-	-		2			
2D1210 <u>Numerical Methods, Basic Course I</u>	4	B	24	24	-	24		2	3		
5B1501 <u>Probability Theory and Statistics</u>	4	C	24	36	-	-	1				
Elective Courses											
2D1468 <u>Supplementary Course in Database Technology</u>	1	D	-	4	-	-				4	

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Surveying

Surveying L4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
1A14TW <u>Third World Housing</u> <i>The course is given after agreement</i>	10	D	-	-	-	-					
1B1336 <u>Geological Processes - Field Course on Iceland</u>	5	C	-	-	-	-					Exkursion 80hJuly-August, 5 weeks Exkursion 80h
1B1820 <u>Risk in Technical Systems</u>	5	D	-	-	-	-	1	2	3	4	Project-course
1B1990 <u>Developing Countries, Society and Technology</u>	4	C	30	-	-	-	1	2			
1B1991 <u>Management of Development Cooperation Projects</u>	4	C	30	-	-	-			3	4	
1B1992 <u>East- and Central Europe - Our Future Market</u>	4	C	30	-	-	-	1	2			
1H1204 <u>Logistics</u>	5	C	6	-	-	-	1	2			15 h SeminarsProject-course, 15 h Seminars
1H1212 <u>Logistics, Advanced Course</u>	5	D	4	-	-	-			3		12 h SeminarsProject-course, 12 h Seminars
1H1601 <u>Mathematics and Reality</u>	5	C	20	10	-	-		2			
1H1602 <u>Good and Bad Science</u>	5	C	32	-	-	-			3	4	
1H1603 <u>Technology and Ethics</u>	5	C	24	-	-	-			3		6 h Seminars6 h Seminars
1H1603 <u>Technology and Ethics</u>	5	C	24	-	-	-	1				6 h Seminars6 h Seminars
1H1604 <u>Philosophy of Risk</u>	5	C	18	-	-	-		2			12 h Seminars12 h Seminars
1K14LV <u>Architecture, Basic Course*</u> <i>First prio: 4th academic year students within L- and V-programs.</i>	5	D	32	-	-	-				4	Seminars, Study-visits
1N1401 <u>Applied Contract Law</u> <i>The course will be given from 02/03</i>	5	B	-	-	-	-			3		60 h Seminars60 h Seminars
1N1402 <u>Civil and Public Law, Intermediate Course</u>	5	B	24	24	-	-				4	
2D1220 <u>Applied Numerical Methods I</u>	4	C	42	-	-	18			3	4	
2D1225 <u>Numerical Solutions of Differential Equations</u>	4	C	26	4	-	18	1	2			
2D1320 <u>Applied Computer Science</u>	4	B	30	14	-	20	1	2			
2D1320 <u>Applied Computer Science</u>	4	B	30	14	-	20			3	4	
2D1323 <u>Computer Graphics and Interaction</u>	4	C	42	-	-	12				4	
2D1378 <u>Text and Image Processing</u>	4	B	28	28	-	-	1				



5B1306 Introductory Financial Mathematics	5	C	-	-	54	-				4	
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*The course has limited participation

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Surveying

Building and Real Estate Economics L3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
1D1343 Operations, Maintenance and Modernisation Techniques	5	D	34	14	-	-				4	15 h Workshop, 17 h Study visit	
1D1841 Buildings and Building Services Engineering	10	C	67	54	-	16		2	3		Study visit 8h	
1F1329 Business Cycles in Construction and Real Estate Market	5	D	30	30	-	-	1					
1F1332 Investment Analysis	5	C	30	30	-	-		2				
1F1394 Real Estate Economics	5	C	36	24	-	-			3			
1F1442 Law of Real Estate	5	C	30	30	-	-	1					
Recommended Courses												
1F1337 Environmental Economics <i>Under bearbetning</i>	5	C	30	30	-	-				4		

Building and Real Estate Economics L4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1F1327 Management	5	D	30	30	-	-			3	4	
1F1330 Financial Analysis	5	D	30	30	-	-			3		
1F1333 Real Estate Market Analysis and Development	5	D	30	30	-	-			3		
1F1336 Real Estate Brokerage	5	D	30	30	-	-		2			
1F1339 Real Estate Finance and Economics	5	D	30	30	-	-				4	
1F1395 Urban Land Economics	5	D	24	36	-	-	1				
1F1396 Management Control	5	D	30	30	-	-		2			
1F1398 Real Estate Management	5	D	30	30	-	-	1				
1F1399 Real Estate Valuation	5	D	30	30	-	-				4	
1F1444 Law of Leaseholds	5	D	30	30	-	-		2	3		
1F1540 Information Technology in Construction	5	D	-	-	66	-		2			
1F1560 Project Management	5	D	-	-	66	-		2			



1F1565 Facilities Management	5	D	-	-	66	-				4	
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Environmental Engineering and Sustainable Infrastructure L4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1B1133 Applied Hydrology	5	D	29	29	-	-			3		
1B1233 Water and Waste Handling	5	C	-	-	77	-			3		
1B1291 Environmental Dynamics/Chemical Processes <i>Under bearbetning</i>	5	D	30	8	-	16		2			Exkursion 8h
1B1292 Environmental Dynamics/Physical Processes <i>Under bearbetning</i>	5	C	26	24	-	-		2			
1B1333 Environmental Geology and Geophysics	5	D	27	27	-	-				4	
1B1634 Environmental Impact Assessment* <i>First prio: Students within TESIM-, L- and V-programs. Second prio: Incoming exchange-students LV.</i>	5	C	30	29	-	-	1				Exkursion 8h
1B1635 Quantitative Hydrogeology	5	D	20	14	-	15				4	Field excursions 20h, Computer 6h
1B1640 Natural Resources Management	5	D	19	-	-	36				4	
1E1610 Environmental Data* <i>First prio: Students within TESIM-, L- and V-programs. Second prio: Incoming exchange-students LV.</i>	5	D	18	2	-	38			3		
1F1462 Management of Land and Water	5	D	20	20	-	-				4	20 h Seminars20 h Seminars
1H1141 Urban Infrastructure	5	D	-	-	56	-				4	
1H1142 Political Economy for Environmental Planners* <i>First prio: Students within TESIM-, L- and V-programs. Second prio: Incoming exchange-students LV.</i>	5	C	30	6	-	-	1				8 h Seminars
1H1143 Sustainable Rural and Urban Development* <i>First prio: Students within TESIM-, L- and V-programs. Second prio: Incoming exchange-students LV.</i>	5	C	32	-	16	-		2			24 h Seminars, 8 h Exkursion
1H1146 Sustainable Project Management	5	C	35	-	-	30			3		15 h Field excursions15 h Field excursions
1H1501 Human Settlements and Housing	5	D	24	20	-	-		2			
1U1030 Theory of Science, Research Methodology and Excursions	5	D	29	-	-	-	1	2		4	Exkursion 40hSeminars Exkursion 40h
Elective Courses											

1H1004 Master Project in Regional Planning	20	D	-	-	-	-					
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*The course has limited participation

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Surveying

Land Development and Management L3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1F1442 <u>Law of Real Estate</u>	5	C	30	30	-	-	1				
1F1451 <u>Building and Environmental Law</u>	5	C	30	30	-	-	1				
1F1460 <u>Land Use and Land Use Policy</u>	5	C	40	28	-	-		2			
1F1461 <u>Land Use Planning</u>	10	D	40	80	-	-			3	4	16 h Field excursions16 h Field excursions
Recommended Courses											
1B1637 <u>Applied Geology and Hydrology</u> <i>The course begins in the 3rd academic year, period 3-4 and finishes in the 4th academic year, period 1</i>	10	C	24	25	-	-			3	4	12 h Seminars, 32 h Field excursions, 2 h Computer
1B1639 <u>Applied Geology and Hydrology</u>	10	C	29	36	-	15			3	4	3 h Seminars, 32 h Field excursions, 2 h Computer
1F1332 <u>Investment Analysis</u>	5	C	30	30	-	-		2			
1F1390 <u>Basic Real Estate Valuation</u>	5	C	24	36	-	-				4	Field-exercises 8h
1F1470 <u>Land Law</u> <i>Compulsory for students attending Land Development and Management during the 4th academic year</i>	5	D	30	30	-	-			3		

Land Development and Management L4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1F1427 <u>Compulsory Purchase and Compensation</u>	5	D	32	32	-	-		2			
1F1430 <u>Land Development</u>	10	D	-	-	142	-	1	2			
Recommended Courses											
1B1637 <u>Applied Geology and Hydrology</u> <i>The course begins in the 3rd academic year, period 3-4 and finishes in the 4th academic year, period 1</i>	10	C	-	-	-	-	1				
1B1640 <u>Natural Resources Management</u>	5	D	19	-	-	36				4	
1F1336 <u>Real Estate Brokerage</u>	5	D	30	30	-	-		2			
1F1441 <u>Civil and Public Law II</u>	5	D	24	40	-	-			3		
1F1444 <u>Law of Leaseholds</u>	5	D	30	30	-	-		2	3		

1F1445 Environmental Law	5	D	24	40	-	-				4	
1F1452 Law of Real Estate Formation	5	D	30	30	-	-	1				
1F1471 Real Estate Planning	10	D	40	90	-	-			3	4	32 h Field excursions 32 h Field excursions

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Environmental Resources Engineering L1

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Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1F1335 Economic Analysis* <i>Non-Surveying students are referred to 1F1385.</i>	5	B	24	36	-	-			3		
1F1440 Civil and Public Law* <i>Non-Surveying students are referred to 1F1446.</i>	5	B	24	40	-	-		2			
1F1453 Real Estate Planning, Basic Course	5	B	42	22	-	-	1				
1U1002 Sustainable Development	4	B	20	-	-	-				4	Seminars 12hSeminars 12h
2D1311 Programming Technique with PBL	4	B	19	12	-	42			3	4	
5B1124 Calculus LV, part 1	5	B	-	-	-	-		2			
5B1125 Calculus LV, part 2	5	B	-	-	-	-			3		
5B1128 Linear Algebra LV	4	B	-	-	-	-	1				
5B1220 Differential Equations and Transforms LV	4	C	-	-	-	-				4	
Recommended Courses											
5B1120 Introductory Course in Mathematics I <i>The course is taught during the introductory-period in August.</i>	1	A	4	-	-	-	1				

*The course has limited participation

Environmental Resources Engineering L2

From the academic year 2001/2002

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1B1034 Land Engineering and Construction	10	B	40	54	-	24	1	2			Field-exercises
1E1110 Surveying, Remote Sensing and Mapping <i>Field-exercises may be scheduled after the end of the term</i>	9	C	34	26	-	32			3	4	80 h Field excursions80 h Field excursions
1E1601 GIS, Databases and Cartography	8	C	38	16	-	40			3	4	
1M1050 Environmental System Analysis <i>The course will be given from 02/03</i>	4	B	20	-	-	-		2			Seminars 10h

2D1210 Numerical Methods, Basic Course I_	4	B	24	24	-	24		2	3		
5B1501 Probability Theory and Statistics	4	C	24	36	-	-	1				

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Urban Planning L3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1H1106 Planning for Housing, Workplaces and Services	5	C	-	-	66	-			3		
1H1151 Theory of Planning and Organization	5	D	-	-	33	-				4	
Recommended Courses											
1H1141 Urban Infrastructure	5	D	-	-	56	-				4	
1H1160 Urban Ecology and Strategic Environmental Assessment	5	D	-	-	66	-				4	
1H1163 Social Planning	5	C	-	-	66	-				4	
1H1243 Traffic and Land-use Planning	5	C	21	65	-	-			3		5 h Exkursion5 h Exkursion

Urban Planning L4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Recommended Courses												
1H1157 Urban and Regional Economics	5	D	-	-	66	-		2				
1H1162 Urban Center Planning <i>The course is mainly carried out in Norrtelje</i>	5	D	-	-	-	-			3		77 h Seminars	77 h Seminars
1H1170 Sustainable Cities	10	D	-	-	120	-	1					
1H1171 Urban Governance	5	D	-	-	66	-			3			
1H1172 Futures Studies and Forecasts	5	D	-	-	36	-		2			30 h Computer	
1H1174 Planning for Regional Development	10	D	-	-	132	-				4		
1H1183 Spatial Planning with GIS	5	D	30	-	-	36			3			
1H1401 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3		6 h Seminars	6 h Seminars
1N1501 Territorial Strategies in a Networking Economy <i>The course will be taught in Västerås.</i>	10	D	35	-	-	-			3	4	15 h Seminars, 10 h Workshop	6h Tutorials 15 h Seminars, 10 h Workshop
Elective Courses												
1H1004 Master Project in Regional Planning	20	D	-	-	-	-						

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Surveying and Mapping L3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1E1121 Theory of Errors	9	C	48	-	-	44	1	2			
1E1131 Geodetic Surveying <i>Field-exercises may be scheduled after the end of the term</i>	10	D	70	40	-	16			3	4	120 h Field excursions120 h Field excursions
1E1410 Analytical Photogrammetry	10	D	50	32	-	40			3	4	
5A1225 Electromagnetism and Waves	5	B	38	18	-	20	1				
5A1591 Image Physics and Photography	7	C	48	-	-	34		2	3		

Surveying and Mapping L4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1E1142 <u>Advanced Geodesy</u>	9	D	66	10	-	56	1	2			
1E1160 <u>Satellite Geodesy</u>	5	D	22	-	-	40			3		40 h Field excursions 40 h Field excursions
1E1170 <u>Engineering Surveying</u>	5	D	20	20	-	20				4	Field-exercise
1E1430 <u>Topographic Sensor Technology</u>	5	D	24	16	-	32				4	
1E1440 <u>Digital Photogrammetry</u>	5	D	24	16	-	32	1				
1E1450 <u>Integrated Project</u>	5	D	-	-	-	-				4	Project
1E1630 <u>Remote Sensing Technology</u>	5	C	18	-	-	36		2			4 h Study visit
1E1640 <u>Geoinformatics</u>	10	D	44	-	-	100		2	3		Study-visits
1E1650 <u>Advanced Remote Sensing</u>	5	D	20	-	-	48				4	

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Mechanical Engineering

Mechanical Engineering M1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1310 <u>Programming Technique</u>	4	B	26	16	-	36			3	4	
4D1026 <u>Industrial Economy and Management, Basic Course</u>	4	B	26	20	-	-		2			4 h Seminars 4 h Seminars
4F1511 <u>Technical Communication and Modeling</u>	4	B	8	36	-	18	1				
5A1225 <u>Electromagnetism and Waves</u>	5	B	38	18	-	20				4	
5B1115 <u>Mathematics 1</u>	6	B	72	28	-	-	1				
5B1116 <u>Mathematics 2</u>	6	B	72	28	-	-		2			
5B1501 <u>Probability Theory and Statistics</u>	4	C	24	36	-	-			3		
5C1103 <u>Mechanics, Basic Course</u>	6	B	48	27	-	-			3	4	

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Mechanical Engineering

Mechanical Engineering M2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1210 Numerical Methods, Basic Course I	4	B	24	24	-	24			3	4	
3C1330 Technology and Ecosystems	4	B	24	-	-	-			3	4	
4C1095 Strength of Materials and Solid Mechanics, Basic Course	8	B	52	52	-	2	1	2			
4D1094 Work Science	2	B	12	-	-	-		2			
4F1521 Machine Elements, Basic Course	8	B	10	86	-	6			3	4	Study visit 1 day, period 1
4H1056 Structural Materials	6	B	30	-	-	27			3	4	
5B1210 Mathematics IV	6	C	72	14	-	-	1				
5C1112 Mechanics, Continuation Course	4	C	30	15	-	-		2			

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Study Handbook

Syllabus

Curriculum

Courses, by

Department

TMS Courses

Abbreviations

Previous academic year (01/02)

Next academic year (03/04)

Mechanical Engineering

Mechanical Engineering M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4A1112 Applied Thermodynamics	6	C	48	48	-	-	1	2			Math exercises
4B1112 Fundamentals of Noise and Vibration Control M	4	C	31	30	-	4	1				
4F1219 Basic Electrical Engineering for Mechanical Engineers	8	B	24	36	-	28		2	3		
4G1634 Manufacturing Engineering, Basic Course	6	C	32	20	-	12	1	2			
Elective Courses											
2C1111 System Planning	4	D	60	-	-	-			3		
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
2D1522 Computer Technology and Communication*	4	C	30	-	-	20				4	
2E1212 Automatic Control, General Course	4	C	24	26	-	12			3		
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		Study visit 2x4h, Exercises
3C1395 Technology and Sustainable Development	4	C	10	9	-	-		2			
3D1112 Fibre Technology	4	D	26	-	-	15				4	
3E1324 Polymer Materials - Properties and Applications	4	C	30	12	-	10				4	
4A1601 Heat Transfer	4	C	24	24	-	20			3		
4A1603 Energy Technology	4	C	48	12	-	-				4	
4B1120 Signal Analysis with Applications	5	D	-	28	-	24				4	
4C1096 Strength of Materials and Solid Mechanics, Advanced Course	4	C	36	14	-	4			3		
4E1102 Lightweight Structures and FEM I	5	C	64	-	-	22			3	4	
4E1103 Lightweight Structures and FEM II	6,5	C	76	-	-	22			3	4	
4E1202 Elements of aeronautics for B, F and M	6	D	86	-	-	5			3	4	
4E1300 Development and Implementation Project	6	D	-	-	-	-	1	2	3	4	
4E1401 Introduction to Naval Architecture	5	C	46	10	-	10			3	4	
4F1241 Microcomputer, Sensors and Actuators	6	C	18	26	-	29				4	

4F1242 Introduction to Microcomputer Systems	4	C	12	22	-	14			4	
4F1244 Motion Control <i>The course will not be given until further notice.</i>	4	D	30	-	-	12			4	
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-			3	4 One day field trip.
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-			4	
4F1642 Modelling and Computer Support in Mechanical Design	4	C	24	36	-	-			3	
4G1134 Effective Production	6	D	25	35	-	-			3	4
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-			4	
4K1101 Control Systems	4	C	18	28	-	12			4	
4K1107 Production of Electronics I	4	C	36	-	-	8			3	
4K1132 Modularisation of Products <i>Some parts of the course are outlined in 4K1131 Assembly Systems and 4K1104 Manufacturing Systems, advanced course.</i>	4	C	24	20	-	-			3	
4K1201 Computer Aided Design and Manufacturing, Introductory course	5	C	48	-	-	24			4	Graded exercise
4K1401 History of Technology, a General Survey	4	B	12	-	-	-			3	Seminars 12h
4M1332 Materials Processing	4	D	22	20	-	20			3	
4M1335 Materials Processing, Laboratory Course	5	D	26	32	-	47			3	4
4M1336 Physics for Materials Processing	5	C	16	16	-	-			3	Home assignments 60h
4M1345 Powder Processing and Materials Forming	4	D	30	-	-	-			4	Home assignments 80h
5B1304 Mathematics, Extended Course	5	D	-	-	54	-			3	4
5B1538 Reliability Theory	6	D	-	-	72	-			3	4
5B1722 Applied Optimization	4	C	30	14	-	-			3	
5C1121 Analytical Mechanics	4	C	48	-	-	-			3	
5C1203 Fluid Mechanics, General Course <i>Compulsory within competenceprogram Fluid Mechanics.</i>	4	C	-	24	24	3			4	
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4			4	4 h Seminars4 h Seminars
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4
9E1131 Information Searching for B, I, M, T	1	B	-	-	-	-			3	4
9E1300 Technical English, Lower Intermediate Level*	4	B	-	-	56	-			3	4
9E1301 Technical English, Intermediate*	6	B	-	-	56	-			3	4
9E1320 German, Elementary Level*	4	B	-	-	56	-			3	4
9E1322 German, Advanced Beginner's Level*	4	B	-	56	56	-			3	4
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	18	-	-			3	4 E-learning exercises
9E1330 French, Elementary Level*	4	B	-	-	56	-			3	4
9E1332 French, Advanced Beginner's Level*	4	B	-	-	56	-			3	4

9E1334 <u>Technical French, Intermediate Level*</u>	6	B	-	-	-	-			3	4	
9E1342 <u>Spanish, Elementary Level*</u>	4	B	-	-	56	-			3	4	
9E1346 <u>Spanish, Advanced Beginner's Level*</u>	4	B	-	-	56	-			3	4	
9E1348 <u>Technical Spanish, Intermediate Level*</u>	6	B	-	-	56	-			3	4	
9E1350 <u>Italian, Elementary Level*</u>	4	B	-	-	56	-			3	4	
9E1360 <u>Communicative Swedish*</u>	4	B	-	-	56	-			3	4	

*The course has limited participation

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TMS Courses

Abbreviations

[Previous academic year \(01/02\)](#)
[Next academic year \(03/04\)](#)

Mechanical Engineering

Mechanical Engineering M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2A1140 Accelerator and Radiation Technology	4	D	36	-	-	4			3		
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
2A1160 Space Physics	3	D	12	-	-	-	1				
2C1111 System Planning	4	D	60	-	-	-			3		
2D1225 Numerical Solutions of Differential Equations	4	C	26	4	-	18	1	2			
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1334 Database Technology	4	C	24	20	-	12			3		
2D1354 Algorithms and Complexity	4	C	30	18	-	-	1	2			
2D1385 Software Engineering	4	C	24	12	-	18				4	
2D1420 Computer Vision, Basic Course	5	D	46	6	-	12			3		
2D1426 Robotics and Autonomous Systems*	5	D	16	-	-	60				4	
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20			3		
2D1520 Graphic Arts Technology, Minor Course	4	C	30	8	-	16		2			
2D1521 Communication and Information*	5	C	21	-	-	-			3		Seminars 24h
2D1522 Computer Technology and Communication*	4	C	30	-	-	20				4	
2E1212 Automatic Control, General Course	4	C	24	26	-	12			3		
2E1241 Automatic Control, Project Course*	5	D	4	-	-	50				4	
2E1252 Control Theory and Practice, Advanced Course	5	D	28	26	-	8			3		
2E1262 Nonlinear Control	5	D	28	28	-	8		2			
2E1291 Chemical Process Control	4	C	20	28	-	8			3		
2F1111 Speech Technology	4	D	36	14	-	6			3		
2F1400 Electroacoustics	4	D	34	12	-	8	1				

3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	21	-	-	6			4	Project work 20h
3C1355 Ecology, Advanced Course	4	C	21	4	-	-			3 4	
3C1360 Environmental Consequences, Advanced Course	4	C	18	9	-	8	1			Seminars 9hSeminars 9h
3C1365 Environmental Consequences, Advanced Course II	4	D	15	15	-	40	1 2			Field exercises
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2		
3C1380 Environmental Management	4	D	21	3	-	8			3 4	Project work 8h
3C1383 Risk Management	4	C	16	30	-	-	1			
3C1385 Biology	4	C	30	6	-	6	1			Field exercise 8h
3C1395 Technology and Sustainable Development	4	C	10	9	-	-		2		
3E1360 Mechanical Properties of Polymers, Minor Course	4	C	24	16	-	12	1			
3E1361 Polymer Processing, Minor Course	4	C	24	8	-	18		2		
4A1140 Energy Systems and Models	4	D	-	-	-	-			4	
4A1341 Introductory Airbreathing Propulsion	4	C	21	24	-	8		2		
4A1344 Airbreathing Propulsion, Intermediate Course I	4	D	40	-	-	-			3	Project work 6h
4A1346 Rocket Propulsion	4	D	36	10	-	-			4	Project work 6h
4A1347 Airbreathing Propulsion for High Speed Flight	4	D	27	10	-	6			4	
4A1605 Sustainable Power Generation	6	D	30	48	-	18	1 2			
4A1607 Sustainable Energy Utilization	6	D	-	-	72	16	1 2			
4A1609 Applied Energy Technology - Project Course	6	D	12	-	-	-			3 4	Project 78h
4A1610 Energy Management	4	D	50	-	-	-			4	
4A1611 Renewable Energy Technology	4	D	-	-	52	-		2		Study visit 8h
4A1613 Energy and Environment	4	D	45	-	-	-			3 4	
4A1620 Combustion Theory	4	C	18	18	-	15	1 2 3 4			
4A1621 Modelling of Thermodynamic Systems	4	D	16	-	-	32	1 2 3 4			The course is given upon agreement
4A1622 Thermal Comfort and Indoor Climate	4	D	24	24	-	12			3 4	
4A1623 Applied Refrigeration and Heat Pump Technology	4	D	24	24	-	16			3 4	
4A1625 Cooling of Electronics	4	D	48	-	-	12			3	
4A1626 Applied Heat and Power Technology	4	D	30	12	-	8			3 4	Project assignment 8h
4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3	Study visits 12h
4A1629 Fluid Machinery	4	C	30	18	-	12	1 2			
4A1630 Thermal Fluid Machinery	4	D	36	12	-	12			3	
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	59	7	1 2			7 h Projektuppgift7 h Projektuppgift
4B1313 Rail Vehicle Dynamics	5	D	-	-	36	24			3	
4B1420 Ground Vehicle Engineering, Basic Course	6	C	36	36	-	-	1 2			

4B1425 Ground Vehicle Dynamics, Basic Course*	7	D	33	60	-	-			3	4	
4C1110 Material Mechanics	4	D	52	-	-	3	1				
4C1111 Fracture Mechanics and Fatigue	4	D	48	-	-	4				4	
4C1112 Theory of Elasticity	4	D	26	26	-	-			3		
4C1114 Finite Element Method	4	D	-	49	-	8		2			
4C1116 Dynamic Problems in Solid Mechanics	4	D	42	-	-	8			3	4	
4C1118 Non-linear Theory of Elasticity	2	D	12	12	-	-				4	
4C1119 Finite Element Method, Project Course	2	D	8	-	-	-			3		
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	
4D1060 Industrial Development	4	C	40	8	-	-			3		
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4D1075 Work Organization and Leadership*	4	C	24	24	-	-			3		
4D1090 Work Science, General Course	4	B	-	-	-	-	1	2	3	4	Literature course
4D1092 Man - Machine System	4	C	24	8	-	4			3		
4D1093 Psychology for Engineers <i>Replaces 4D1088 Technical Work Psychology</i>	4	C	24	4	-	4		2			
4D1170 Advanced Production and Product Development	4	D	36	12	-	-		2			
4D1174 Management and Analysis of Innovations and Technology	4	D	38	-	-	-		2			Seminars 10hSeminars 10h
4E1124 Fibre Composites I: materials and processes	4	D	40	-	-	5	1				
4E1126 Structural Design and Optimisation	4	D	36	-	-	12			3		
4E1150 Biomechanics and Neurronics	4	D	36	-	-	6				4	
4F1131 Microcomputers in Embedded Systems*	5	D	-	36	-	36		2			
4F1131 Microcomputers in Embedded Systems* <i>Limited attendance: 25</i>	5	D	-	36	-	36			3		
4F1141 Project Work in Mechatronics* <i>Limited attendance due to limited number of available projects</i>	4	C	-	-	-	-	1	2	3	4	No scheduled hours
4F1244 Motion Control <i>The course will not be given until further notice.</i>	4	D	30	-	-	12				4	
4F1340 Introduction to Fluid Power	4	C	24	24	-	9	1				
4F1343 Fluid Systems and Machines	4	C	24	24	-	12				4	
4F1430 Combustion Engines, general course*	4	C	48	-	-	12	1				
4F1540 Tribology	4	C	18	9	-	5				4	
4F1540 Tribology	4	C	18	9	-	5	1				
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-				4	
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4F1631 Intermediate Machine Design Course	7	D	4	84	-	-			3	4	

4F1640 Industrial Design* <i>Limited number of participants.</i>	4	C	24	36	-	-		3		
4F1640 Industrial Design* <i>Limited number of participants.</i>	4	C	24	36	-	-		2		
4F1641 Environmentally Adapted Product Design	4	C	24	20	-	16		2		
4F1643 Eco Design Project*	4	C	-	-	-	-	1	2	3	4
4G1161 Quality	6	C	40	16	-	-	1			
4G1230 Introductory Welding Technology	4	C	24	18	-	12	1			
4G1231 Intermediate Welding Technology	4	D	24	24	-	12	1	2		
4G1246 Enlarged Welding Technology for EWE <i>Course is given upon agreement</i>	4	D	25	25	-	10	1	2	3	4
4G1540 Laser Metrology Methods and Non Destructive Testing	4	C	28	22	-	4		2		
4G1541 Measurement Technology & Statistics f Manuf. Processes	4	D	30	-	-	8			3	
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1			
4K1103 Manufacturing Automation II	6	C	28	32	-	17	1	2		
4K1107 Production of Electronics I	4	C	36	-	-	8			3	
4K1109 Principles for Product Integrated Manufacturing Systems Design	4	C	12	12	-	4	1			
4K1131 Assembly Systems	4	C	24	20	-	12		2		
4K1132 Modularisation of Products <i>Some parts of the course are outlined in 4K1131 Assembly Systems and 4K1104 Manufacturing Systems, advanced course.</i>	4	C	24	20	-	-			3	
4K1202 Modelling and Interaction in CAD/CAM* <i>Maximum of 20 participants. Students of "Computer Systems for Design and Manufacturing" will have priority.</i>	5	D	-	36	-	24	1			3 Programming tasks, periods 1, 2
4K1405 Environmental History	4	B	12	-	-	-			4	12 h Seminars
4K1409 History of Industry	4	B	12	-	-	-	1	2		Seminars 12h, Study visit 10h
4K1601 Wood Material Science, Basic Course	5	C	36	24	-	32			3	4
4K1602 Industrial Wood Processing, Basic Course	4	C	26	16	-	16	1			
4M1051 Project	4	D	-	160	-	-	1	2	3	4
4M1342 Space Systems and Technology	4	D	36	-	-	-		2		
4M1343 Materials Processing, Project Support	4	D	72	48	-	40	1	2	3	4
4M1344 Metrology in Materials Processing	4	D	16	-	-	80	1			Seminars 16h
4M1345 Powder Processing and Materials Forming	4	D	30	-	-	-				4 Home assignments 80h
4M1346 Simulation and Modelling	4	D	10	80	-	-			3	
4M1370 Solidification Processing	4	D	36	24	-	-		2	3	
5A1260 Modern Physics at CERN	5	C	24	12	-	10	1	2		
5A1414 Radiation Detectors and Medical Imaging Systems	5	D	24	6	-	20			3	4
5A1416 Radiation Sources for Therapy	2	D	8	-	-	-				4 2 compulsory studyvisits
5A1590 Technical Photography	5	D	20	-	-	36			3	4

5B1310 Applied and Industrial Mathematics	5	D	26	-	-	-	1	2			
5B1555 Computer Intensive Methods in Mathematical Statistics	5	D	-	-	48	-				4	
5B1574 Portfolio Theory and Risk Management	4	D	30	12	-	-	1				
5B1814 Applied Mathematical Programming - Linear Problems	4	D	18	12	-	-		2			Projektuppgift 18h
5B1816 Applied Mathematical Programming - Nonlinear Problems	4	D	18	12	-	-			3		Projektuppgift 18h
5B1852 Mathematical Economics	4	D	32	16	-	-		2			
5C1122 Continuum Mechanics	4	C	42	-	-	-	1				
5C1123 Mathematical Methods of Mechanics, General Course	4	D	36	-	-	-		2			
5C1125 Mathematical Methods of Mechanics, Intermediate Course	2	D	-	-	-	-			3		
5C1210 Experimental Methods in Fluid Mechanics	4	D	-	-	28	9				4	
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4				4	4 h Seminars4 h Seminars
5C1400 Nonlinear Dynamics in Mechanics	5	C	24	-	-	-			3		
5C1860 FEM Modelling	5	D	33	-	-	-		2			44 h Workshop
5C1980 Mechanics in Research and Industry <i>The course runs the entire academic year. A few lectures during fall.</i>	4	C	24	-	-	37	1	2	3	4	
7E1101 Medical Engineering, Basic Course	4	C	24	-	-	-	1				
7E1110 Quality and Regulatory Aspects on Medical Devices*	2	D	20	-	-	-			3	4	
7E1112 Implants and Biomaterials*	4	D	25	-	-	-			3	4	
7E1113 Medical Instrumentation and Signal Processing*	4	D	30	-	-	6			3	4	
7E1114 Radiation Physics and Biology*	4	D	40	-	-	-				4	
7E1115 Engineering in Intensive Care and Anesthesia*	4	D	12	-	-	-			3	4	30 + 10h (field work with oral and written report)
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1				
7E1200 Cellular and Molecular Biology*	10	C	80	-	-	8			3	4	
7E1202 Systems Biology*	5	C	32	-	-	25		2			24 h Seminars24 h Seminars
9E1131 Information Searching for B, I, M, T	1	B	-	-	-	-	1	2			3 laborations on all together 12 hours, 1 written examination and 1 written report. The course is given regularly throughout the academic year, please refer to the web page for the course.
9E1131 Information Searching for B, I, M, T	1	B	-	-	-	-			3	4	
9E1300 Technical English, Lower Intermediate Level*	4	B	-	-	56	-	1	2			
9E1301 Technical English, Intermediate*	6	B	-	-	56	-	1	2			
9E1304 Technical English, Advanced Level*	6	C	-	-	56	-			3	4	

9E1304 <u>Technical English, Advanced Level*</u>	6	C	-	-	56	-	1	2			
9E1320 <u>German, Elementary Level*</u>	4	B	-	-	56	56	-	1	2		
9E1322 <u>German, Advanced Beginner's Level*</u>	4	B	-	-	56	-	1	2			
9E1325 <u>Technical German, Intermediate Level, E-learning</u>	6	B	-	18	-	-	1	2			E-learning exercises
9E1326 <u>Technical German, Advanced Level*</u>	6	C	-	-	56	-	1	2			
9E1326 <u>Technical German, Advanced Level*</u>	6	C	-	-	56	-			3	4	
9E1330 <u>French, Elementary Level*</u>	4	B	-	-	56	-	1	2			
9E1332 <u>French, Advanced Beginner's Level*</u>	4	B	-	-	56	-	1	2			
9E1334 <u>Technical French, Intermediate Level*</u>	6	B	-	-	56	-	1	2			
9E1342 <u>Spanish, Elementary Level*</u>	4	B	-	-	56	-	1	2			
9E1346 <u>Spanish, Advanced Beginner's Level*</u>	4	B	-	-	56	-	1	2			
9E1350 <u>Italian, Elementary Level*</u>	4	B	-	-	56	-	1	2			
9E1352 <u>Italian, Advanced Beginner's Level*</u>	4	B	-	-	56	-			3	4	
9E1360 <u>Communicative Swedish*</u>	4	B	-	-	56	-	1	2			

*The course has limited participation

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[Previous academic year \(01/02\)](#)

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Mechanical Engineering

Business Development and Media Technology M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Elective Courses												
9E1300 Technical English, Lower Intermediate Level*_	4	B	-	-	56	-			3	4		
9E1301 Technical English, Intermediate*_	6	B	-	-	56	-			3	4		
9E1304 Technical English, Advanced Level*_	6	C	-	-	56	-			3	4		

*The course has limited participation

Business Development and Media Technology M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1521 <u>Communication and Information</u>	5	C	21	-	-	-	1				Seminars 24
2D1550 <u>Market Systems</u> <i>Only open to AFM-students</i>	5	C	-	-	-	-	1				Seminars 40h
2D1551 <u>Consumer Markets</u> <i>Open only to AFM-students.</i>	5	C	-	-	-	-	1				Seminars 40h
2D1552 <u>Media Management</u> <i>Open only for AFM-students.</i>	10	C	72	56	-	-	1	2	3	4	Only open for AFM-students.
2D1553 <u>Media Production</u> <i>Only open for AFM-students.</i>	10	C	40	-	-	110		2			Only open for AFM-students.
2D1555 <u>Information Technology and Organizations</u>	5	D	39	-	-	-				4	
4D1028 <u>Industrial Economics and Management, Advanced Course</u>	4	C	26	20	-	-				4	4 h Seminars4 h Seminars
Elective Courses											
2D1334 <u>Database Technology</u>	4	C	24	20	-	12			3		
2D1524 <u>Image Processing and Reprographic Methods*</u> <i>Limited number of participants</i>	6	C	50	16	-	24	1				

*The course has limited participation

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Mechanical Engineering

Advanced Materials M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4H1610 <u>Advanced Materials</u>	4	C	18	-	-	6			3		Study visit 18h Seminars	
4H1611 <u>Materials Optimisation and Design</u>	5	C	18	18	-	12				4	Study visits 10h	
Elective Courses												
4H1504 <u>Processing of Ceramic Materials</u>	4	C	12	-	-	18			3			

Advanced Materials M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1612 High Temperature Materials	7	D	18	12	-	6	1				Study visit 8h Seminars 10h Project assignment 100h
Elective Courses											
4H1404 Corrosion and Surface Protection, General Course	4	C	16	12	-	12	1				
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-			3		
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18		2			

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Mechanical Engineering

Biomedical Engineering M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1200 Cellular and Molecular Biology*_	10	C	80	-	-	8			3	4	
7E1201 Neuroscience*_	5	C	60	-	-	30				4	

*The course has limited participation

Biomedical Engineering M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1				
7E1202 Systems Biology*_	5	C	32	-	-	25		2			24 h Seminars24 h Seminars
Elective Courses											
2D1435 Mathematical Modelling of Biological Systems <i>The course is given every second year and will not be given in 02/03.</i>	6	D	26	-	-	20					

*The course has limited participation

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Computer Systems for Design and Manufacturing M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
4K1201 Computer Aided Design and Manufacturing, Introductory course	5	C	48	-	-	24				4	Graded exercise

Computer Systems for Design and Manufacturing M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				
4K1202 Modelling and Interaction in CAD/CAM* Maximum of 20 participants. Students of "Computer Systems for Design and Manufacturing" will have priority.	5	D	-	36	-	24	1				3 Programming tasks, periods 1, 2
4K1203 Computer Systems for Design and Manufacturing, advanced course Maximum of 20 participants. Students of "Computer Systems for Design and Manufacturing" will have priority.	12	D	-	68	-	60		2	3	4	4 Programming Projects, periods 2, 3, 4
Elective Courses											
4F1131 Microcomputers in Embedded Systems*	5	D	-	36	-	36		2			
4K1103 Manufacturing Automation II	6	C	28	32	-	17	1	2			

*The course has limited participation

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Energy Technology M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4A1601 Heat Transfer	4	C	24	24	-	20			3		
4A1603 Energy Technology	4	C	48	12	-	-				4	
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4	

Energy Technology M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4A1605 Sustainable Power Generation	6	D	30	48	-	18	1	2			
4A1607 Sustainable Energy Utilization	6	D	-	-	72	16	1	2			
4A1609 Applied Energy Technology - Project Course	6	D	12	-	-	-			3	4	Project 78h
Elective Courses											
4A1140 Energy Systems and Models	4	D	-	-	-	-				4	
4A1610 Energy Management	4	D	50	-	-	-				4	
4A1611 Renewable Energy Technology	4	D	-	-	52	-		2			Study visit 8h
4A1613 Energy and Environment	4	D	45	-	-	-			3	4	
4A1620 Combustion Theory	4	C	18	18	-	15	1	2	3	4	
4A1621 Modelling of Thermodynamic Systems	4	D	16	-	-	32	1	2	3	4	The course is given upon agreement
4A1622 Thermal Comfort and Indoor Climate	4	D	24	24	-	12			3	4	
4A1623 Applied Refrigeration and Heat Pump Technology	4	D	24	24	-	16			3	4	
4A1624 Numerical Methods in Energy Technology	4	D	24	12	-	12				4	
4A1625 Cooling of Electronics	4	D	48	-	-	12			3		
4A1626 Applied Heat and Power Technology	4	D	30	12	-	8			3	4	Project assignment 8h
4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3		Study visits 12h

4A1628 <u>Advanced Nuclear Reactor Engineering</u>	4	D	42	-	-	-				4	Study visits 18h
4A1629 <u>Fluid Machinery</u>	4	C	30	18	-	12	1	2			
4A1630 <u>Thermal Fluid Machinery</u>	4	D	36	12	-	12			3		

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Automotive Engineering M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2E1212 Automatic Control, General Course	4	C	24	26	-	12			3		
4B1120 Signal Analysis with Applications	5	D	-	28	-	24				4	
4F1242 Introduction to Microcomputer Systems	4	C	12	22	-	14				4	
5B1304 Mathematics, Extended Course	5	D	-	-	54	-			3	4	
Elective Courses											
4E1103 Lightweight Structures and FEM II	6,5	C	76	-	-	22			3	4	

Automotive Engineering M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1420 <u>Ground Vehicle Engineering, Basic Course</u>	6	C	36	36	-	-	1	2			
4B1425 <u>Ground Vehicle Dynamics, Basic Course*_</u>	7	D	33	60	-	-			3	4	
4F1430 <u>Combustion Engines, general course*_</u>	4	C	48	-	-	12	1				
Elective Courses											
4B1131 <u>Experimental Structure Dynamics</u>	5	D	-	58	-	12		2	3		
4F1131 <u>Microcomputers in Embedded Systems*_</u>	5	D	-	36	-	36		2			
4F1131 <u>Microcomputers in Embedded Systems*_</u> <i>Limited attendance: 25</i>	5	D	-	36	-	36			3		

Limited attendance: 25

*The course has limited participation

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Mechanical Engineering

Internal Combustion Engines M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
4F1241 <u>Microcomputer, Sensors and Actuators</u>	6	C	18	26	-	29				4	

Internal Combustion Engines M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1420 <u>Ground Vehicle Engineering, Basic Course</u>	6	C	36	36	-	-	1	2			
4F1430 <u>Combustion Engines, general course*</u>	4	C	48	-	-	12	1				
4F1431 <u>Combustion Engines, Advanced Course*</u>	6	D	56	-	-	32		2	3		
4F1460 <u>Combustion Engines, Project Course</u>	6	D	-	18	-	-			3	4	
Elective Courses											
2E1212 <u>Automatic Control, General Course</u>	4	C	24	26	-	12	1				
2E1212 <u>Automatic Control, General Course</u>	4	C	24	26	-	12			3		
4B1131 <u>Experimental Structure Dynamics</u>	5	D	-	58	-	12		2	3		
4F1141 <u>Project Work in Mechatronics*</u> <i>Limited attendance due to limited number of available projects</i>	4	C	-	-	-	-	1	2	3	4	No scheduled hours

*The course has limited participation

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Solid Mechanics M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1096 Strength of Materials and Solid Mechanics, Advanced Course	4	C	36	14	-	4			3		
4C1117 Design Applications of Solid Mechanics*	4	D	16	6	-	-				4	Estimated time for project: 90h
5B1304 Mathematics, Extended Course	5	D	-	-	54	-			3	4	

*The course has limited participation

Solid Mechanics M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1114 Finite Element Method	4	D	-	49	-	8	2				
Elective Courses											
3E1324 Polymer Materials - Properties and Applications	4	C	30	12	-	10				4	
3E1360 Mechanical Properties of Polymers, Minor Course	4	C	24	16	-	12	1				
4B1313 Rail Vehicle Dynamics	5	D	-	-	36	24			3		
4B1420 Ground Vehicle Engineering, Basic Course	6	C	36	36	-	-	1	2			
4C1110 Material Mechanics	4	D	52	-	-	3	1				
4C1111 Fracture Mechanics and Fatigue	4	D	48	-	-	4				4	
4C1112 Theory of Elasticity	4	D	26	26	-	-			3		
4C1116 Dynamic Problems in Solid Mechanics	4	D	42	-	-	8			3	4	
4C1118 Non-linear Theory of Elasticity	2	D	12	12	-	-				4	
4C1119 Finite Element Method, Project Course	2	D	8	-	-	-			3		
4E1125 Fibre Composites II, Analysis and Design	4	D	48	-	-	6		2			
4F1540 Tribology	4	C	18	9	-	5	1				
4F1540 Tribology	4	C	18	9	-	5				4	
4G1230 Introductory Welding Technology	4	C	24	18	-	12	1				

4H1202 Mechanical Metallurgy I	6	D	24	12	-	48			3	4	Home assignments
4H1203 Mechanical Metallurgy II	4,5	C	24	12	-	24			3	4	Home assignments
4H1205 Mechanical Properties of Materials	4	C	20	18	-	6		2			Study visit 4hStudy visit 4h Study visit 4h
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18		2			
5A1301 Mathematical Methods in Physics, Course I	4	C	-	54	-	-	1	2			
5C1122 Continuum Mechanics	4	C	42	-	-	-	1				
5C1123 Mathematical Methods of Mechanics, General Course	4	D	36	-	-	-		2			
5C1125 Mathematical Methods of Mechanics, Intermediate Course	2	D	-	-	-	-			3		
5C1902 Advanced Dynamics of Complex Systems	4	D	24	-	-	-	1				

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Industrial Economics and Management M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4D1028 Industrial Economics and Management, Advanced Course	4	C	26	20	-	-					4	4 h Seminars4 h Seminars
Elective with												
4D1060 Industrial Development	4	C	40	8	-	-				3		
4D1075 Work Organization and Leadership*	4	C	24	24	-	-				3		
4K1101 Control Systems	4	C	18	28	-	12					4	
Elective Courses												
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-					4	

*The course has limited participation

Industrial Economics and Management M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1035 Advanced Industrial Economics and Management	12	D	68	72	-	-		2	3	4	Roll-play 16h
Elective with											
4D1070 Industrial Project Management	4	C	32	-	-	-	1				Seminars 2hSeminars 2h
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				
Elective Courses											
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4D1070 Industrial Project Management	4	C	32	-	-	-	1				Seminars 2hSeminars 2h
4D1152 Industrial Marketing, Advanced Course <i>Open only to IEO-students.</i>	4	D	36	12	-	-	1				
4K1103 Manufacturing Automation II	6	C	28	32	-	17	1	2			

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Industrial Engineering M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4	
4G1161 Quality	6	C	40	16	-	-			3		
Elective Courses											
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		Study visit 2x4h, Exercises
4G1632 Materials Processing II	4	C	29	30	-	13				4	
4G1635 Materials Processing II, Laboratory Course	5	D	29	30	-	37				4	

Industrial Engineering M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1146 <u>Advanced Industrial Engineering</u>	12	D	67	22	-	-	1	2			Projektuppgift 120h
4G1161 <u>Quality</u>	6	C	40	16	-	-	1				
Elective Courses											
3C1360 <u>Environmental Consequences, Advanced Course</u>	4	C	18	9	-	8	1				Seminars 9hSeminars 9h
4D1062 <u>Industrial Marketing</u> <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4D1093 <u>Psychology for Engineers</u> <i>Replaces 4D1088 Technical Work Psychology</i>	4	C	24	4	-	4		2			
4G1053 <u>Materials Processing, Project Support</u>	4	D	72	48	-	40		2	3	4	Home assignments 48h
4G1170 <u>Intelligent Machining, Advanced Course</u>	4	D	36	20	-	-		2	3	4	
4G1243 <u>Advanced Welding Technology, Modulus 1</u>	4	D	20	20	-	20			3		
4G1244 <u>Advanced Welding Technology, Modulus 2</u>	4	D	20	20	-	20			3		

4G1245 Advanced Welding Technology, Modulus 3	4	D	20	20	-	20				4	
4G1246 Enlarged Welding Technology for EWE <i>Course is given upon agreement</i>	4	D	25	25	-	10	1	2	3	4	
4G1540 Laser Metrology Methods and Non Destructive Testing	4	C	28	22	-	4		2			
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				

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Integrated Product Development M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1075 Work Organization and Leadership*_	4	C	24	24	-	-			3		
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-				4	
Elective Courses											
4F1242 Introduction to Microcomputer Systems	4	C	12	22	-	14				4	

*The course has limited participation

Integrated Product Development M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-		2			
4F1760 Integrated Product Development, Advanced Course	20	D	-	180	-	-	1	2	3	4	
Elective Courses											
4F1131 Microcomputers in Embedded Systems*	5	D	-	36	-	36		2			
4F1641 Environmentally Adapted Product Design	4	C	24	20	-	16		2			
4F1642 Modelling and Computer Support in Mechanical Design	4	C	24	36	-	-			3		

*The course has limited participation

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Sound and Vibrations M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1120 Signal Analysis with Applications	5	D	-	28	-	24				4	
5B1304 Mathematics, Extended Course	5	D	-	-	54	-			3	4	
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4	

Sound and Vibrations M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1127 <u>Vibroacoustics</u>	5	D	-	56	-	8	1	2			
4B1131 <u>Experimental Structure Dynamics</u>	5	D	-	58	-	12		2	3		
4B1136 <u>Flow Acoustics</u>	4	D	-	36	-	8			3		
4B1141 <u>Sound and Vibration, Projekt Course</u>	5	D	-	48	-	12			3	4	Study tour to industry 40h
9E1131 <u>Information Searching for B, I, M, T</u>	1	B	-	-	-	-			3	4	

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Lightweight Structures M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4E1103 Lightweight Structures and FEM II	6,5	C	76	-	-	22			3	4		
Elective Courses												
4E1201 Elements of Aeronautics	5	C	72	-	-	4			3	4		

Lightweight Structures M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1124 Fibre Composites I: materials and processes	4	D	40	-	-	5	1				
4E1125 Fibre Composites II, Analysis and Design	4	D	48	-	-	6		2			
4E1126 Structural Design and Optimisation	4	D	36	-	-	12			3		
4E1131 Aircraft and Lightweight Design	6	D	8	60	-	12			3	4	
4E1150 Biomechanics and Neuronics	4	D	36	-	-	6				4	
Elective Courses											
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	59	7	1	2			7 h Projektuppgift7 h Projektuppgift
4B1420 Ground Vehicle Engineering, Basic Course	6	C	36	36	-	-	1	2			
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
5B1722 Applied Optimization	4	C	30	14	-	-			3		
9E1300 Technical English, Lower Intermediate Level*_	4	B	-	-	56	-	1	2			
9E1301 Technical English, Intermediate*_	6	B	-	-	56	-	1	2			
9E1304 Technical English, Advanced Level*_	6	C	-	-	56	-	1	2			
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	18	-	-	1	2			E-learning exercises
9E1326 Technical German, Advanced Level*_	6	C	-	-	56	-	1	2			

9E1334 <u>Technical French, Intermediate</u> Level*_	6	B	-	-	56	-	1	2			
9E1348 <u>Technical Spanish, Intermediate</u> Level*_	6	B	-	-	56	-			3	4	

*The course has limited participation

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Marina system M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1103 <u>Lightweight Structures and FEM II</u>	6,5	C	76	-	-	22			3	4	
4E1401 <u>Introduction to Naval Architecture</u>	5	C	46	10	-	10			3	4	
5C1921 <u>Fluid Mechanics for Engineers</u>	4,5	C	28	30	-	6			3	4	

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Machine Elements M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1096 Strength of Materials and Solid Mechanics, Advanced Course	4	C	36	14	-	4			3		
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-			3	4	One day field trip.

Machine Elements M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1540 Tribology	4	C	18	9	-	5				4	
4F1540 Tribology	4	C	18	9	-	5	1				
4F1560 Advanced Machine Elements	12	D	-	120	-	-			3	4	
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4K1132 Modularisation of Products <i>Some parts of the course are outlined in 4K1131 Assembly Systems and 4K1104 Manufacturing Systems, advanced course.</i>	4	C	24	20	-	-			3		
Elective Courses											
4C1114 Finite Element Method	4	D	-	49	-	8		2			

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Mechanical Engineering

Machine Design M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1096 Strength of Materials and Solid Mechanics, Advanced Course	4	C	36	14	-	4			3		
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-			3	4	One day field trip.
Elective Courses											
4C1112 Theory of Elasticity	4	D	26	26	-	-			3		
4F1241 Microcomputer, Sensors and Actuators	6	C	18	26	-	29				4	
4F1242 Introduction to Microcomputer Systems	4	C	12	22	-	14				4	
4F1343 Fluid Systems and Machines	4	C	24	24	-	12				4	
4F1642 Modelling and Computer Support in Mechanical Design	4	C	24	36	-	-			3		
4K1201 Computer Aided Design and Manufacturing, Introductory course	5	C	48	-	-	24				4	Graded exercise
5C1121 Analytical Mechanics	4	C	48	-	-	-			3		

Machine Design M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1630 <u>Introduction to Machine Design</u>	5	C	24	36	-	-	1	2			
4F1640 <u>Industrial Design*</u>	4	C	24	36	-	-	1				
4F1660 <u>Advanced Machine Design</u>	12	D	4	114	-	-			3	4	
Elective Courses											
3E1360 <u>Mechanical Properties of Polymers, Minor Course</u>	4	C	24	16	-	12	1				
3E1361 <u>Polymer Processing, Minor Course</u>	4	C	24	8	-	18		2			
4C1114 <u>Finite Element Method</u>	4	D	-	49	-	8		2			
4F1131 <u>Microcomputers in Embedded Systems*</u>	5	D	-	36	-	36		2			

4F1131 <u>Microcomputers in Embedded Systems*</u> <i>Limited attendance: 25</i>	5	D	-	36	-	36			3		
4F1141 <u>Project Work in Mechatronics*</u> <i>Limited attendance due to limited number of available projects</i>	4	C	-	-	-	-	1	2	3	4	No scheduled hours
4F1541 <u>CAD 3D-modelling and Visualization for Personal Computers</u>	4	C	8	36	-	-				4	
4F1641 <u>Environmentally Adapted Product Design</u>	4	C	24	20	-	16		2			
4K1102 <u>Manufacturing Automation I</u>	4	C	20	24	-	12	1				

*The course has limited participation

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Mechanical Engineering

Materials Science M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4H1059 Engineering Materials, Advanced Course	6	C	10	15	-	15			3		
4H1202 Mechanical Metallurgy I	6	D	24	12	-	48			3	4	Home assignments
4H1204 Experimental Methods in Materials Science	5	D	10	10	-	48			3	4	
4H1504 Processing of Ceramic Materials	4	C	12	-	-	18			3		

Materials Science M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4H1104 Diffusion and Phase Equilibria	6	D	18	18	-	42	1	2			
4H1113 Powder Metallurgy	4	D	18	18	-	12		2			
4H1301 Material Design	4	D	-	2	-	10			3	4	
4H1404 Corrosion and Surface Protection, General Course	4	C	16	12	-	12	1				
Elective with											
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-			3		
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18		2			
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1610 Advanced Materials	4	C	18	-	-	6			3		Study visit 18h Seminars
4H1702 Current Research Topics in Materials Chemistry	4	D	20	4	-	8				4	
4H1703 Materials Chemistry	4	D	20	4	-	8				4	
4H1802 Artificial Materials	4	D	20	4	-	6	1				
5A1304 Mathematical Methods in Physics	6	C	-	78	-	-	1	2			
5A1370 Solid State Theory	4	D	36	-	-	-	1				
Elective Courses											
4H1803 Physics of Nanostructured Materials	4	D	20	4	-	6				4	

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Mechanics M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
5B1304 Mathematics, Extended Course	5	D	-	-	54	-			3	4	
5C1121 Analytical Mechanics	4	C	48	-	-	-			3		
Elective Courses											
5C1203 Fluid Mechanics, General Course <i>Compulsory within competenceprogram Fluid Mechanics.</i>	4	C	-	24	24	3				4	
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4	

Mechanics M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1225 Numerical Solutions of Differential Equations	4	C	26	4	-	18	1	2			
2D1255 Numerical Solutions of Differential Equations	5	D	36	-	-	20			3	4	
5C1122 Continuum Mechanics	4	C	42	-	-	-	1				
5C1123 Mathematical Methods of Mechanics, General Course	4	D	36	-	-	-		2			
5C1125 Mathematical Methods of Mechanics, Intermediate Course	2	D	-	-	-	-			3		
5C1205 Compressible Flow, General Course	4	D	-	-	42	6	1				
5C1207 Boundary Layer Theory and Thermal Convection	5	D	-	-	38	9		2	3		
5C1208 Fluid Mechanics, Intermediate Course	2	D	-	-	20	-	1				
5C1209 Compressible Flow, Intermediate Course	2	D	-	-	22	6		2			
5C1210 Experimental Methods in Fluid Mechanics	4	D	-	-	28	9				4	
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4				4	4 h Seminars4 h Seminars
5C1212 Computational Fluid Dynamics	5	D	-	-	50	10			3		

5C1213 <u>Applied Computational Fluid Dynamics</u>	2	D	-	-	10	14				4	
5C1400 <u>Nonlinear Dynamics in Mechanics</u>	5	C	24	-	-	-			3		
5C1902 <u>Advanced Dynamics of Complex Systems</u>	4	D	24	-	-	-	1				
5C1904 <u>Advanced Modern Mechanics</u>	4	D	24	-	-	-		2			
5C1992 <u>Turbulence</u>	4,5	D	-	-	36	3			3	4	

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Mechatronics M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
2E1212 Automatic Control, General Course	4	C	24	26	-	12			3		
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-			3	4	One day field trip.
Elective Courses											
4F1241 Microcomputer, Sensors and Actuators	6	C	18	26	-	29				4	
4F1242 Introduction to Microcomputer Systems	4	C	12	22	-	14				4	

Mechatronics M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1132 <u>Microcomputers in Embedded Systems</u>	5	D	-	36	-	36	1				
4F1142 <u>Motion Control and Real-time Implementation*</u>	5	D	22	10	-	30		2		4	
4F1162 <u>Mechatronics, Advanced Course II</u>	15	D	-	116	-	80		2	3	4	

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Environmental Management M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		Study visit 2x4h, Exercises	

Environmental Management M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3C1360 Environmental Consequences, Advanced Course	4	C	18	9	-	8	1				Seminars 9hSeminars 9h
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2			
3C1390 Environmental Management, Larger Course	8	D	36	3	-	24			3	4	Project work, field exercise
Elective Courses											
3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	21	-	-	6				4	Project work 20h
3C1365 Environmental Consequences, Advanced Course II	4	D	15	15	-	40	1	2			Field exercises
3C1387 Environmental Systems Analysis	4	C	22	15	-	6		2			

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Paper Technology M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3D1107 Paper Technology	6	D	42	-	-	56			3	4	2 days studytrip
Elective Courses											
3D1112 Fibre Technology	4	D	26	-	-	15				4	
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4	

Paper Technology M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1520 <u>Graphic Arts Technology, Minor Course</u>	4	C	30	8	-	16		2			
3D1113 <u>Paper Physics</u>	4	D	20	-	-	20	1				
3D1114 <u>Paper Processes Technology</u>	4	D	20	-	-	20			3		
3D1117 <u>Paper Technology, project</u>	4	D	-	-	-	-			3	4	Project work
3D1163 <u>Pulp Technology, M</u> <i>Under bearbetning</i>	4	D	20	-	-	24	1				

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Publiceringsteknik M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2D1521 Communication and Information*_	5	C	21	-	-	-			3		Seminars 24h	
2D1522 Computer Technology and Communication*_	4	C	30	-	-	20				4		
2D1526 Publishing Technology, General Course	6	C	60	-	-	20			3		30h; A one week study tour is made in period 4.	

*The course has limited participation

Publiceringsteknik M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1515 Machinery and Materials in Graphic Arts Technology	6	C	50	12	-	12		2			
2D1517 XML for Publishing*_	5	D	30	-	-	40	1	2			
2D1518 Audio, Video and Multimedia Production*_	5	C	30	-	-	40		2	3		
2D1524 Image Processing and Reprographic Methods*_ <i>Limited number of participants</i>	6	C	50	16	-	24	1				
2D1527 Publishing Technology, Advanced Course	10	D	100	50	-	32			3	4	50h
Elective Courses											
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1334 Database Technology	4	C	24	20	-	12			3		

*The course has limited participation

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Naval Architecture M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
4B1127 Vibroacoustics	5	D	-	56	-	8	1	2			
4C1111 Fracture Mechanics and Fatigue	4	D	48	-	-	4				4	
4C1112 Theory of Elasticity	4	D	26	26	-	-			3		
4C1114 Finite Element Method	4	D	-	49	-	8		2			
4C1116 Dynamic Problems in Solid Mechanics	4	D	42	-	-	8			3	4	
4F1430 Combustion Engines, general course*	4	C	48	-	-	12	1				
4G1230 Introductory Welding Technology	4	C	24	18	-	12	1				
5A1301 Mathematical Methods in Physics, Course I	4	C	-	54	-	-	1	2			
5B1832 Systems Engineering	8	D	56	28	-	12	1	2			
5C1208 Fluid Mechanics, Intermediate Course	2	D	-	-	20	-	1				
5C1212 Computational Fluid Dynamics	5	D	-	-	50	10			3		
5C1213 Applied Computational Fluid Dynamics	2	D	-	-	10	14				4	

*The course has limited participation

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Rail Vehicles and Railway Systems M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1304 <u>Railway Systems and Rail Vehicles</u>	6	C	-	-	59	7	1	2			7 h Projektuppgift 7 h Projektuppgift
4B1313 <u>Rail Vehicle Dynamics</u>	5	D	-	-	36	24			3		
Elective with											
1C1206 <u>Railway Track Engineering</u>	5	D	33	-	-	-			3		Workshop 44h
1H1206 <u>Planning of Railroad Traffic</u>	5	C	-	-	72	-	1				
2C1149 <u>Electric Traction</u>	4	C	36	-	-	-				4	
4B1127 <u>Vibroacoustics</u>	5	D	-	56	-	8	1	2			
4C1116 <u>Dynamic Problems in Solid Mechanics</u>	4	D	42	-	-	8			3	4	
4F1630 <u>Introduction to Machine Design</u>	5	C	24	36	-	-	1	2			
5B1722 <u>Applied Optimization</u>	4	C	30	14	-	-			3		
Elective Courses											
1H1206 <u>Planning of Railroad Traffic</u>	5	C	-	-	72	-	1				
4F1540 <u>Tribology</u>	4	C	18	9	-	5	1				
4F1540 <u>Tribology</u>	4	C	18	9	-	5				4	

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Systems Engineering M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
2E1200 Automatic Control, General Course	4	C	24	26	-	12		2			
2E1212 Automatic Control, General Course	4	C	24	26	-	12			3		
5B1538 Reliability Theory	6	D	-	-	72	-			3	4	
5B1722 Applied Optimization	4	C	30	14	-	-			3		
Elective Courses											
2D1220 Applied Numerical Methods I	4	C	42	-	-	18			3	4	
2D1250 Applied Numerical Methods II	6	C	-	-	60	24			3	4	

Systems Engineering M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
5B1832 Systems Engineering	8	D	56	28	-	12	1	2			
Elective Courses											
1H1204 Logistics	5	C	6	-	-	-	1	2			15 h SeminarsProject-course, 15 h Seminars
1H1206 Planning of Railroad Traffic	5	C	-	-	72	-	1				
1H1212 Logistics, Advanced Course	5	D	4	-	-	-			3		12 h SeminarsProject-course, 12 h Seminars
1H1401 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3		6 h Seminars6 h Seminars
2E1252 Control Theory and Practice, Advanced Course	5	D	28	26	-	8			3		
5B1550 Applied Mathematical Statistics	5	D	-	-	60	-			3		
5B1814 Applied Mathematical Programming - Linear Problems	4	D	18	12	-	-		2			Projektuppgift 18h
5B1816 Applied Mathematical Programming - Nonlinear Problems	4	D	18	12	-	-			3		Projektuppgift 18h
5B1852 Mathematical Economics	4	D	32	16	-	-		2			

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Materials Processing M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1134 <u>Effective Production</u>	6	D	25	35	-	-			3	4	
4G1160 <u>Manufacturing Engineering, Intermediate Course I</u>	5	C	42	42	-	-				4	
4G1161 <u>Quality</u>	6	C	40	16	-	-			3		
Elective Courses											
4G1632 <u>Materials Processing II</u>	4	C	29	30	-	13				4	
4G1635 <u>Materials Processing II, Laboratory Course</u>	5	D	29	30	-	37				4	
4H1251 <u>Metal Forming - Fundamentals</u>	6	C	36	36	-	18			3	4	

Materials Processing M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1051 Project Assignment, Materials Processing <i>Under bearbetning</i>	4	D	-	160	-	-		2	3	4	Projektuppgift 160hProjektuppgift 160h
4G1053 Materials Processing, Project Support	4	D	72	48	-	40		2	3	4	Home assignments 48h
Elective with											
4D1070 Industrial Project Management	4	C	32	-	-	-	1				Seminars 2hSeminars 2h
4G1541 Measurement Technology & Statistics f Manufact. Processes	4	D	30	-	-	8			3		
4G1570 Metrology & Quality for the Manufacturing Industry	4	D	36	24	-	-		2	3		
4G1670 Materials Forming	4	D	18	12	-	18		2	3		
4H1251 Metal Forming - Fundamentals	6	C	36	36	-	18			3	4	
4H1255 Metal Forming Processes	6	C	18	18	-	-			3	4	Projektuppgift 60h
4M1334 Casting Processing	4	D	12	24	-	18				4	
4M1346 Simulation and Modelling	4	D	10	80	-	-			3		
4M1370 Solidification Processing	4	D	36	24	-	-		2	3		
Elective Courses											

4C1110 Material Mechanics	4	D	52	-	-	3	1				
4C1114 Finite Element Method	4	D	-	49	-	8		2			
4D1070 Industrial Project Management	4	C	32	-	-	-	1				Seminars 2hSeminars 2h
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4G1243 Advanced Welding Technology, Modulus 1	4	D	20	20	-	20			3		
4G1244 Advanced Welding Technology, Modulus 2	4	D	20	20	-	20			3		
4G1245 Advanced Welding Technology, Modulus 3	4	D	20	20	-	20				4	
4G1246 Enlarged Welding Technology for EWE <i>Course is given upon agreement</i>	4	D	25	25	-	10	1	2	3	4	
4M1341 Foundry Processing	4	D	12	-	-	-	1				Seminarier 24h Other 28h

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Assembly Systems M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4	
4G1161 Quality	6	C	40	16	-	-			3		
4K1101 Control Systems	4	C	18	28	-	12				4	
4K1201 Computer Aided Design and Manufacturing, Introductory course	5	C	48	-	-	24				4	Graded exercise

Assembly Systems M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				
4K1104 Manufacturing Systems, advanced course	12	D	50	48	-	28		2	3	4	
4K1109 Principles for Product Integrated Manufacturing Systems Design	4	C	12	12	-	4	1				

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Wood Technology M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4K1601 Wood Material Science, Basic Course	5	C	36	24	-	32			3	4		
Elective Courses												
4K1101 Control Systems	4	C	18	28	-	12				4		

Wood Technology M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4K1602 Industrial Wood Processing, Basic Course	4	C	26	16	-	16	1				
4K1603 Wood Technology, Advanced Course	10	D	48	24	-	36		2	3	4	
Elective Courses											
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				

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Materials Technology

Materials Technology B1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1310 Programming Technique	4	B	26	16	-	36			3	4	
4D1027 Industrial Economics and Management, Basic Course	4	B	26	20	-	-		2			Seminars 4hSeminars 4h
4H1613 Materials Selection and Industrial Ecology	4	C	28	-	-	-		2			Seminars 8h Computer exercises 6h
4H1701 General Chemistry for Materials Students	5	B	22	24	-	25	1	2			Project assignment 10h
5A1225 Electromagnetism and Waves	5	B	-	-	-	-				4	
5B1115 Mathematics 1	6	B	72	28	-	-	1				
5B1116 Mathematics 2	6	B	72	28	-	-			3		
5C1103 Mechanics, Basic Course	6	B	48	27	-	-			3	4	

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Materials Technology

Materials Technology B2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1210 Numerical Methods, Basic Course I	4	B	24	24	-	24	1	2			
4C1035 Strength of Materials and Solid Mechanics, Basic Course	6	B	42	42	-	2		2	3		4 written assignments
4H1060 Foundations of Materials Science	6	C	36	-	-	27			3	4	
4H1805 Physics of Materials	5	C	40	20	-	20		2	3		Project work
4H1901 Thermodynamics of Materials	6	B	48	48	-	-	1	2			
4H1902 Fundamentals of Process Metallurgy	4	C	24	24	-	-				4	Plant visits 20h
4M1320 Manufacturing Technology	4	C	22	20	-	20				4	Preparatory course 20h Computer work 20h Home assignments 20h
5B1210 Mathematics IV	6	C	72	14	-	-	1				

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Kungl Tekniska Högskolan

Studentwebben

KTH / Studentwebben / Study Handbook (02 / 03)

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Materials Technology B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3E1305 <u>Polymer Materials, General Course</u>	4	C	32	8	-	12	1				
4F1221 <u>Electrical Engineering, Basic Course, B</u>	4	B	12	18	-	14		2			
4H1105 <u>Phase Transformations in Materials</u>	4	C	12	12	-	15	1				
4H1205 <u>Mechanical Properties of Materials</u>	4	C	20	18	-	6		2			Study visit 4hStudy visit 4h Study visit 4h
4H1903 <u>Transport Phenomena</u>	4	C	24	24	-	-		2			
4M1320 <u>Manufacturing Technology</u>	4	C	22	20	-	-	1				Home assignment 20h
5B1501 <u>Probability Theory and Statistics</u>	4	C	24	36	-	-			3		
Elective Courses											
2D1515 <u>Machinery and Materials in Graphic Arts Technology</u>	6	C	50	12	-	12		2			
2D1522 <u>Computer Technology and Communication*</u>	4	C	30	-	-	20				4	
2D1526 <u>Publishing Technology, General Course</u>	6	C	60	-	-	20			3		30h; A one week study tour is made in period 4.
3C1340 <u>Environmental Technology, Advanced Course</u>	4	D	36	6	-	-			3		Study visit 2x4h, Exercises
3C1395 <u>Technology and Sustainable Development</u>	4	C	10	9	-	-		2			
3D1112 <u>Fibre Technology</u>	4	D	26	-	-	15				4	
3E1323 <u>Polymer Physics, General Course</u>	4	C	36	9	-	-			3		
3E1324 <u>Polymer Materials - Properties and Applications</u>	4	C	30	12	-	10				4	
4A1601 <u>Heat Transfer</u>	4	C	24	24	-	20			3		
4A1603 <u>Energy Technology</u>	4	C	48	12	-	-				4	
4B1120 <u>Signal Analysis with Applications</u>	5	D	-	28	-	24				4	
4C1096 <u>Strength of Materials and Solid Mechanics, Advanced Course</u>	4	C	36	14	-	4			3		
4E1103 <u>Lightweight Structures and FEM II</u>	6,5	C	76	-	-	22			3	4	
4E1202 <u>Elements of aeronautics for B, F and M</u>	6	D	86	-	-	5			3	4	
4E1300 <u>Development and Implementation Project</u>	6	D	-	-	-	-	1	2	3	4	

4F1242 Introduction to Microcomputer Systems	4	C	12	22	-	14			4	
4F1244 Motion Control <i>The course will not be given until further notice.</i>	4	D	30	-	-	12			4	
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-			3	4 One day field trip.
4F1531 Machine Elements, basic course for I and T	4	B	24	40	-	-			4	
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-			4	
4F1642 Modelling and Computer Support in Mechanical Design	4	C	24	36	-	-			3	
4G1134 Effective Production	6	D	25	35	-	-			3	4
4H1202 Mechanical Metallurgy I	6	D	24	12	-	48			3	4 Home assignments
4H1204 Experimental Methods in Materials Science	5	D	10	10	-	48			3	4
4H1251 Metal Forming - Fundamentals	6	C	36	36	-	18			3	4
4H1504 Processing of Ceramic Materials	4	C	12	-	-	18			3	
4H1610 Advanced Materials	4	C	18	-	-	6			3	Study visit 18h Seminars
4H1611 Materials Optimisation and Design	5	C	18	18	-	12			4	Study visits 10h
4H1803 Physics of Nanostructured Materials	4	D	20	4	-	6			4	
4H1921 Advanced Transport Phenomena	6	C	20	20	-	16			3	4 Projektuppgift 136hProjektuppgift 136h
4H1922 Chemical Equilibria in Metallurgical Processes	10	C	72	72	-	28			3	4 Projektuppgift 120h
4K1101 Control Systems	4	C	18	28	-	12			4	
4K1107 Production of Electronics I	4	C	36	-	-	8			3	
4K1201 Computer Aided Design and Manufacturing, Introductory course	5	C	48	-	-	24			4	Graded exercise
4K1401 History of Technology, a General Survey	4	B	12	-	-	-			3	Seminars 12h
4M1332 Materials Processing	4	D	22	20	-	20			3	
4M1335 Materials Processing, Laboratory Course	5	D	26	32	-	47			3	4
4M1336 Physics for Materials Processing	5	C	16	16	-	-			3	Home assignments 60h
4M1345 Powder Processing and Materials Forming	4	D	30	-	-	-			4	Home assignments 80h
5A1304 Mathematical Methods in Physics	6	C	-	78	-	-	1	2		
5A1324 Quantum Physics	8	C	60	48	-	-		2	3	
5B1304 Mathematics, Extended Course	5	D	-	-	54	-			3	4
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4			4	4 h Seminars4 h Seminars
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4
9E1131 Information Searching for B, I, M, T	1	B	-	-	-	-			3	4
9E1300 Technical English, Lower Intermediate Level*	4	B	-	-	56	-			3	4
9E1301 Technical English, Intermediate*	6	B	-	-	56	-			3	4
9E1320 German, Elementary Level*	4	B	-	-	56	-			3	4

9E1322 German, Advanced Beginner's Level*_	4	B	-	56	56	-			3	4	
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	18	-	-			3	4	E-learning exercises
9E1330 French, Elementary Level*_	4	B	-	-	56	-			3	4	
9E1332 French, Advanced Beginner's Level*_	4	B	-	-	56	-			3	4	
9E1334 Technical French, Intermediate Level*_	6	B	-	-	-	-			3	4	
9E1342 Spanish, Elementary Level*_	4	B	-	-	56	-			3	4	
9E1346 Spanish, Advanced Beginner's Level*_	4	B	-	-	56	-			3	4	
9E1348 Technical Spanish, Intermediate Level*_	6	B	-	-	56	-			3	4	
9E1350 Italian, Elementary Level*_	4	B	-	-	56	-			3	4	
9E1360 Communicative Swedish*_	4	B	-	-	56	-			3	4	

*The course has limited participation

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Materials Technology B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2A1140 Accelerator and Radiation Technology	4	D	36	-	-	4			3		
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
2A1160 Space Physics	3	D	12	-	-	-	1				
2B1262 The Nature of Materials	4	C	32	-	-	-				4	
2B1507 Semiconductor Electronics	6	C	36	22	-	8	1	2			
2B1700 Advanced Semiconductor Materials	5	D	34	-	-	16				4	
2B1750 Smart Electronic Materials	4	C	18	10	-	8	1				
2B1751 Physics of Electronic Devices	4	D	12	6	-	-				4	
2C1111 System Planning	4	D	60	-	-	-			3		
2C1114 Wind Power Systems	4	C	52	10	-	4			3	4	
2D1225 Numerical Solutions of Differential Equations	4	C	26	4	-	18	1	2			
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1334 Database Technology	4	C	24	20	-	12			3		
2D1354 Algorithms and Complexity	4	C	30	18	-	-	1	2			
2D1385 Software Engineering	4	C	24	12	-	18				4	
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20			3		
2D1520 Graphic Arts Technology, Minor Course	4	C	30	8	-	16		2			
2D1521 Communication and Information*_	5	C	21	-	-	-			3		Seminars 24h
2D1522 Computer Technology and Communication*_	4	C	30	-	-	20				4	
2E1212 Automatic Control, General Course	4	C	24	26	-	12	1				
2E1212 Automatic Control, General Course	4	C	24	26	-	12			3		
2E1241 Automatic Control, Project Course*_	5	D	4	-	-	50				4	
2F1400 Electroacoustics	4	D	34	12	-	8	1				

3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	21	-	-	6			4	Project work 20h
3C1355 Ecology, Advanced Course	4	C	21	4	-	-			3 4	
3C1360 Environmental Consequences, Advanced Course	4	C	18	9	-	8	1			Seminars 9hSeminars 9h
3C1365 Environmental Consequences, Advanced Course II	4	D	15	15	-	40	1 2			Field exercises
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2		
3C1380 Environmental Management	4	D	21	3	-	8			3 4	Project work 8h
3C1385 Biology	4	C	30	6	-	6	1			Field exercise 8h
3C1395 Technology and Sustainable Development	4	C	10	9	-	-		2		
3E1354 Biopolymers	5	D	24	16	-	-			3	5h Study visit
3E1360 Mechanical Properties of Polymers, Minor Course	4	C	24	16	-	12	1			
3E1361 Polymer Processing, Minor Course	4	C	24	8	-	18		2		
4A1140 Energy Systems and Models	4	D	-	-	-	-				4
4A1605 Sustainable Power Generation	6	D	30	48	-	18	1 2			
4A1607 Sustainable Energy Utilization	6	D	-	-	72	16	1 2			
4A1609 Applied Energy Technology - Project Course	6	D	12	-	-	-			3 4	Project 78h
4A1610 Energy Management	4	D	50	-	-	-				4
4A1611 Renewable Energy Technology	4	D	-	-	52	-		2		Study visit 8h
4A1613 Energy and Environment	4	D	45	-	-	-			3 4	
4A1621 Modelling of Thermodynamic Systems	4	D	16	-	-	32	1 2	3 4		The course is given upon agreement
4A1623 Applied Refrigeration and Heat Pump Technology	4	D	24	24	-	16			3 4	
4A1625 Cooling of Electronics	4	D	48	-	-	12			3	
4A1626 Applied Heat and Power Technology	4	D	30	12	-	8			3 4	Project assignment 8h
4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3	Study visits 12h
4A1629 Fluid Machinery	4	C	30	18	-	12	1 2			
4A1630 Thermal Fluid Machinery	4	D	36	12	-	12			3	
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	59	7	1 2			7 h Projektuppgift7 h Projektuppgift
4C1110 Material Mechanics	4	D	52	-	-	3	1			
4C1114 Finite Element Method	4	D	-	49	-	8		2		
4C1118 Non-linear Theory of Elasticity	2	D	12	12	-	-				4
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4
4D1060 Industrial Development	4	C	40	8	-	-			3	
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3	
4D1075 Work Organization and Leadership*	4	C	24	24	-	-			3	
4D1090 Work Science, General Course	4	B	-	-	-	-	1 2	3 4		Literature course
4D1092 Man - Machine System	4	C	24	8	-	4			3	

4D1093 Psychology for Engineers <i>Replaces 4D1088 Technical Work Psychology</i>	4	C	24	4	-	4	2				
4D1170 Advanced Production and Product Development	4	D	36	12	-	-	2				
4D1174 Management and Analysis of Innovations and Technology	4	D	38	-	-	-	2			Seminars 10hSeminars 10h	
4E1124 Fibre Composites I: materials and processes	4	D	40	-	-	5	1				
4E1126 Structural Design and Optimisation	4	D	36	-	-	12		3			
4E1150 Biomechanics and Neurronics	4	D	36	-	-	6			4		
4F1131 Microcomputers in Embedded Systems*	5	D	-	36	-	36	2				
4F1131 Microcomputers in Embedded Systems* <i>Limited attendance: 25</i>	5	D	-	36	-	36		3			
4F1141 Project Work in Mechatronics* <i>Limited attendance due to limited number of available projects</i>	4	C	-	-	-	-	1	2	3	4	No scheduled hours
4F1244 Motion Control <i>The course will not be given until further notice.</i>	4	D	30	-	-	12				4	
4F1531 Machine Elements, basic course for I and T	4	B	24	40	-	-	1				
4F1540 Tribology	4	C	18	9	-	5				4	
4F1540 Tribology	4	C	18	9	-	5	1				
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-				4	
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4F1631 Intermediate Machine Design Course	7	D	4	84	-	-			3	4	
4F1640 Industrial Design* <i>Limited number of participants.</i>	4	C	24	36	-	-			3		
4F1640 Industrial Design* <i>Limited number of participants.</i>	4	C	24	36	-	-	2				
4F1641 Environmentally Adapted Product Design	4	C	24	20	-	16	2				
4F1643 Eco Design Project*	4	C	-	-	-	-	1	2	3	4	
4G1161 Quality	6	C	40	16	-	-	1				
4G1230 Introductory Welding Technology	4	C	24	18	-	12	1				
4G1231 Intermediate Welding Technology	4	D	24	24	-	12	1	2			
4G1246 Enlarged Welding Technology for EWE <i>Course is given upon agreement</i>	4	D	25	25	-	10	1	2	3	4	
4G1540 Laser Metrology Methods and Non Destructive Testing	4	C	28	22	-	4	2				
4G1541 Measurement Technology & Statistics f Manufact. Processes	4	D	30	-	-	8			3		
4G1634 Manufacturing Engineering, Basic Course	6	C	32	20	-	12	1	2			
4H1104 Diffusion and Phase Equilibria	6	D	18	18	-	42	1	2			
4H1113 Powder Metallurgy	4	D	18	18	-	12		2			
4H1203 Mechanical Metallurgy II	4,5	C	24	12	-	24			3	4	Home assignments
4H1255 Metal Forming Processes	6	C	18	18	-	-			3	4	Projektuppgift 60h
4H1301 Material Design	4	D	-	2	-	10			3	4	

4H1404 Corrosion and Surface Protection, General Course	4	C	16	12	-	12	1				
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-			3		
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18		2			
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1612 High Temperature Materials	7	D	18	12	-	6	1				Study visit 8h Seminars 10h Project assignment 100h
4H1803 Physics of Nanostructured Materials	4	D	20	4	-	6				4	
4H1941 Electrochemical Material and Energy Processes	4	D	18	18	-	12				4	
4H1942 Experimental Methods in Metallurgical Engineering	4	D	2	-	-	-				4	Projektuppgift 160h
4H1945 Economical Process Analysis and Strategy	4	C	12	12	-	-				4	Projektuppgift 60h
4H1946 Combustion in Industrial Processes	6	D	24	24	-	12				4	Seminars 4hSeminars 4h
4H1948 Process Metallurgy II	4	C	24	24	-	-		2			
4K1107 Production of Electronics I	4	C	36	-	-	8			3		
4K1109 Principles for Product Integrated Manufacturing Systems Design	4	C	12	12	-	4	1				
4K1202 Modelling and Interaction in CAD/CAM* <i>Maximum of 20 participants. Students of "Computer Systems for Design and Manufacturing" will have priority.</i>	5	D	-	36	-	24	1				3 Programming tasks, periods 1, 2
4K1405 Environmental History	4	B	12	-	-	-				4	12 h Seminars
4K1409 History of Industry	4	B	12	-	-	-	1	2			Seminars 12h, Study visit 10h
4K1601 Wood Material Science, Basic Course	5	C	36	24	-	32			3	4	
4K1602 Industrial Wood Processing, Basic Course	4	C	26	16	-	16	1				
4M1051 Project	4	D	-	160	-	-	1	2	3	4	
4M1342 Space Systems and Technology	4	D	36	-	-	-		2			
4M1343 Materials Processing, Project Support	4	D	72	48	-	40	1	2	3	4	
4M1344 Metrology in Materials Processing	4	D	16	-	-	80	1				Seminars 16h
4M1345 Powder Processing and Materials Forming	4	D	30	-	-	-				4	Home assignments 80h
4M1346 Simulation and Modelling	4	D	10	80	-	-			3		
4M1370 Solidification Processing	4	D	36	24	-	-		2	3		
5A1414 Radiation Detectors and Medical Imaging Systems	5	D	24	6	-	20			3	4	
5A1416 Radiation Sources for Therapy	2	D	8	-	-	-				4	2 compulsory studyvisits
5A1590 Technical Photography	5	D	20	-	-	36			3	4	
5B1310 Applied and Industrial Mathematics	5	D	26	-	-	-	1	2			
5B1555 Computer Intensive Methods in Mathematical Statistics	5	D	-	-	48	-				4	
5C1122 Continuum Mechanics	4	C	42	-	-	-	1				

5C1211 Vehicle Aerodynamics	4	C	16	-	-	4				4	4 h Seminars4 h Seminars
5C1980 Mechanics in Research and Industry <i>The course runs the entire academic year. A few lectures during fall.</i>	4	C	24	-	-	37	1	2	3	4	
7E1101 Medical Engineering, Basic Course	4	C	24	-	-	-	1				
7E1110 Quality and Regulatory Aspects on Medical Devices*	2	D	20	-	-	-			3	4	
7E1112 Implants and Biomaterials*	4	D	25	-	-	-			3	4	
7E1113 Medical Instrumentation and Signal Processing*	4	D	30	-	-	6			3	4	
7E1114 Radiation Physics and Biology*	4	D	40	-	-	-				4	
7E1115 Engineering in Intensive Care and Anesthesia*	4	D	12	-	-	-			3	4	30 + 10h (field work with oral and written report)
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1				
7E1200 Cellular and Molecular Biology*	10	C	80	-	-	8			3	4	
7E1202 Systems Biology*	5	C	32	-	-	25		2			24 h Seminars24 h Seminars
9E1131 Information Searching for B, I, M, T	1	B	-	-	-	-	1	2			3 laborations on all together 12 hours, 1 written examination and 1 written report. The course is given regularly throughout the academic year, please refer to the web page for the course.
9E1131 Information Searching for B, I, M, T	1	B	-	-	-	-			3	4	
9E1300 Technical English, Lower Intermediate Level*	4	B	-	-	56	-	1	2			
9E1301 Technical English, Intermediate*	6	B	-	-	56	-	1	2			
9E1304 Technical English, Advanced Level*	6	C	-	-	56	-	1	2			
9E1304 Technical English, Advanced Level*	6	C	-	-	56	-			3	4	
9E1320 German, Elementary Level*	4	B	-	56	56	-	1	2			
9E1322 German, Advanced Beginner's Level*	4	B	-	-	56	-	1	2			
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	18	-	-	1	2			E-learning exercises
9E1326 Technical German, Advanced Level*	6	C	-	-	56	-	1	2			
9E1326 Technical German, Advanced Level*	6	C	-	-	56	-			3	4	
9E1330 French, Elementary Level*	4	B	-	-	56	-	1	2			
9E1332 French, Advanced Beginner's Level*	4	B	-	-	56	-	1	2			
9E1334 Technical French, Intermediate Level*	6	B	-	-	56	-	1	2			
9E1342 Spanish, Elementary Level*	4	B	-	-	56	-	1	2			
9E1346 Spanish, Advanced Beginner's Level*	4	B	-	-	56	-	1	2			
9E1350 Italian, Elementary Level*	4	B	-	-	56	-	1	2			

9E1352 Italian, Advanced Beginner's Level*_	4	B	-	-	56	-			3	4	
9E1360 Communicative Swedish*_	4	B	-	-	56	-	1	2			

*The course has limited participation

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Materials Technology

Business Development and Media Technology B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Elective Courses												
9E1300 Technical English, Lower Intermediate Level*_	4	B	-	-	56	-			3	4		
9E1301 Technical English, Intermediate*_	6	B	-	-	56	-			3	4		
9E1304 Technical English, Advanced Level*_	6	C	-	-	56	-			3	4		

*The course has limited participation

Business Development and Media Technology B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1521 <u>Communication and Information</u>	5	C	21	-	-	-	1				Seminars 24
2D1550 <u>Market Systems</u> <i>Only open to AFM-students</i>	5	C	-	-	-	-	1				Seminars 40h
2D1551 <u>Consumer Markets</u> <i>Open only to AFM-students.</i>	5	C	-	-	-	-	1				Seminars 40h
2D1552 <u>Media Management</u> <i>Open only for AFM-students.</i>	10	C	72	56	-	-	1	2	3	4	Only open for AFM-students.
2D1553 <u>Media Production</u> <i>Only open for AFM-students.</i>	10	C	40	-	-	110		2			Only open for AFM-students.
2D1555 <u>Information Technology and Organizations</u>	5	D	39	-	-	-				4	
Elective Courses											
2D1334 <u>Database Technology</u>	4	C	24	20	-	12			3		
2D1524 <u>Image Processing and Reprographic Methods*</u> <i>Limited number of participants</i>	6	C	50	16	-	24	1				

*The course has limited participation

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Advanced Materials B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4H1610 <u>Advanced Materials</u>	4	C	18	-	-	6			3		Study visit 18h Seminars	
4H1611 <u>Materials Optimisation and Design</u>	5	C	18	18	-	12				4	Study visits 10h	
Elective Courses												
4H1504 <u>Processing of Ceramic Materials</u>	4	C	12	-	-	18			3			

Advanced Materials B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1612 High Temperature Materials	7	D	18	12	-	6	1				Study visit 8h Seminars 10h Project assignment 100h
Elective Courses											
4H1404 Corrosion and Surface Protection, General Course	4	C	16	12	-	12	1				
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-			3		
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18		2			

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Biomedical Engineering B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1200 Cellular and Molecular Biology*	10	C	80	-	-	8			3	4	
7E1201 Neuroscience*	5	C	60	-	-	30				4	

*The course has limited participation

Biomedical Engineering B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1				
7E1202 Systems Biology*_	5	C	32	-	-	25		2			24 h Seminars24 h Seminars
Elective Courses											
2D1435 Mathematical Modelling of Biological Systems <i>The course is given every second year and will not be given in 02/03.</i>	6	D	26	-	-	20					

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Computer Systems for Design and Manufacturing B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4		
4K1201 Computer Aided Design and Manufacturing, Introductory course	5	C	48	-	-	24				4	Graded exercise	
Elective Courses												
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4		

Computer Systems for Design and Manufacturing B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				
4K1202 Modelling and Interaction in CAD/CAM* Maximum of 20 participants. Students of "Computer Systems for Design and Manufacturing" will have priority.	5	D	-	36	-	24	1				3 Programming tasks, periods 1, 2
4K1203 Computer Systems for Design and Manufacturing, advanced course Maximum of 20 participants. Students of "Computer Systems for Design and Manufacturing" will have priority.	12	D	-	68	-	60		2	3	4	4 Programming Projects, periods 2, 3, 4
Elective Courses											
4F1131 Microcomputers in Embedded Systems*	5	D	-	36	-	36		2			
4K1103 Manufacturing Automation II	6	C	28	32	-	17	1	2			

*The course has limited participation

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Energy Technology B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4A1601 Heat Transfer	4	C	24	24	-	20			3		
4A1603 Energy Technology	4	C	48	12	-	-				4	
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4	

Energy Technology B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4A1605 Sustainable Power Generation	6	D	30	48	-	18	1	2			
4A1607 Sustainable Energy Utilization	6	D	-	-	72	16	1	2			
4A1609 Applied Energy Technology - Project Course	6	D	12	-	-	-			3	4	Project 78h
Elective Courses											
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
4A1140 Energy Systems and Models	4	D	-	-	-	-				4	
4A1610 Energy Management	4	D	50	-	-	-				4	
4A1611 Renewable Energy Technology	4	D	-	-	52	-		2			Study visit 8h
4A1613 Energy and Environment	4	D	45	-	-	-			3	4	
4A1620 Combustion Theory	4	C	18	18	-	15	1	2	3	4	
4A1621 Modelling of Thermodynamic Systems	4	D	16	-	-	32	1	2	3	4	The course is given upon agreement
4A1622 Thermal Comfort and Indoor Climate	4	D	24	24	-	12			3	4	
4A1623 Applied Refrigeration and Heat Pump Technology	4	D	24	24	-	16			3	4	
4A1624 Numerical Methods in Energy Technology	4	D	24	12	-	12				4	
4A1625 Cooling of Electronics	4	D	48	-	-	12			3		
4A1626 Applied Heat and Power Technology	4	D	30	12	-	8			3	4	Project assignment 8h
4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3		Study visits 12h

4A1628 Advanced Nuclear Reactor Engineering	4	D	42	-	-	-				4	Study visits 18h
4A1629 Fluid Machinery	4	C	30	18	-	12	1	2			
4A1630 Thermal Fluid Machinery	4	D	36	12	-	12			3		

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Internal Combustion Engines B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
4F1241 Microcomputer, Sensors and Actuators	6	C	18	26	-	29				4	

Internal Combustion Engines B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1420 <u>Ground Vehicle Engineering, Basic Course</u>	6	C	36	36	-	-	1	2			
4F1430 <u>Combustion Engines, general course*_</u>	4	C	48	-	-	12	1				
4F1431 <u>Combustion Engines, Advanced Course*_</u>	6	D	56	-	-	32		2	3		
4F1460 <u>Combustion Engines, Project Course</u>	6	D	-	18	-	-			3	4	
Elective Courses											
2E1212 <u>Automatic Control, General Course</u>	4	C	24	26	-	12			3		
4B1131 <u>Experimental Structure Dynamics</u>	5	D	-	58	-	12		2	3		
4F1141 <u>Project Work in Mechatronics*_</u> <i>Limited attendance due to limited number of available projects</i>	4	C	-	-	-	-	1	2	3	4	No scheduled hours

*The course has limited participation

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Solid Mechanics B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4C1096 Strength of Materials and Solid Mechanics, Advanced Course	4	C	36	14	-	4			3			
4C1117 Design Applications of Solid Mechanics*	4	D	16	6	-	-				4	Estimated time for project: 90h	
4F1531 Machine Elements, basic course for I and T	4	B	24	40	-	-				4		
5B1304 Mathematics, Extended Course	5	D	-	-	54	-			3	4		

*The course has limited participation

Solid Mechanics B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1114 Finite Element Method	4	D	-	49	-	8		2			
Elective Courses											
3E1324 Polymer Materials - Properties and Applications	4	C	30	12	-	10				4	
3E1360 Mechanical Properties of Polymers, Minor Course	4	C	24	16	-	12	1				
4B1111 Fundamentals of Noise and Vibration Control T	4	C	31	32	-	4		2			
4B1112 Fundamentals of Noise and Vibration Control M	4	C	31	30	-	4	1				
4B1420 Ground Vehicle Engineering, Basic Course	6	C	36	36	-	-	1	2			
4C1110 Material Mechanics	4	D	52	-	-	3	1				
4C1111 Fracture Mechanics and Fatigue	4	D	48	-	-	4				4	
4C1112 Theory of Elasticity	4	D	26	26	-	-			3		
4C1116 Dynamic Problems in Solid Mechanics	4	D	42	-	-	8			3	4	
4C1118 Non-linear Theory of Elasticity	2	D	12	12	-	-				4	
4C1119 Finite Element Method, Project Course	2	D	8	-	-	-			3		

4E1125 Fibre Composites II, Analysis and Design	4	D	48	-	-	6	2			
4F1540 Tribology	4	C	18	9	-	5			4	
4F1540 Tribology	4	C	18	9	-	5	1			
4G1230 Introductory Welding Technology	4	C	24	18	-	12	1			
4H1202 Mechanical Metallurgy I	6	D	24	12	-	48		3	4	Home assignments
4H1203 Mechanical Metallurgy II	4,5	C	24	12	-	24		3	4	Home assignments
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18	2			
5A1301 Mathematical Methods in Physics, Course I	4	C	-	54	-	-	1	2		
5C1122 Continuum Mechanics	4	C	42	-	-	-	1			
5C1123 Mathematical Methods of Mechanics, General Course	4	D	36	-	-	-		2		
5C1125 Mathematical Methods of Mechanics, Intermediate Course	2	D	-	-	-	-			3	
5C1208 Fluid Mechanics, Intermediate Course	2	D	-	-	20	-	1			
5C1902 Advanced Dynamics of Complex Systems	4	D	24	-	-	-	1			

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Industrial Economics and Management B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1028 Industrial Economics and Management, Advanced Course	4	C	26	20	-	-				4	4 h Seminars4 h Seminars
Elective with											
4D1060 Industrial Development	4	C	40	8	-	-			3		
4D1075 Work Organization and Leadership*_	4	C	24	24	-	-			3		
Elective Courses											
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	

*The course has limited participation

Industrial Economics and Management B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1035 Advanced Industrial Economics and Management	12	D	68	72	-	-		2	3	4	Roll-play 16h
Elective with											
4D1070 Industrial Project Management	4	C	32	-	-	-	1				Seminars 2hSeminars 2h
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4K1101 Control Systems	4	C	18	28	-	12				4	
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				
Elective Courses											
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4D1070 Industrial Project Management	4	C	32	-	-	-	1				Seminars 2hSeminars 2h
4D1152 Industrial Marketing, Advanced Course <i>Open only to IEO-students.</i>	4	D	36	12	-	-	1				
4K1103 Manufacturing Automation II	6	C	28	32	-	17	1	2			

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Industrial Engineering B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4	
4G1161 Quality	6	C	40	16	-	-			3		
Elective Courses											
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		Study visit 2x4h, Exercises
4G1632 Materials Processing II	4	C	29	30	-	13				4	
4G1635 Materials Processing II, Laboratory Course	5	D	29	30	-	37				4	

Industrial Engineering B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1146 <u>Advanced Industrial Engineering</u>	12	D	67	22	-	-	1	2			Projektuppgift 120h
4G1161 <u>Quality</u>	6	C	40	16	-	-	1				
Elective Courses											
3C1360 <u>Environmental Consequences, Advanced Course</u>	4	C	18	9	-	8	1				Seminars 9hSeminars 9h
4D1062 <u>Industrial Marketing</u> <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4D1093 <u>Psychology for Engineers</u> <i>Replaces 4D1088 Technical Work Psychology</i>	4	C	24	4	-	4		2			
4G1053 <u>Materials Processing, Project Support</u>	4	D	72	48	-	40		2	3	4	Home assignments 48h
4G1170 <u>Intelligent Machining, Advanced Course</u>	4	D	36	20	-	-		2	3	4	
4G1243 <u>Advanced Welding Technology, Modulus 1</u>	4	D	20	20	-	20			3		
4G1244 <u>Advanced Welding Technology, Modulus 2</u>	4	D	20	20	-	20			3		

4G1245 Advanced Welding Technology, Modulus 3	4	D	20	20	-	20				4	
4G1246 Enlarged Welding Technology for EWE <i>Course is given upon agreement</i>	4	D	25	25	-	10	1	2	3	4	
4G1540 Laser Metrology Methods and Non Destructive Testing	4	C	28	22	-	4		2			
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				

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Integratd Product Development B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1075 Work Organization and Leadership*_	4	C	24	24	-	-			3		
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-				4	

*The course has limited participation

Integratd Product Development B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-		2			
4F1760 Integrated Product Development, Advanced Course	20	D	-	180	-	-	1	2	3	4	
Elective Courses											
4F1131 Microcomputers in Embedded Systems*	5	D	-	36	-	36		2			
4F1641 Environmentally Adapted Product Design	4	C	24	20	-	16		2			
4F1642 Modelling and Computer Support in Mechanical Design	4	C	24	36	-	-			3		

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Sound and Vibrations B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
5B1304 Mathematics, Extended Course	5	D	-	-	54	-			3	4	
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4	
Elective Courses											
4B1111 Fundamentals of Noise and Vibration Control T	4	C	31	32	-	4		2			
4B1112 Fundamentals of Noise and Vibration Control M	4	C	31	30	-	4	1				

Sound and Vibrations B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1127 Vibroacoustics	5	D	-	56	-	8	1	2			
4B1131 Experimental Structure Dynamics	5	D	-	58	-	12		2	3		
4B1136 Flow Acoustics	4	D	-	36	-	8			3		
4B1141 Sound and Vibration, Projekt Course	5	D	-	48	-	12			3	4	Study tour to industry 40h
9E1131 Information Searching for B, I, M, T	1	B	-	-	-	-			3	4	

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Lightweight Structures B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1103 Lightweight Structures and FEM II	6,5	C	76	-	-	22			3	4	
Elective Courses											
4E1201 Elements of Aeronautics	5	C	72	-	-	4			3	4	

Lightweight Structures B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1124 Fibre Composites I: materials and processes	4	D	40	-	-	5	1				
4E1125 Fibre Composites II, Analysis and Design	4	D	48	-	-	6		2			
4E1126 Structural Design and Optimisation	4	D	36	-	-	12			3		
4E1131 Aircraft and Lightweight Design	6	D	8	60	-	12			3	4	
4E1150 Biomechanics and Neuronics	4	D	36	-	-	6				4	
Elective Courses											
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	59	7	1	2			7 h Projektuppgift7 h Projektuppgift
4B1420 Ground Vehicle Engineering, Basic Course	6	C	36	36	-	-	1	2			
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
5B1722 Applied Optimization	4	C	30	14	-	-			3		
9E1300 Technical English, Lower Intermediate Level*_	4	B	-	-	56	-	1	2			
9E1301 Technical English, Intermediate*_	6	B	-	-	56	-	1	2			
9E1304 Technical English, Advanced Level*_	6	C	-	-	56	-	1	2			
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	18	-	-	1	2			E-learning exercises
9E1326 Technical German, Advanced Level*_	6	C	-	-	56	-	1	2			

9E1334 <u>Technical French, Intermediate</u> Level*_	6	B	-	-	56	-	1	2			
9E1348 <u>Technical Spanish, Intermediate</u> Level*_	6	B	-	-	56	-			3	4	

*The course has limited participation

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Machine Elements B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1096 Strength of Materials and Solid Mechanics, Advanced Course	4	C	36	14	-	4			3		
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-			3	4	One day field trip.

Machine Elements B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1540 Tribology	4	C	18	9	-	5	1				
4F1540 Tribology	4	C	18	9	-	5				4	
4F1560 Advanced Machine Elements	12	D	-	120	-	-			3	4	
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4K1132 Modularisation of Products <i>Some parts of the course are outlined in 4K1131 Assembly Systems and 4K1104 Manufacturing Systems, advanced course.</i>	4	C	24	20	-	-			3		
Elective Courses											
4C1114 Finite Element Method	4	D	-	49	-	8		2			

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Machine Design B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1096 <u>Strength of Materials and Solid Mechanics, Advanced Course</u>	4	C	36	14	-	4			3		
4F1530 <u>Function Analysis and Optimization in Mechanical Engineering</u>	5	C	-	60	-	-			3	4	One day field trip.
Elective Courses											
4F1241 <u>Microcomputer, Sensors and Actuators</u>	6	C	18	26	-	29				4	
4F1343 <u>Fluid Systems and Machines</u>	4	C	24	24	-	12				4	
4F1642 <u>Modelling and Computer Support in Mechanical Design</u>	4	C	24	36	-	-			3		
5C1121 <u>Analytical Mechanics</u>	4	C	48	-	-	-			3		

Machine Design B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1630 Introduction to Machine Design_	5	C	24	36	-	-	1	2			
4F1640 Industrial Design*_	4	C	24	36	-	-	1				
4F1660 Advanced Machine Design_	12	D	4	114	-	-			3	4	
Elective Courses											
3E1360 Mechanical Properties of Polymers, Minor Course_	4	C	24	16	-	12	1				
3E1361 Polymer Processing, Minor Course_	4	C	24	8	-	18		2			
4C1114 Finite Element Method_	4	D	-	49	-	8		2			
4F1131 Microcomputers in Embedded Systems*_	5	D	-	36	-	36		2			
4F1131 Microcomputers in Embedded Systems*_ <i>Limited attendance: 25</i>	5	D	-	36	-	36			3		
4F1141 Project Work in Mechatronics*_ <i>Limited attendance due to limited number of available projects</i>	4	C	-	-	-	-	1	2	3	4	No scheduled hours
4F1541 CAD 3D-modelling and Visualization for Personal Computers_	4	C	8	36	-	-				4	

4F1641 Environmentally Adapted Product Design	4	C	24	20	-	16	2			
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1			

*The course has limited participation

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Mateials Physics B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1770 Solid State Physics, General Course	6	D	54	-	-	30			3	4	
5A1304 Mathematical Methods in Physics	6	C	-	78	-	-	1	2			
5A1324 Quantum Physics	8	C	60	48	-	-		2	3		
Elective Courses											
5A1350 Statistical Mechanics	4	C	24	24	-	-				4	

Mateials Physics B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1760 Experimental Methods in Material Physics	5	C	26	22	-	30		2	3		
Elective Courses											
2B1260 Semiconductor Theory and Device Physics, General Course	5	D	30	-	-	10	1				Individual assignments 20h
2B1261 Semiconductor Theory and Device Physics, Advanced Course	4	D	-	36	-	-			3		
2B1262 The Nature of Materials	4	C	32	-	-	-				4	
2B1263 Surface Physics, Basic Course	4	D	36	-	-	-		2			
2B1380 Optics, General Course	4	D	26	14	-	25	1				
2B1771 Superconductivity and Applications	4	D	28	-	-	-		2			
4C1110 Material Mechanics	4	D	52	-	-	3	1				
4C1111 Fracture Mechanics and Fatigue	4	D	48	-	-	4				4	
4C1112 Theory of Elasticity	4	D	26	26	-	-			3		
4C1114 Finite Element Method	4	D	-	49	-	8		2			
4H1104 Diffusion and Phase Equilibria	6	D	18	18	-	42	1	2			
4H1202 Mechanical Metallurgy I	6	D	24	12	-	48			3	4	Home assignments
4H1203 Mechanical Metallurgy II	4,5	C	24	12	-	24			3	4	Home assignments
4H1404 Corrosion and Surface Protection, General Course	4	C	16	12	-	12	1				

4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18	2			
4H1609 Functional Materials	4	D	18	-	-	6	2			Study visit 8h
4H1610 Advanced Materials	4	C	18	-	-	6		3		Study visit 18h Seminars
4H1611 Materials Optimisation and Design	5	C	18	18	-	12			4	Study visits 10h
4H1612 High Temperature Materials	7	D	18	12	-	6	1			Study visit 8h Seminars 10h Project assignment 100h
4M1342 Space Systems and Technology	4	D	36	-	-	-	2			
4M1370 Solidification Processing	4	D	36	24	-	-	2	3		
5A1332 Advanced Quantum Mechanics, Course I	5	D	36	-	-	-	1	2		
5A1354 Computational Physics	6	D	24	-	-	20	2			
5A1370 Solid State Theory	4	D	36	-	-	-	1			
5A1502 Quantum Electronics with Electro Optics	8	D	48	-	-	-	2			
5A1503 Electro Optics	4	D	24	-	-	-	2			
5A1775 Nuclear Reactor Physics, Major Course	6	D	36	-	-	24	2			
5A1777 Reactor Physics, Minor Course	4	D	30	-	-	16	2			

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Materials Science B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4H1202 Mechanical Metallurgy I	6	D	24	12	-	48			3	4	Home assignments	
4H1204 Experimental Methods in Materials Science	5	D	10	10	-	48			3	4		
4H1504 Processing of Ceramic Materials	4	C	12	-	-	18			3			

Materials Science B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4H1104 Diffusion and Phase Equilibria	6	D	18	18	-	42	1	2			
4H1113 Powder Metallurgy	4	D	18	18	-	12		2			
4H1301 Material Design	4	D	-	2	-	10			3	4	
4H1404 Corrosion and Surface Protection, General Course	4	C	16	12	-	12	1				
Elective with											
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-			3		
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18		2			
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1610 Advanced Materials	4	C	18	-	-	6			3		Study visit 18h Seminars
4H1702 Current Research Topics in Materials Chemistry	4	D	20	4	-	8				4	
4H1703 Materials Chemistry	4	D	20	4	-	8				4	
4H1802 Artificial Materials	4	D	20	4	-	6	1				
5A1304 Mathematical Methods in Physics	6	C	-	78	-	-	1	2			
5A1370 Solid State Theory	4	D	36	-	-	-	1				
Elective Courses											
4H1803 Physics of Nanostructured Materials	4	D	20	4	-	6				4	

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Mechatronics B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
2E1200 Automatic Control, General Course	4	C	24	26	-	12		2			
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-			3	4	One day field trip.
Elective Courses											
4F1241 Microcomputer, Sensors and Actuators	6	C	18	26	-	29				4	

Mechatronics B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1132 <u>Microcomputers in Embedded Systems</u>	5	D	-	36	-	36	1				
4F1142 <u>Motion Control and Real-time Implementation*</u>	5	D	22	10	-	30		2		4	
4F1162 <u>Mechatronics, Advanced Course II</u>	15	D	-	116	-	80		2	3	4	

*The course has limited participation

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Metallurgy and Processes of Manufacture B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4H1921 Advanced Transport Phenomena	6	C	20	20	-	16			3	4	Projektuppgift 136hProjektuppgift 136h	
4H1922 Chemical Equilibria in Metallurgical Processes	10	C	72	72	-	28			3	4	Projektuppgift 120h	
4M1334 Casting Processing	4	D	12	24	-	18				4		

Metallurgy and Processes of Manufacture B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4H1923 Theory of High Temperature Processes	6	D	24	24	-	8	1				
4H1924 Reactor and Process Technology	6	D	24	24	-	16	1	2			Study visits 20h
4H1925 International Seminar in Material Processes	4	D	2	-	-	-		2			Projektuppgift 120h
4H1926 Metallurgical Process Simulation	6	D	2	-	-	-			3	4	Projektuppgift 240h
Elective Courses											
4H1203 Mechanical Metallurgy II	4,5	C	24	12	-	24			3	4	Home assignments
4H1943 Thermochemical Modelling of Metallurgical Processes	4	D	2	-	-	-		2			Projektuppgift 120h
4H1944 Energy and Environmental Issues within the Process Industry	4	C	24	24	-	-			3	4	
4H1945 Economical Process Analysis and Strategy	4	C	12	12	-	-				4	Projektuppgift 60h
4M1341 Foundry Processing	4	D	12	-	-	-	1				Seminarier 24h Other 28h
4M1370 Solidification Processing	4	D	36	24	-	-		2	3		

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Environmental Management B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		Study visit 2x4h, Exercises	

Environmental Management B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3C1360 Environmental Consequences, Advanced Course	4	C	18	9	-	8	1				Seminars 9hSeminars 9h
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2			
3C1390 Environmental Management, Larger Course	8	D	36	3	-	24			3	4	Project work, field exercise
Elective Courses											
3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	21	-	-	6				4	Project work 20h
3C1365 Environmental Consequences, Advanced Course II	4	D	15	15	-	40	1	2			Field exercises
3C1387 Environmental Systems Analysis	4	C	22	15	-	6		2			

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Paper Technology B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3D1107 Paper Technology	6	D	42	-	-	56			3	4	2 days studytrip
Elective Courses											
3D1112 Fibre Technology	4	D	26	-	-	15				4	
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4	

Paper Technology B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1520 <u>Graphic Arts Technology, Minor Course</u>	4	C	30	8	-	16		2			
3D1113 <u>Paper Physics</u>	4	D	20	-	-	20	1				
3D1114 <u>Paper Processes Technology</u>	4	D	20	-	-	20			3		
3D1117 <u>Paper Technology, project</u>	4	D	-	-	-	-			3	4	Project work
3D1163 <u>Pulp Technology, M</u> <i>Under bearbetning</i>	4	D	20	-	-	24	1				

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Polymer Materials B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3E1320 Polymer Chemistry, General Course	5	C	24	18	-	30			3		
3E1323 Polymer Physics, General Course	4	C	36	9	-	-			3		
3E1324 Polymer Materials - Properties and Applications	4	C	30	12	-	10				4	

Polymer Materials B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3E1360 Mechanical Properties of Polymers, Minor Course	4	C	24	16	-	12	1				
3E1361 Polymer Processing, Minor Course	4	C	24	8	-	18		2			
4E1124 Fibre Composites I: materials and processes	4	D	40	-	-	5	1				
Elective with											
3E1354 Biopolymers	5	D	24	16	-	-			3		5h Study visit
3E1362 Polymer Physics, Intermediate Course	5	C	36	9	-	20			3		
3E1367 Mechanical Properties of Polymers, Intermediate Course	4	D	24	24	-	-			3		
3E1368 Polymer Processing, Intermediate Course	4	D	24	-	-	24				4	
3E1370 Polymers in engineering design II	4	D	18	24	-	8				4	
4C1110 Material Mechanics	4	D	52	-	-	3	1				
Elective Courses											
3E1363 Coating Technology	4	C	30	-	-	24				4	

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Publiceringsteknik B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1521 Communication and Information*_	5	C	21	-	-	-			3		Seminars 24h
2D1522 Computer Technology and Communication*_	4	C	30	-	-	20				4	
2D1526 Publishing Technology, General Course	6	C	60	-	-	20			3		30h; A one week study tour is made in period 4.

*The course has limited participation

Publiceringsteknik B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1517 XML for Publishing*_	5	D	30	-	-	40	1	2			
2D1518 Audio, Video and Multimedia Production*_	5	C	30	-	-	40		2	3		
2D1527 Publishing Technology, Advanced Course	10	D	100	50	-	32			3	4	50h
Elective Courses											
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1334 Database Technology	4	C	24	20	-	12			3		

*The course has limited participation

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Materials Processing B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1134 Effective Production	6	D	25	35	-	-			3	4	
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4	
4G1161 Quality	6	C	40	16	-	-			3		
Elective Courses											
4G1632 Materials Processing II	4	C	29	30	-	13				4	
4G1635 Materials Processing II, Laboratory Course	5	D	29	30	-	37				4	
4H1251 Metal Forming - Fundamentals	6	C	36	36	-	18			3	4	

Materials Processing B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1051 Project Assignment, Materials Processing <i>Under bearbetning</i>	4	D	-	160	-	-		2	3	4	Projektuppgift 160hProjektuppgift 160h
4G1053 Materials Processing, Project Support	4	D	72	48	-	40		2	3	4	Home assignments 48h
Elective with											
4G1230 Introductory Welding Technology	4	C	24	18	-	12	1				
4G1570 Metrology & Quality for the Manufacturing Industry	4	D	36	24	-	-		2	3		
4G1670 Materials Forming	4	D	18	12	-	18		2	3		
4M1370 Solidification Processing	4	D	36	24	-	-		2	3		
Elective Courses											
4C1110 Material Mechanics	4	D	52	-	-	3	1				
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4G1170 Intelligent Machining, Advanced Course	4	D	36	20	-	-		2	3	4	
4G1243 Advanced Welding Technology, Modulus 1	4	D	20	20	-	20			3		

4G1244 Advanced Welding Technology, Modulus 2	4	D	20	20	-	20			3		
4G1245 Advanced Welding Technology, Modulus 3	4	D	20	20	-	20				4	
4G1246 Enlarged Welding Technology for EWE <i>Course is given upon agreement</i>	4	D	25	25	-	10	1	2	3	4	
4G1541 Measurement Technology & Statistics f Manufact. Processes	4	D	30	-	-	8			3		
4M1341 Foundry Processing	4	D	12	-	-	-	1				Seminarier 24h Other 28h

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Assembly Systems B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4	
4G1161 Quality	6	C	40	16	-	-			3		
4K1101 Control Systems	4	C	18	28	-	12				4	
4K1201 Computer Aided Design and Manufacturing, Introductory course	5	C	48	-	-	24				4	Graded exercise

Assembly Systems B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1531 Machine Elements, basic course for I and T	4	B	24	40	-	-	1				
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				
4K1104 Manufacturing Systems, advanced course	12	D	50	48	-	28		2	3	4	
4K1109 Principles for Product Integrated Manufacturing Systems Design	4	C	12	12	-	4	1				

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Wood Technology B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4K1601 Wood Material Science, Basic Course	5	C	36	24	-	32			3	4	
Elective Courses											
4K1101 Control Systems	4	C	18	28	-	12				4	

Wood Technology B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4K1602 Industrial Wood Processing, Basic Course	4	C	26	16	-	16	1				
4K1603 Wood Technology, Advanced Course	10	D	48	24	-	36		2	3	4	
Elective Courses											
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				

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Media Technology

Media Technology MEDIA1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1310 <u>Programming Technique</u>	4	B	26	16	-	36		2	3		
2D1348 <u>Communication and Information</u>	5	B	40	20	-	-		2	3		
2D1571 <u>Introduction to Media Technology</u>	4	B	54	15	8	-	1				
2D1572 <u>Creation and Design</u>	4	C	30	18	-	-			3	4	
2D1575 <u>Media Technology Programme Summary Course</u>	4	B	16	-	-	-	1	2	3	4	
4F1224 <u>Electrical Engineering, Basic Course Media</u>	4	B	12	21	-	13				4	
5A1230 <u>Waves</u>	4	B	28	14	-	15			3		
5B1115 <u>Mathematics 1</u>	6	B	-	-	-	-	1				
5B1116 <u>Mathematics 2</u>	6	B	-	-	-	-		2			
5B1118 <u>Discrete Mathematics</u>	5	B	-	-	-	-				4	

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Media Technology

Media Technology MEDIA2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1A1996 <u>Communicative Spaces*</u> <i>Under bearbetning</i>	4	C	-	-	-	-		2			160 h Workshop
2D1320 <u>Applied Computer Science</u>	4	B	30	14	-	20	1	2			
2D1334 <u>Database Technology</u>	4	C	24	20	-	12			3		
2D1574 <u>Media Technology, Basic Course</u>	12	C	64	6	-	38	1	2			Study visit 12hStudy visit 12h
2D1575 <u>Media Technology Programme Summary Course</u>	4	B	16	-	-	-	1	2	3	4	
2G1316 <u>Data and Computer Communication</u> <i>Not given for Media 02/03</i>	4	D	24	18	-	4			3		
4D1200 <u>Industrial Economics for Media Technology, Basic Course</u>	4	B	28	14	-	-				4	Seminars 4h
4F1224 <u>Electrical Engineering, Basic Course Media</u>	4	B	12	21	-	13				4	
5B1118 <u>Discrete Mathematics</u>	5	B	-	-	-	-				4	
5B1501 <u>Probability Theory and Statistics</u>	4	C	24	36	-	-			3		

*The course has limited participation

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Media Technology

Media Technology MEDIA3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2I1130 Cognitive Psychology <i>Under bearbetning</i>	4	B	30	12	-	-	1				
4D1215 Media from Technology to Culture	4	C	42	-	-	-	1				
4K1575 Media Technology Programme Summary Course	1	B	16	-	-	-	1	2	3	4	
Elective Courses											
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1406 Fundamentals of Human-Computer Interaction	4	D	18	-	-	-		2			Seminars 5hSeminars 5h
2D1573 Telepresence Production	4	C	20	-	10	-			3	4	
2D1591 Production Techniques for Moving Images	6	C	40	-	-	16				4	Project 16h
2D1592 Processing of Moving Pictures	6	D	40	-	-	20	1				
2D1593 Display and Projection Technology	4	D	20	-	-	10		2			
2F1111 Speech Technology	4	D	36	14	-	6			3		
2F1213 Musical Communication and Music Technology	5	D	28	8	-	12				4	Project assignment 30h
2F1300 No translation	5	D	24	12	-	12	1				
2F1410 Audio Technology	5		30	12	-	12		2			Projektuppgift 20hProjektuppgift 20h
3C1320 Environment and Technology	4	C	24	3	-	-			3		
3C1330 Technology and Ecosystems	4	B	24	3	-	-		2			

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Media Technology

Media Technology MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1576 Media Management	6	D	60	30	-	-			3	4	
2D1577 Content and expression in media	6	D	30	60	-	-			3	4	
4K1575 Media Technology Programme Summary Course	1	B	16	-	-	-	1	2	3	4	
Elective Courses											
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1591 Production Techniques for Moving Images	6	C	40	-	-	16				4	Project 16h
2D1592 Processing of Moving Pictures	6	D	40	-	-	20	1				
2D1593 Display and Projection Technology	4	D	20	-	-	10		2			
2F1111 Speech Technology	4	D	36	14	-	6			3		
2F1213 Musical Communication and Music Technology	5	D	28	8	-	12				4	Project assignment 30h
2F1300 No translation	5	D	24	12	-	12	1				
2F1410 Audio Technology	5		30	12	-	12		2			Projektuppgift 20hProjektuppgift 20h
3C1320 Environment and Technology	4	C	24	3	-	-			3		
3C1330 Technology and Ecosystems	4	B	24	3	-	-		2			

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Media Technology

Interactive Media MEDIA3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1385 Software Engineering	4	C	24	12	-	18			3		
2D1573 Telepresence Production	4	C	20	-	10	-			3	4	

Interactive Media MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4		

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Media Technology

Information System Management MEDIA3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2I1190	7	C	36	-	-	9			3	4	Seminars 6h
2I1191	5	C	30	-	-	2				4	Seminars 6h
2I1197 No translation	3		21	-	3	3			3		
2I1198 No translation	5	C	24	-	-	3				4	Seminars 3h

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Media Technology

Journalism MEDIA3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7G1101 Specialisation Course in Journalism, Part 1 <i>Under bearbetning</i>	6	C	-	-	-	-			3		
7G1102 Specialisation Course in Journalism, Part 2 <i>Under bearbetning</i>	4	C	-	-	-	-		2			

Journalism MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7G1103 Specialisation Course in Journalism, Part 3 <i>Under bearbetning</i>	5	D	-	-	-	-	1				
7G1104 Specialisation Course in Journalism, Part 4 <i>Under bearbetning</i>	5	D	-	-	-	-		2			

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Media Technology

MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2G1322 Communication System Design for Media Technology	16	D	-	-	-	-			3	4	Project plan P3 Project report P3 and P4	

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Audio Technology MEDIA3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2F1112 <u>Speech Technology, Extended Course</u> <i>Under bearbetning</i>	5	D	36	14	-	6			3		
2F1213 <u>Musical Communication and Music Technology</u>	5	D	28	8	-	12				4	Project assignment 30h
2F1300 <u>No translation</u>	5	D	24	12	-	12	1				
2F1410 <u>Audio Technology</u>	5		30	12	-	12		2			Projektuppgift 20hProjektuppgift 20h

Audio Technology MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2F1112 Speech Technology, Extended Course <i>Under bearbetning</i>	5	D	36	14	-	6			3		
2F1410 Audio Technology	5		30	12	-	12		2			Projektuppgift 20h Projektuppgift 20h

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Media Technology

Man-Machine Interaction MEDIA3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1385 Software Engineering	4	C	24	12	-	18			3		
2D1406 Fundamentals of Human-Computer Interaction	4	D	18	-	-	-		2			Seminars 5hSeminars 5h

Man-Machine Interaction MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2D1406 Fundamentals of Human-Computer Interaction	4	D	18	-	-	-		2			Seminars 5hSeminars 5h	

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Media Technology

Video and Film Production MEDIA3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1590 Media Perception	4	D	20	-	-	24			3		
2D1591 Production Techniques for Moving Images	6	C	40	-	-	16				4	Project 16h
2D1592 Processing of Moving Pictures	6	D	40	-	-	20	1				
2D1593 Display and Projection Technology	4	D	20	-	-	10		2			

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Materials Technology

Business Development and Media Technology B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Elective Courses												
9E1300 Technical English, Lower Intermediate Level*_	4	B	-	-	56	-			3	4		
9E1301 Technical English, Intermediate*_	6	B	-	-	56	-			3	4		
9E1304 Technical English, Advanced Level*_	6	C	-	-	56	-			3	4		

*The course has limited participation

Business Development and Media Technology B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1521 Communication and Information	5	C	21	-	-	-	1				Seminars 24
2D1550 Market Systems <i>Only open to AFM-students</i>	5	C	-	-	-	-	1				Seminars 40h
2D1551 Consumer Markets <i>Open only to AFM-students.</i>	5	C	-	-	-	-	1				Seminars 40h
2D1552 Media Management <i>Open only for AFM-students.</i>	10	C	72	56	-	-	1	2	3	4	Only open for AFM-students.
2D1553 Media Production <i>Only open for AFM-students.</i>	10	C	40	-	-	110		2			Only open for AFM-students.
2D1555 Information Technology and Organizations	5	D	39	-	-	-				4	
Elective Courses											
2D1334 Database Technology	4	C	24	20	-	12			3		
2D1524 Image Processing and Reprographic Methods*_ <i>Limited number of participants</i>	6	C	50	16	-	24	1				

*The course has limited participation

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Materials Technology

Advanced Materials B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4H1610 <u>Advanced Materials</u>	4	C	18	-	-	6			3		Study visit 18h Seminars	
4H1611 <u>Materials Optimisation and Design</u>	5	C	18	18	-	12				4	Study visits 10h	
Elective Courses												
4H1504 <u>Processing of Ceramic Materials</u>	4	C	12	-	-	18			3			

Advanced Materials B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1612 High Temperature Materials	7	D	18	12	-	6	1				Study visit 8h Seminars 10h Project assignment 100h
Elective Courses											
4H1404 Corrosion and Surface Protection, General Course	4	C	16	12	-	12	1				
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-			3		
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18		2			

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Materials Technology

Biomedical Engineering B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1200 Cellular and Molecular Biology*_	10	C	80	-	-	8			3	4	
7E1201 Neuroscience*_	5	C	60	-	-	30				4	

*The course has limited participation

Biomedical Engineering B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1				
7E1202 Systems Biology* ₋	5	C	32	-	-	25		2			24 h Seminars24 h Seminars
Elective Courses											
2D1435 Mathematical Modelling of Biological Systems <i>The course is given every second year and will not be given in 02/03.</i>	6	D	26	-	-	20					

*The course has limited participation

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Computer Systems for Design and Manufacturing B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4		
4K1201 Computer Aided Design and Manufacturing, Introductory course	5	C	48	-	-	24				4	Graded exercise	
Elective Courses												
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4		

Computer Systems for Design and Manufacturing B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				
4K1202 Modelling and Interaction in CAD/CAM* Maximum of 20 participants. Students of "Computer Systems for Design and Manufacturing" will have priority.	5	D	-	36	-	24	1				3 Programming tasks, periods 1, 2
4K1203 Computer Systems for Design and Manufacturing, advanced course Maximum of 20 participants. Students of "Computer Systems for Design and Manufacturing" will have priority.	12	D	-	68	-	60		2	3	4	4 Programming Projects, periods 2, 3, 4
Elective Courses											
4F1131 Microcomputers in Embedded Systems*	5	D	-	36	-	36		2			
4K1103 Manufacturing Automation II	6	C	28	32	-	17	1	2			

*The course has limited participation

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Energy Technology B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4A1601 Heat Transfer	4	C	24	24	-	20			3		
4A1603 Energy Technology	4	C	48	12	-	-				4	
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4	

Energy Technology B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4A1605 Sustainable Power Generation	6	D	30	48	-	18	1	2			
4A1607 Sustainable Energy Utilization	6	D	-	-	72	16	1	2			
4A1609 Applied Energy Technology - Project Course	6	D	12	-	-	-			3	4	Project 78h
Elective Courses											
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
4A1140 Energy Systems and Models	4	D	-	-	-	-				4	
4A1610 Energy Management	4	D	50	-	-	-				4	
4A1611 Renewable Energy Technology	4	D	-	-	52	-		2			Study visit 8h
4A1613 Energy and Environment	4	D	45	-	-	-			3	4	
4A1620 Combustion Theory	4	C	18	18	-	15	1	2	3	4	
4A1621 Modelling of Thermodynamic Systems	4	D	16	-	-	32	1	2	3	4	The course is given upon agreement
4A1622 Thermal Comfort and Indoor Climate	4	D	24	24	-	12			3	4	
4A1623 Applied Refrigeration and Heat Pump Technology	4	D	24	24	-	16			3	4	
4A1624 Numerical Methods in Energy Technology	4	D	24	12	-	12				4	
4A1625 Cooling of Electronics	4	D	48	-	-	12			3		
4A1626 Applied Heat and Power Technology	4	D	30	12	-	8			3	4	Project assignment 8h
4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3		Study visits 12h

4A1628 Advanced Nuclear Reactor Engineering	4	D	42	-	-	-				4	Study visits 18h
4A1629 Fluid Machinery	4	C	30	18	-	12	1	2			
4A1630 Thermal Fluid Machinery	4	D	36	12	-	12			3		

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Internal Combustion Engines B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
4F1241 Microcomputer, Sensors and Actuators	6	C	18	26	-	29				4	

Internal Combustion Engines B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1420 <u>Ground Vehicle Engineering, Basic Course</u>	6	C	36	36	-	-	1	2			
4F1430 <u>Combustion Engines, general course*_</u>	4	C	48	-	-	12	1				
4F1431 <u>Combustion Engines, Advanced Course*_</u>	6	D	56	-	-	32		2	3		
4F1460 <u>Combustion Engines, Project Course</u>	6	D	-	18	-	-			3	4	
Elective Courses											
2E1212 <u>Automatic Control, General Course</u>	4	C	24	26	-	12			3		
4B1131 <u>Experimental Structure Dynamics</u>	5	D	-	58	-	12		2	3		
4F1141 <u>Project Work in Mechatronics*_</u> <i>Limited attendance due to limited number of available projects</i>	4	C	-	-	-	-	1	2	3	4	No scheduled hours

*The course has limited participation

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Solid Mechanics B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4C1096 <u>Strength of Materials and Solid Mechanics, Advanced Course</u>	4	C	36	14	-	4			3			
4C1117 <u>Design Applications of Solid Mechanics*</u>	4	D	16	6	-	-				4	Estimated time for project: 90h	
4F1531 <u>Machine Elements, basic course for I and T</u>	4	B	24	40	-	-				4		
5B1304 <u>Mathematics, Extended Course</u>	5	D	-	-	54	-			3	4		

*The course has limited participation

Solid Mechanics B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1114 <u>Finite Element Method</u>	4	D	-	49	-	8		2			
Elective Courses											
3E1324 <u>Polymer Materials - Properties and Applications</u>	4	C	30	12	-	10				4	
3E1360 <u>Mechanical Properties of Polymers, Minor Course</u>	4	C	24	16	-	12	1				
4B1111 <u>Fundamentals of Noise and Vibration Control T</u>	4	C	31	32	-	4		2			
4B1112 <u>Fundamentals of Noise and Vibration Control M</u>	4	C	31	30	-	4	1				
4B1420 <u>Ground Vehicle Engineering, Basic Course</u>	6	C	36	36	-	-	1	2			
4C1110 <u>Material Mechanics</u>	4	D	52	-	-	3	1				
4C1111 <u>Fracture Mechanics and Fatigue</u>	4	D	48	-	-	4				4	
4C1112 <u>Theory of Elasticity</u>	4	D	26	26	-	-			3		
4C1116 <u>Dynamic Problems in Solid Mechanics</u>	4	D	42	-	-	8			3	4	
4C1118 <u>Non-linear Theory of Elasticity</u>	2	D	12	12	-	-				4	
4C1119 <u>Finite Element Method, Project Course</u>	2	D	8	-	-	-			3		

4E1125 Fibre Composites II, Analysis and Design	4	D	48	-	-	6	2			
4F1540 Tribology	4	C	18	9	-	5			4	
4F1540 Tribology	4	C	18	9	-	5	1			
4G1230 Introductory Welding Technology	4	C	24	18	-	12	1			
4H1202 Mechanical Metallurgy I	6	D	24	12	-	48		3	4	Home assignments
4H1203 Mechanical Metallurgy II	4,5	C	24	12	-	24		3	4	Home assignments
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18	2			
5A1301 Mathematical Methods in Physics, Course I	4	C	-	54	-	-	1	2		
5C1122 Continuum Mechanics	4	C	42	-	-	-	1			
5C1123 Mathematical Methods of Mechanics, General Course	4	D	36	-	-	-		2		
5C1125 Mathematical Methods of Mechanics, Intermediate Course	2	D	-	-	-	-			3	
5C1208 Fluid Mechanics, Intermediate Course	2	D	-	-	20	-	1			
5C1902 Advanced Dynamics of Complex Systems	4	D	24	-	-	-	1			

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Materials Technology

Industrial Economics and Management B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1028 Industrial Economics and Management, Advanced Course	4	C	26	20	-	-				4	4 h Seminars4 h Seminars
Elective with											
4D1060 Industrial Development	4	C	40	8	-	-			3		
4D1075 Work Organization and Leadership*	4	C	24	24	-	-			3		
Elective Courses											
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	

*The course has limited participation

Industrial Economics and Management B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1035 <u>Advanced Industrial Economics and Management</u>	12	D	68	72	-	-		2	3	4	Roll-play 16h
Elective with											
4D1070 <u>Industrial Project Management</u>	4	C	32	-	-	-	1				Seminars 2hSeminars 2h
4F1630 <u>Introduction to Machine Design</u>	5	C	24	36	-	-	1	2			
4K1101 <u>Control Systems</u>	4	C	18	28	-	12				4	
4K1102 <u>Manufacturing Automation I</u>	4	C	20	24	-	12	1				
Elective Courses											
4D1062 <u>Industrial Marketing</u> <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4D1070 <u>Industrial Project Management</u>	4	C	32	-	-	-	1				Seminars 2hSeminars 2h
4D1152 <u>Industrial Marketing, Advanced Course</u> <i>Open only to IEO-students.</i>	4	D	36	12	-	-	1				
4K1103 <u>Manufacturing Automation II</u>	6	C	28	32	-	17	1	2			

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Industrial Engineering B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4	
4G1161 Quality	6	C	40	16	-	-			3		
Elective Courses											
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		Study visit 2x4h, Exercises
4G1632 Materials Processing II	4	C	29	30	-	13				4	
4G1635 Materials Processing II, Laboratory Course	5	D	29	30	-	37				4	

Industrial Engineering B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1146 <u>Advanced Industrial Engineering</u>	12	D	67	22	-	-	1	2			Projektuppgift 120h
4G1161 <u>Quality</u>	6	C	40	16	-	-	1				
Elective Courses											
3C1360 <u>Environmental Consequences, Advanced Course</u>	4	C	18	9	-	8	1				Seminars 9hSeminars 9h
4D1062 <u>Industrial Marketing</u> <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4D1093 <u>Psychology for Engineers</u> <i>Replaces 4D1088 Technical Work Psychology</i>	4	C	24	4	-	4		2			
4G1053 <u>Materials Processing, Project Support</u>	4	D	72	48	-	40		2	3	4	Home assignments 48h
4G1170 <u>Intelligent Machining, Advanced Course</u>	4	D	36	20	-	-		2	3	4	
4G1243 <u>Advanced Welding Technology, Modulus 1</u>	4	D	20	20	-	20			3		
4G1244 <u>Advanced Welding Technology, Modulus 2</u>	4	D	20	20	-	20			3		

4G1245 Advanced Welding Technology, Modulus 3	4	D	20	20	-	20				4	
4G1246 Enlarged Welding Technology for EWE <i>Course is given upon agreement</i>	4	D	25	25	-	10	1	2	3	4	
4G1540 Laser Metrology Methods and Non Destructive Testing	4	C	28	22	-	4		2			
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				

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Integratd Product Development B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1075 <u>Work Organization and Leadership*</u>	4	C	24	24	-	-			3		
4F1541 <u>CAD 3D-modelling and Visualization for Personal Computers</u>	4	C	8	36	-	-				4	

*The course has limited participation

Integratd Product Development B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-		2			
4F1760 Integrated Product Development, Advanced Course	20	D	-	180	-	-	1	2	3	4	
Elective Courses											
4F1131 Microcomputers in Embedded Systems*	5	D	-	36	-	36		2			
4F1641 Environmentally Adapted Product Design	4	C	24	20	-	16		2			
4F1642 Modelling and Computer Support in Mechanical Design	4	C	24	36	-	-			3		

*The course has limited participation

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Sound and Vibrations B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
5B1304 Mathematics, Extended Course	5	D	-	-	54	-			3	4	
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4	
Elective Courses											
4B1111 Fundamentals of Noise and Vibration Control T	4	C	31	32	-	4		2			
4B1112 Fundamentals of Noise and Vibration Control M	4	C	31	30	-	4	1				

Sound and Vibrations B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1127 Vibroacoustics	5	D	-	56	-	8	1	2			
4B1131 Experimental Structure Dynamics	5	D	-	58	-	12		2	3		
4B1136 Flow Acoustics	4	D	-	36	-	8			3		
4B1141 Sound and Vibration, Projekt Course	5	D	-	48	-	12			3	4	Study tour to industry 40h
9E1131 Information Searching for B, I, M, T	1	B	-	-	-	-			3	4	

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Lightweight Structures B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1103 <u>Lightweight Structures and FEM II</u>	6,5	C	76	-	-	22			3	4	
Elective Courses											
4E1201 <u>Elements of Aeronautics</u>	5	C	72	-	-	4			3	4	

Lightweight Structures B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1124 Fibre Composites I: materials and processes	4	D	40	-	-	5	1				
4E1125 Fibre Composites II, Analysis and Design	4	D	48	-	-	6		2			
4E1126 Structural Design and Optimisation	4	D	36	-	-	12			3		
4E1131 Aircraft and Lightweight Design	6	D	8	60	-	12			3	4	
4E1150 Biomechanics and Neuronics	4	D	36	-	-	6				4	
Elective Courses											
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	59	7	1	2			7 h Projektuppgift7 h Projektuppgift
4B1420 Ground Vehicle Engineering, Basic Course	6	C	36	36	-	-	1	2			
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
5B1722 Applied Optimization	4	C	30	14	-	-			3		
9E1300 Technical English, Lower Intermediate Level*	4	B	-	-	56	-	1	2			
9E1301 Technical English, Intermediate*	6	B	-	-	56	-	1	2			
9E1304 Technical English, Advanced Level*	6	C	-	-	56	-	1	2			
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	18	-	-	1	2			E-learning exercises
9E1326 Technical German, Advanced Level*	6	C	-	-	56	-	1	2			

9E1334 <u>Technical French, Intermediate</u> Level*_	6	B	-	-	56	-	1	2			
9E1348 <u>Technical Spanish, Intermediate</u> Level*_	6	B	-	-	56	-			3	4	

*The course has limited participation

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Machine Elements B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1096 <u>Strength of Materials and Solid Mechanics, Advanced Course</u>	4	C	36	14	-	4			3		
4F1530 <u>Function Analysis and Optimization in Mechanical Engineering</u>	5	C	-	60	-	-			3	4	One day field trip.

Machine Elements B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1540 Tribology	4	C	18	9	-	5	1				
4F1540 Tribology	4	C	18	9	-	5				4	
4F1560 Advanced Machine Elements	12	D	-	120	-	-			3	4	
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4K1132 Modularisation of Products <i>Some parts of the course are outlined in 4K1131 Assembly Systems and 4K1104 Manufacturing Systems, advanced course.</i>	4	C	24	20	-	-			3		
Elective Courses											
4C1114 Finite Element Method	4	D	-	49	-	8		2			

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Machine Design B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1096 Strength of Materials and Solid Mechanics, Advanced Course	4	C	36	14	-	4			3		
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-			3	4	One day field trip.
Elective Courses											
4F1241 Microcomputer, Sensors and Actuators	6	C	18	26	-	29				4	
4F1343 Fluid Systems and Machines	4	C	24	24	-	12				4	
4F1642 Modelling and Computer Support in Mechanical Design	4	C	24	36	-	-			3		
5C1121 Analytical Mechanics	4	C	48	-	-	-			3		

Machine Design B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4F1640 Industrial Design*	4	C	24	36	-	-	1				
4F1660 Advanced Machine Design	12	D	4	114	-	-			3	4	
Elective Courses											
3E1360 Mechanical Properties of Polymers, Minor Course	4	C	24	16	-	12	1				
3E1361 Polymer Processing, Minor Course	4	C	24	8	-	18		2			
4C1114 Finite Element Method	4	D	-	49	-	8		2			
4F1131 Microcomputers in Embedded Systems*	5	D	-	36	-	36		2			
4F1131 Microcomputers in Embedded Systems* <i>Limited attendance: 25</i>	5	D	-	36	-	36			3		
4F1141 Project Work in Mechatronics* <i>Limited attendance due to limited number of available projects</i>	4	C	-	-	-	-	1	2	3	4	No scheduled hours
4F1541 CAD 3D-modelling and Visualization for Personal Computers	4	C	8	36	-	-				4	

4F1641 Environmentally Adapted Product Design	4	C	24	20	-	16	2			
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1			

*The course has limited participation

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Mateials Physics B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2B1770 Solid State Physics, General Course	6	D	54	-	-	30			3	4		
5A1304 Mathematical Methods in Physics	6	C	-	78	-	-	1	2				
5A1324 Quantum Physics	8	C	60	48	-	-		2	3			
Elective Courses												
5A1350 Statistical Mechanics	4	C	24	24	-	-				4		

Mateials Physics B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1760 Experimental Methods in Material Physics	5	C	26	22	-	30		2	3		
Elective Courses											
2B1260 Semiconductor Theory and Device Physics, General Course	5	D	30	-	-	10	1				Individual assignments 20h
2B1261 Semiconductor Theory and Device Physics, Advanced Course	4	D	-	36	-	-			3		
2B1262 The Nature of Materials	4	C	32	-	-	-				4	
2B1263 Surface Physics, Basic Course	4	D	36	-	-	-		2			
2B1380 Optics, General Course	4	D	26	14	-	25	1				
2B1771 Superconductivity and Applications	4	D	28	-	-	-		2			
4C1110 Material Mechanics	4	D	52	-	-	3	1				
4C1111 Fracture Mechanics and Fatigue	4	D	48	-	-	4				4	
4C1112 Theory of Elasticity	4	D	26	26	-	-			3		
4C1114 Finite Element Method	4	D	-	49	-	8		2			
4H1104 Diffusion and Phase Equilibria	6	D	18	18	-	42	1	2			
4H1202 Mechanical Metallurgy I	6	D	24	12	-	48			3	4	Home assignments
4H1203 Mechanical Metallurgy II	4,5	C	24	12	-	24			3	4	Home assignments
4H1404 Corrosion and Surface Protection, General Course	4	C	16	12	-	12	1				

4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18	2			
4H1609 Functional Materials	4	D	18	-	-	6	2			Study visit 8h
4H1610 Advanced Materials	4	C	18	-	-	6		3		Study visit 18h Seminars
4H1611 Materials Optimisation and Design	5	C	18	18	-	12			4	Study visits 10h
4H1612 High Temperature Materials	7	D	18	12	-	6	1			Study visit 8h Seminars 10h Project assignment 100h
4M1342 Space Systems and Technology	4	D	36	-	-	-	2			
4M1370 Solidification Processing	4	D	36	24	-	-	2	3		
5A1332 Advanced Quantum Mechanics, Course I	5	D	36	-	-	-	1	2		
5A1354 Computational Physics	6	D	24	-	-	20	2			
5A1370 Solid State Theory	4	D	36	-	-	-	1			
5A1502 Quantum Electronics with Electro Optics	8	D	48	-	-	-	2			
5A1503 Electro Optics	4	D	24	-	-	-	2			
5A1775 Nuclear Reactor Physics, Major Course	6	D	36	-	-	24	2			
5A1777 Reactor Physics, Minor Course	4	D	30	-	-	16	2			

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Materials Science B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4H1202 Mechanical Metallurgy I	6	D	24	12	-	48			3	4	Home assignments	
4H1204 Experimental Methods in Materials Science	5	D	10	10	-	48			3	4		
4H1504 Processing of Ceramic Materials	4	C	12	-	-	18			3			

Materials Science B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4H1104 Diffusion and Phase Equilibria	6	D	18	18	-	42	1	2			
4H1113 Powder Metallurgy	4	D	18	18	-	12		2			
4H1301 Material Design	4	D	-	2	-	10			3	4	
4H1404 Corrosion and Surface Protection, General Course	4	C	16	12	-	12	1				
Elective with											
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-			3		
4H1505 Structure and Properties of Ceramic Materials	4	D	12	12	-	18		2			
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1610 Advanced Materials	4	C	18	-	-	6			3		Study visit 18h Seminars
4H1702 Current Research Topics in Materials Chemistry	4	D	20	4	-	8				4	
4H1703 Materials Chemistry	4	D	20	4	-	8				4	
4H1802 Artificial Materials	4	D	20	4	-	6	1				
5A1304 Mathematical Methods in Physics	6	C	-	78	-	-	1	2			
5A1370 Solid State Theory	4	D	36	-	-	-	1				
Elective Courses											
4H1803 Physics of Nanostructured Materials	4	D	20	4	-	6				4	

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Mechatronics B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 Applied Computer Science	4	B	30	14	-	20			3	4	
2E1200 Automatic Control, General Course	4	C	24	26	-	12		2			
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-			3	4	One day field trip.
Elective Courses											
4F1241 Microcomputer, Sensors and Actuators	6	C	18	26	-	29				4	

Mechatronics B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1132 Microcomputers in Embedded Systems	5	D	-	36	-	36	1				
4F1142 Motion Control and Real-time Implementation*	5	D	22	10	-	30		2		4	
4F1162 Mechatronics, Advanced Course II	15	D	-	116	-	80		2	3	4	

*The course has limited participation

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Metallurgy and Processes of Manufacture B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4H1921 Advanced Transport Phenomena	6	C	20	20	-	16			3	4	Projektuppgift 136hProjektuppgift 136h	
4H1922 Chemical Equilibria in Metallurgical Processes	10	C	72	72	-	28			3	4	Projektuppgift 120h	
4M1334 Casting Processing	4	D	12	24	-	18				4		

Metallurgy and Processes of Manufacture B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4H1923 Theory of High Temperature Processes	6	D	24	24	-	8	1				
4H1924 Reactor and Process Technology	6	D	24	24	-	16	1	2			Study visits 20h
4H1925 International Seminar in Material Processes	4	D	2	-	-	-		2			Projektuppgift 120h
4H1926 Metallurgical Process Simulation	6	D	2	-	-	-			3	4	Projektuppgift 240h
Elective Courses											
4H1203 Mechanical Metallurgy II	4,5	C	24	12	-	24			3	4	Home assignments
4H1943 Thermochemical Modelling of Metallurgical Processes	4	D	2	-	-	-		2			Projektuppgift 120h
4H1944 Energy and Environmental Issues within the Process Industry	4	C	24	24	-	-			3	4	
4H1945 Economical Process Analysis and Strategy	4	C	12	12	-	-				4	Projektuppgift 60h
4M1341 Foundry Processing	4	D	12	-	-	-	1				Seminarier 24h Other 28h
4M1370 Solidification Processing	4	D	36	24	-	-		2	3		

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Environmental Management B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		Study visit 2x4h, Exercises

Environmental Management B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3C1360 Environmental Consequences, Advanced Course	4	C	18	9	-	8	1				Seminars 9hSeminars 9h
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2			
3C1390 Environmental Management, Larger Course	8	D	36	3	-	24			3	4	Project work, field exercise
Elective Courses											
3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	21	-	-	6				4	Project work 20h
3C1365 Environmental Consequences, Advanced Course II	4	D	15	15	-	40	1	2			Field exercises
3C1387 Environmental Systems Analysis	4	C	22	15	-	6		2			

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Materials Technology

Paper Technology B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3D1107 Paper Technology	6	D	42	-	-	56			3	4	2 days studytrip
Elective Courses											
3D1112 Fibre Technology	4	D	26	-	-	15				4	
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4	

Paper Technology B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1520 <u>Graphic Arts Technology, Minor Course</u>	4	C	30	8	-	16		2			
3D1113 <u>Paper Physics</u>	4	D	20	-	-	20	1				
3D1114 <u>Paper Processes Technology</u>	4	D	20	-	-	20			3		
3D1117 <u>Paper Technology, project</u>	4	D	-	-	-	-			3	4	Project work
3D1163 <u>Pulp Technology, M</u> <i>Under bearbetning</i>	4	D	20	-	-	24	1				

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Materials Technology

Polymer Materials B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3E1320 Polymer Chemistry, General Course	5	C	24	18	-	30			3		
3E1323 Polymer Physics, General Course	4	C	36	9	-	-			3		
3E1324 Polymer Materials - Properties and Applications	4	C	30	12	-	10				4	

Polymer Materials B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3E1360 Mechanical Properties of Polymers, Minor Course	4	C	24	16	-	12	1				
3E1361 Polymer Processing, Minor Course	4	C	24	8	-	18		2			
4E1124 Fibre Composites I: materials and processes	4	D	40	-	-	5	1				
Elective with											
3E1354 Biopolymers	5	D	24	16	-	-			3		5h Study visit
3E1362 Polymer Physics, Intermediate Course	5	C	36	9	-	20			3		
3E1367 Mechanical Properties of Polymers, Intermediate Course	4	D	24	24	-	-			3		
3E1368 Polymer Processing, Intermediate Course	4	D	24	-	-	24				4	
3E1370 Polymers in engineering design II	4	D	18	24	-	8				4	
4C1110 Material Mechanics	4	D	52	-	-	3	1				
Elective Courses											
3E1363 Coating Technology	4	C	30	-	-	24				4	

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Materials Technology

Publiceringsteknik B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1521 Communication and Information*_	5	C	21	-	-	-			3		Seminars 24h
2D1522 Computer Technology and Communication*_	4	C	30	-	-	20				4	
2D1526 Publishing Technology, General Course	6	C	60	-	-	20			3		30h; A one week study tour is made in period 4.

*The course has limited participation

Publiceringsteknik B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1517 XML for Publishing*_	5	D	30	-	-	40	1	2			
2D1518 Audio, Video and Multimedia Production*_	5	C	30	-	-	40		2	3		
2D1527 Publishing Technology, Advanced Course	10	D	100	50	-	32			3	4	50h
Elective Courses											
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1334 Database Technology	4	C	24	20	-	12			3		

*The course has limited participation

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Materials Processing B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1134 Effective Production	6	D	25	35	-	-			3	4	
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4	
4G1161 Quality	6	C	40	16	-	-			3		
Elective Courses											
4G1632 Materials Processing II	4	C	29	30	-	13				4	
4G1635 Materials Processing II, Laboratory Course	5	D	29	30	-	37				4	
4H1251 Metal Forming - Fundamentals	6	C	36	36	-	18			3	4	

Materials Processing B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1051 Project Assignment, Materials Processing <i>Under bearbetning</i>	4	D	-	160	-	-		2	3	4	Projektuppgift 160hProjektuppgift 160h
4G1053 Materials Processing, Project Support	4	D	72	48	-	40		2	3	4	Home assignments 48h
Elective with											
4G1230 Introductory Welding Technology	4	C	24	18	-	12	1				
4G1570 Metrology & Quality for the Manufacturing Industry	4	D	36	24	-	-		2	3		
4G1670 Materials Forming	4	D	18	12	-	18		2	3		
4M1370 Solidification Processing	4	D	36	24	-	-		2	3		
Elective Courses											
4C1110 Material Mechanics	4	D	52	-	-	3	1				
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4G1170 Intelligent Machining, Advanced Course	4	D	36	20	-	-		2	3	4	
4G1243 Advanced Welding Technology, Modulus 1	4	D	20	20	-	20			3		

4G1244 Advanced Welding Technology, Modulus 2	4	D	20	20	-	20			3		
4G1245 Advanced Welding Technology, Modulus 3	4	D	20	20	-	20				4	
4G1246 Enlarged Welding Technology for EWE <i>Course is given upon agreement</i>	4	D	25	25	-	10	1	2	3	4	
4G1541 Measurement Technology & Statistics f Manufact. Processes	4	D	30	-	-	8			3		
4M1341 Foundry Processing	4	D	12	-	-	-	1				Seminarier 24h Other 28h

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Assembly Systems B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	C	36	12	-	-				4	
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4	
4G1161 Quality	6	C	40	16	-	-			3		
4K1101 Control Systems	4	C	18	28	-	12				4	
4K1201 Computer Aided Design and Manufacturing, Introductory course	5	C	48	-	-	24				4	Graded exercise

Assembly Systems B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4F1531 Machine Elements, basic course for I and T	4	B	24	40	-	-	1				
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				
4K1104 Manufacturing Systems, advanced course	12	D	50	48	-	28		2	3	4	
4K1109 Principles for Product Integrated Manufacturing Systems Design	4	C	12	12	-	4	1				

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Wood Technology B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4K1601 Wood Material Science, Basic Course	5	C	36	24	-	32			3	4	
Elective Courses											
4K1101 Control Systems	4	C	18	28	-	12				4	

Wood Technology B4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4K1602 Industrial Wood Processing, Basic Course	4	C	26	16	-	16	1				
4K1603 Wood Technology, Advanced Course	10	D	48	24	-	36		2	3	4	
Elective Courses											
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4K1102 Manufacturing Automation I	4	C	20	24	-	12	1				

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Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1110 Introduction to Microelectronics	4	B	-	-	-	-	1				
2B1111 Applied Physics, Thermodynamics and Waves	6	B	42	28	-	-			3	4	
2B1112 Project Course in Microelectronics	5	B	12	-	-	50			3	4	
2I1035 Computer Science, Basic Course	4	B	10	21	-	26		2			
5B1115 Mathematics 1	6	B	-	-	-	-	1				
5B1116 Mathematics 2	6	B	-	-	-	-		2			
5B1117 Mathematics 3	6	B	-	-	-	-			3	4	
5C1106 Applied Physics, Mechanics	4	B	30	15	-	-			3	4	

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Engineering Physics

Engineering Physics F1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1339 Program Construction	5	B	30	24	-	34	1	2	3		
5A1201 No translation	7	B	52	14	-	30	1	2			
5A1202 No translation	8	B	42	32	-	25			3	4	
5B1106 Calculus II, part 1	6	B	72	-	-	-	1	2			
5B1107 Calculus II, part 2	6	B	72	-	-	-			3	4	
5B1109 Linear Algebra II	5	B	60	-	-	-	1				
5C1103 Mechanics, Basic Course	6	B	48	27	-	-			3	4	

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Engineering Physics

Engineering Physics F2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2A1840 Electromagnetic Theory F	6	C	52	52	-	-	1	2			
2D1240 Numerical Methods, Basic Course II	4	B	28	14	-	18			3	4	
4C1055 Strength of Materials and Solid Mechanics, Basic Course	6	B	42	40	-	2			3	4	
5A1245 Modern Physics	4	B	28	14	-	-		2	3		
5A1931 Experimental Methods in Physics	3	C	18	12	-	-			3	4	
5B1201 Complex Analysis	4	C	48	-	-	-	1				
5B1202 Differential Equations and Transforms II	6	C	72	-	-	-		2		4	
5B1506 Mathematical Statistics, basic course	6	C	36	48	-	-			3	4	
5C1113 Mechanics, Continuation Course	4	C	30	15	-	-	1				
Elective Courses											
2A6840 Electromagnetic Theory - with Honours	0	C	-	-	-	-			3		
5U1201 Advanced Problems A	4	C	-	48	-	-	1	2	3	4	

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Engineering Physics

Engineering Physics F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1507 Semiconductor Electronics	6	C	36	22	-	8	1	2			
2D1344 Fundamentals of Computer Science	4	B	24	24	-	24		2	3		
2E1200 Automatic Control, General Course	4	C	24	26	-	12	1				
5A1301 Mathematical Methods in Physics, Course I	4	C	-	54	-	-	1	2			
5A1450 Quantum Physics	11	C	60	48	-	40	1	2	3		
Elective with											
5A1326 Relativity	4	C	28	20	-	-			3		
5A1350 Statistical Mechanics	4	C	24	24	-	-				4	
5A1400 Subatomic Physics	4	C	36	-	-	-				4	
5B1712 Optimization	4	C	28	14	-	6			3		
5C1202 Fluid Mechanics, Introductory Course <i>Compulsory within competenceprogram Mechanics and Fluid mechanics.</i>	4	C	-	-	42	6			3		
Elective											
5U1201 Advanced Problems A	4	C	-	48	-	-	1	2	3	4	
5U1202 Advanced Problems B	4	D	-	36	-	-					

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Engineering Physics

Biological Physics and Medical Technology F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2A1140 Accelerator and Radiation Technology	4	D	36	-	-	4			3		
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20			3		
2D1435 Mathematical Modelling of Biological Systems <i>The course is given every second year and will not be given in 02/03.</i>	6	D	26	-	-	20					
5A1351 Non-equilibrium Statistical Mechanics	4	D	24	-	-	-				4	
5A1352 Complex Systems	4	D	24	-	-	-	1				
5A1353 Macromolecular Conformations	4	D	24	-	-	-			3		
5A1354 Computational Physics	6	D	24	-	-	20		2			
5A1355 Molecular Biophysics <i>The course is given by the Department of Biophysics, Stockholm University. The instruction takes place at the Arrhenius laboratories, Frescati.</i>	8	D	60	24	-	-				4	
5A1414 Radiation Detectors and Medical Imaging Systems	5	D	24	6	-	20			3	4	
5A1416 Radiation Sources for Therapy	2	D	8	-	-	-				4	2 compulsory studyvisits
5A1490 Laser Chemistry	4	D	24	-	-	12		2			
5A1491 Femtochemistry	5	D	36	-	-	-			3		
5A1580 Physics of Biomedical Imaging	4	D	21	7	-	17		2			
5A1581 Physics of Biomedical Imaging, Project	2	D	2	-	-	-			3		
7E1101 Medical Engineering, Basic Course	4	C	24	-	-	-	1				
7E1110 Quality and Regulatory Aspects on Medical Devices*_	2	D	20	-	-	-			3	4	
7E1112 Implants and Biomaterials*_	4	D	25	-	-	-			3	4	
7E1113 Medical Instrumentation and Signal Processing*_	4	D	30	-	-	6			3	4	
7E1114 Radiation Physics and Biology*_	4	D	40	-	-	-				4	
7E1115 Engineering in Intensive Care and Anesthesia*_	4	D	12	-	-	-			3	4	30 + 10h (field work with oral and written report)
7E1200 Cellular and Molecular Biology*_	10	C	80	-	-	8			3	4	

7E1201 Neuroscience*	5	C	60	-	-	30			4	
7E1202 Systems Biology*	5	C	32	-	-	25	2			24 h Seminars24 h Seminars

*The course has limited participation

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Engineering Physics

Physics F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2B1770 Solid State Physics, General Course	6	D	54	-	-	30			3	4	
5A1326 Relativity	4	C	28	20	-	-			3		
5A1350 Statistical Mechanics	4	C	24	24	-	-				4	
5A1372 Condensed Matter Physics	4	D	36	-	-	10				4	
5A1400 Subatomic Physics	4	C	36	-	-	-				4	
5A1402 Subatomic Physics, Extended Course <i>The course can only be studied as a supplement to 5A1400.</i>	2	D	4	-	-	20				4	
5A1800 Laser Physics I	4	D	24	12	-	-				4	

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Mathematical Physics F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5A1310 Elementary Particle Physics	4	D	36	-	-	-				4	
5A1312 Astroparticle Physics	4	D	28	-	-	-		2			
5A1329 Quantum Mechanics, Intermediate Course	5	D	34	28	-	-		1	2		
5A1331 Classical Dynamical Systems <i>Not sure that the course is given 01/02.</i>	4	D	28	-	-	-			3		
5A1332 Advanced Quantum Mechanics, Course I	5	D	36	-	-	-		1	2		
5A1333 Advanced Quantum Mechanics, Course II	4	D	32	-	-	-			3		
5A1334 Differential Geometry in Physics	4	D	34	-	-	-			3		
5A1335 Symmetries in Physics	4	D	30	-	-	-		1	2		
5A1336 Quantum Dynamical Systems	4	D	30	-	-	-			3		
5A1337 Integrable Nonlinear Systems and Solitons	4	D	20	-	-	-			3		
5A1351 Non-equilibrium Statistical Mechanics	4	D	24	-	-	-				4	
5A1354 Computational Physics	6	D	24	-	-	20		2			
5A1802 Laser Physics II	4	D	36	-	-	-			3		

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Material Physics F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2B1260 Semiconductor Theory and Device Physics, General Course	5	D	30	-	-	10	1				Individual assignments 20h
2B1261 Semiconductor Theory and Device Physics, Advanced Course	4	D	-	36	-	-			3		
2B1262 The Nature of Materials	4	C	32	-	-	-				4	
2B1263 Surface Physics, Basic Course	4	D	36	-	-	-		2			
2B1380 Optics, General Course	4	D	26	14	-	25	1				
2B1381 Optics, Extended Course <i>The course can only be studied as a supplement to 2B1380.</i>	2	D	12	6	-	10	1				
2B1750 Smart Electronic Materials	4	C	18	10	-	8	1				
2B1751 Physics of Electronic Devices	4	D	12	6	-	-				4	
2B1760 Experimental Methods in Material Physics	5	C	26	22	-	30		2	3		
2B1761 Experimental Material Physics, Extended Course <i>The course can only be studied as a supplement to 2B1760.</i>	3	D	-	-	-	10			3		
2B1771 Superconductivity and Applications	4	D	28	-	-	-		2			
4C1110 Material Mechanics	4	D	52	-	-	3	1				
4C1111 Fracture Mechanics and Fatigue	4	D	48	-	-	4				4	
4C1112 Theory of Elasticity	4	D	26	26	-	-			3		
4C1114 Finite Element Method	4	D	-	49	-	8		2			
4M1342 Space Systems and Technology	4	D	36	-	-	-		2			
5A1332 Advanced Quantum Mechanics, Course I	5	D	36	-	-	-	1	2			
5A1354 Computational Physics	6	D	24	-	-	20		2			
5A1370 Solid State Theory	4	D	36	-	-	-	1				
5A1502 Quantum Electronics with Electro Optics	8	D	48	-	-	-		2			
5A1503 Electro Optics	4	D	24	-	-	-		2			
5A1552 Optronics	4	D	20	-	-	10				4	6 h Projektuppgift6 h Projektuppgift
5A1775 Nuclear Reactor Physics, Major Course	6	D	36	-	-	24		2			

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Engineering Physics

Micro Electronics F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2B1211 <u>Physics of Electronic Materials</u>	5	C	40	24	-	8	1				
2B1216 <u>Microelectronics</u>	5	C	24	-	-	12			3		
2B1230 <u>Power Semiconductor Devices</u>	5	D	40	-	-	-			3		Project 40h
2B1240 <u>VLSI-technology II</u>	5	D	24	-	-	32				4	
2B1245 <u>Advanced VLSI-Devices</u>	5	D	20	-	-	32				4	
2B1260 <u>Semiconductor Theory and Device Physics, General Course</u>	5	D	30	-	-	10	1				Individual assignments 20h
2B1310 <u>Microwave Engineering</u>	5	C	36	18	-	10		2			
2B1322 <u>Fibre Optical Communication</u>	5	D	28	14	-	8			3		
2B1325 <u>Photonics</u>	5	D	38	-	-	8				4	
2B1380 <u>Optics, General Course</u>	4	D	26	14	-	25	1				
2B1515 <u>Analog Electronics, Advanced Course</u>	5	C	30	14	-	20			3		Project work
2B1600 <u>Radio Electronics</u>	5	D	26	16	-	12				4	
2B1700 <u>Advanced Semiconductor Materials</u>	5	D	34	-	-	16				4	
2E1423 <u>Signal Theory</u> <i>Replaces 2E1421.</i>	5	C	24	22	-	10			3		
5A1502 <u>Quantum Electronics with Electro Optics</u>	8	D	48	-	-	-		2			

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Engineering Physics

Discrete Mathematics and Computer Science F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1220 Applied Numerical Methods I	4	C	42	-	-	18			3	4	
2D1257 Visualization	4	C	20	-	-	10			3		
2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1334 Database Technology	4	C	24	20	-	12			3		
2D1354 Algorithms and Complexity	4	C	30	18	-	-	1	2			
2D1365 Overview of Human-computer Interaction	4	C	16	2	-	5		2			
2D1373 Artificial Languages and Syntax Analysis	4	D	24	-	-	16			3		
2D1375 Implementation of Programming Languages	4	D	2	-	-	-	1	2			
2D1381 Industrial Applications of Artificial Intelligence	4	D	36	-	-	-	1	2			
2D1385 Software Engineering	4	C	24	12	-	18				4	
2D1387 Program System Construction Using C++	4	C	18	6	-	30	1	2			
2D1390 Internet Programming	4	C	28	-	-	26		2			
2D1392 Protocols and Principles of the Internet*_	5	C	35	21	-	32		2			
2D1406 Fundamentals of Human-Computer Interaction	4	D	18	-	-	-		2			Seminars 5hSeminars 5h
2D1408 Evaluation Methods in Human-Computer Interaction*_ <i>The course will be given only if the number of students is large enough. Please contact the course administrator.</i>	4	D	10	19	-	-			3	4	2 h Seminars
2D1410 User Centered Program Development*_	6	D	30	-	14	-			3	4	
2D1413 Advanced Graphics and Interaction	6	D	50	-	-	12	1	2			
2D1416 Computer Supported Cooperative Work	6	D	60	-	-	15			3	4	
2D1418 Language Engineering	4	D	42	-	-	12	1				
2D1420 Computer Vision, Basic Course	5	D	46	6	-	12			3		

2D1424 Geometric Computing in Image Analysis and Visualization	4	D	28	-	-	8			4	
2D1426 Robotics and Autonomous Systems*	5	D	16	-	-	60			4	
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	20		3		
2D1440 Advanced Algorithms	4	D	30	-	-	-	2			
2D1441 Seminars on Theoretical Computer Science	4	D	30	-	-	-			4	
2D1446 Complexity Theory <i>Not given the academic year 02/03.</i>	4	D	30	-	-	-				
2D1449 Foundations of Cryptography	4	D	30	-	-	-		3		
2D1450 Algorithmic Bioinformatics	4	D	36	-	-	-			4	
2D1465 Advanced, Individual Course in Computer Science	4	D	-	-	-	-				
2D1469 Database Theory	4	D	24	24	-	-	1			
2D1482 Programming of Web Server Applications*	4	D	12	-	-	26			4	
2D1490 IP Routing in Simple Computer Networks*	5	D	32	8	-	32		3		
2D1491 IP-routing in Internet and Other Complex Networks*	5	D	32	8	-	32			4	
2D1954 Program Development Project	4	C	12	-	-	-		3	4	
2E1423 Signal Theory <i>Replaces 2E1421.</i>	5	C	24	22	-	10		3		
2G1316 Data and Computer Communication <i>Not given for Media 02/03</i>	4	D	24	18	-	4		3		
2G1502 Computer Hardware Basics <i>replaces 2G1119 and 2G1129</i>	4	B	18	18	-	20	1	2		
2G1915 Concurrent Programming	5	C	36	-	-	24		3		
2I1130 Cognitive Psychology <i>Under bearbetning</i>	4	B	30	12	-	-	1			
5B1456 Seminar Course in Mathematics I <i>Given 02/03.</i>	5	D	36	-	-	-	1	2		
5B1457 Seminar Course in Mathematics II <i>Given 02/03.</i>	5	D	36	-	-	-			3	4
5B1458 Seminar Course in Mathematics III <i>Not given 02/03.</i>	5	D	36	-	-	-				
5B1459 Seminar Course in Mathematics IV <i>Not given 02/03.</i>	5	D	36	-	-	-			3	4
5B1466 Fourier Analysis <i>Not given 02/03.</i>	5	D	36	-	-	-				
5B1467 Algebra, Advanced Course <i>Not given 02/03.</i>	5	D	36	-	-	-				
5B1475 Combinatorics, Advanced Course <i>Not given 02/03.</i>	5	D	36	-	-	-				
5B1492 Linear Algebra, Advanced Course <i>Not given 02/03.</i>	5	D	36	-	-	-				
5B1814 Applied Mathematical Programming - Linear Problems	4	D	18	12	-	-	2			Projektuppgift 18h
5B1928 Logics	4	D	-	-	-	-			4	

*The course has limited participation

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Mathematics and Computer Science F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1250 Applied Numerical Methods II	6	C	-	-	60	24			3	4	
2D1385 Software Engineering	4	C	24	12	-	18				4	
5B1302 Algebra and Combinatorics, Basic Course	6	D	-	-	66	-			3	4	
5B1303 Analysis, Basic Course	6	D	-	-	66	-			3	4	
5B1306 Introductory Financial Mathematics	5	C	-	-	54	-				4	
5B1307 Linear Algebra, Basic Course	4	D	-	-	42	-			3		
5B1540 Probability Theory	5	D	24	30	-	-				4	
5B1712 Optimization	4	C	28	14	-	6			3		

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Mathematics F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5B1455 Ordinary Differential Equations <i>Not given 02/ 03.</i>	4	D	36	-	-	-					
5B1456 Seminar Course in Mathematics I <i>Given 02/03.</i>	5	D	36	-	-	-	1	2			
5B1457 Seminar Course in Mathematics II <i>Given 02/03.</i>	5	D	36	-	-	-			3	4	
5B1458 Seminar Course in Mathematics III <i>Not given 02/03.</i>	5	D	36	-	-	-					
5B1459 Seminar Course in Mathematics IV <i>Not given 02/03.</i>	5	D	36	-	-	-			3	4	
5B1464 Topology <i>Given 02/03.</i>	5	D	36	-	-	-			3	4	
5B1466 Fourier Analysis <i>Not given 02/03.</i>	5	D	36	-	-	-					
5B1467 Algebra, Advanced Course <i>Not given 02/03.</i>	5	D	36	-	-	-					
5B1470 Analytic Functions <i>Not given 02/03.</i>	5	D	36	-	-	-					
5B1472 Functional Analysis <i>Not given 02/03.</i>	5	D	36	-	-	-			3	4	
5B1473 Elementary Differential Geometry <i>Not given 02/03.</i>	5	D	36	-	-	-					
5B1475 Combinatorics, Advanced Course <i>Not given 02/03.</i>	5	D	36	-	-	-					
5B1479 Integration Theory <i>Given 02/03.</i>	5	D	36	-	-	-	1	2			
5B1490 Chaotic Dynamical Systems <i>Given 02/03.</i>	5	D	36	-	-	-	1	2			
5B1491 Analytical and Numerical Methods for Partial Differential Equations <i>Given 02/03.</i>	5	D	36	-	-	-			3	4	
5B1492 Linear Algebra, Advanced Course <i>Not given 02/03.</i>	5	D	36	-	-	-					
5B1712 Optimization	4	C	28	14	-	6			3		

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Optimization and Systems Theory F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
1H1401 <u>Optimisation Models in Transport and Location Analysis</u>	5	D	27	12	-	6			3		6 h Seminars6 h Seminars
2D1334 <u>Database Technology</u>	4	C	24	20	-	12			3		
2D1385 <u>Software Engineering</u>	4	C	24	12	-	18				4	
2E1252 <u>Control Theory and Practice, Advanced Course</u>	5	D	28	26	-	8			3		
2E1262 <u>Nonlinear Control</u>	5	D	28	28	-	8		2			
5B1538 <u>Reliability Theory</u>	6	D	-	-	72	-			3	4	
5B1545 <u>Time Series Analysis</u>	4	D	24	24	-	-		2			
5B1550 <u>Applied Mathematical Statistics</u>	5	D	-	-	60	-			3		
5B1570 <u>Martingales and Stochastic Integrals</u>	4	D	-	-	48	-	1				
5B1574 <u>Portfolio Theory and Risk Management</u>	4	D	30	12	-	-	1				
5B1575 <u>Financial Derivatives</u>	5	D	-	-	48	-			3	4	
5B1742 <u>Mathematical Systems Theory</u>	4	D	32	16	-	-	1				
5B1814 <u>Applied Mathematical Programming - Linear Problems</u>	4	D	18	12	-	-		2			Projektuppgift 18h
5B1816 <u>Applied Mathematical Programming - Nonlinear Problems</u>	4	D	18	12	-	-			3		Projektuppgift 18h
5B1822 <u>Mathematical Systems Theory, Advanced Course</u>	4	D	24	24	-	6		2			
5B1842 <u>Operations Research Methods</u>	4	D	32	16	-	-	1				
5B1846 <u>Applied Systems Engineering</u>	4	D	24	12	-	12		2			
5B1852 <u>Mathematical Economics</u>	4	D	32	16	-	-		2			
5B1872 <u>Optimal Control Theory</u>	4	D	32	16	-	-			3		

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Applied Mathematics F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1255 Numerical Solutions of Differential Equations	5	D	36	-	-	20			3	4	
2D1257 Visualization	4	C	20	-	-	10			3		
2D1260 The Finite Element Method	4	D	18	14	-	12		2			
2D1263 Program Construction for Scientific Computing	4	D	24	-	-	12			3	4	
2D1269 Mathematical Models, Analysis and Simulation, part II <i>Not given the academic year 02/03:</i>	5	C	48	-	-	28					
2D1290 Advanced Numerical Analysis <i>The course will not be on the central schedule.</i>	4	D	28	-	-	14				4	
5B1306 Introductory Financial Mathematics	5	C	-	-	54	-				4	
5B1455 Ordinary Differential Equations <i>Not given 02/ 03.</i>	4	D	36	-	-	-					
5B1466 Fourier Analysis <i>Not given 02/03.</i>	5	D	36	-	-	-					
5B1491 Analytical and Numerical Methods for Partial Differential Equations <i>Given 02/03.</i>	5	D	36	-	-	-			3	4	
5B1545 Time Series Analysis	4	D	24	24	-	-		2			
5B1550 Applied Mathematical Statistics	5	D	-	-	60	-			3		
5B1555 Computer Intensive Methods in Mathematical Statistics	5	D	-	-	48	-				4	
5B1560 Statistical Theory <i>The course is given by the Mathematical Department at Stockholms University.</i>	4	D	-	-	48	-		2			
5B1570 Martingales and Stochastic Integrals	4	D	-	-	48	-	1				
5B1574 Portfolio Theory and Risk Management	4	D	30	12	-	-	1				
5B1575 Financial Derivatives	5	D	-	-	48	-			3	4	
5B1814 Applied Mathematical Programming - Linear Problems	4	D	18	12	-	-		2			Projektuppgift 18h
5B1852 Mathematical Economics	4	D	32	16	-	-		2			
5C1212 Computational Fluid Dynamics	5	D	-	-	50	10			3		

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Solid Mechanics F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
4C1110 <u>Material Mechanics</u>	4	D	52	-	-	3	1				
4C1111 <u>Fracture Mechanics and Fatigue</u>	4	D	48	-	-	4				4	
4C1112 <u>Theory of Elasticity</u>	4	D	26	26	-	-			3		
4C1114 <u>Finite Element Method</u>	4	D	-	49	-	8		2			
4C1116 <u>Dynamic Problems in Solid Mechanics</u>	4	D	42	-	-	8			3	4	
4C1118 <u>Non-linear Theory of Elasticity</u>	2	D	12	12	-	-				4	
4C1119 <u>Finite Element Method, Project Course</u>	2	D	8	-	-	-			3		

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Noise and Vibration Control F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
4B1127 Vibroacoustics	5	D	-	56	-	8	1	2			
4B1131 Experimental Structure Dynamics	5	D	-	58	-	12		2	3		
4B1136 Flow Acoustics	4	D	-	36	-	8			3		
4B1141 Sound and Vibration, Projekt Course	5	D	-	48	-	12			3	4	Study tour to industry 40h

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Mechanics F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1250 Applied Numerical Methods II	6	C	-	-	60	24			3	4	
2D1255 Numerical Solutions of Differential Equations	5	D	36	-	-	20			3	4	
4B1111 Fundamentals of Noise and Vibration Control T	4	C	31	32	-	4		2			
4B1120 Signal Analysis with Applications	5	D	-	28	-	24				4	
4C1112 Theory of Elasticity	4	D	26	26	-	-			3		
4C1118 Non-linear Theory of Elasticity	2	D	12	12	-	-				4	
5C1203 Fluid Mechanics, General Course <i>Compulsory within competenceprogram Fluid Mechanics.</i>	4	C	-	24	24	3				4	

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Fluid Mechanics F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5C1122 Continuum Mechanics	4	C	42	-	-	-	1				
5C1123 Mathematical Methods of Mechanics, General Course	4	D	36	-	-	-		2			
5C1125 Mathematical Methods of Mechanics, Intermediate Course	2	D	-	-	-	-			3		
5C1205 Compressible Flow, General Course	4	D	-	-	42	6	1				
5C1207 Boundary Layer Theory and Thermal Convection	5	D	-	-	38	9		2	3		
5C1208 Fluid Mechanics, Intermediate Course	2	D	-	-	20	-	1				
5C1209 Compressible Flow, Intermediate Course	2	D	-	-	22	6		2			
5C1210 Experimental Methods in Fluid Mechanics	4	D	-	-	28	9				4	
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4				4	4 h Seminars4 h Seminars
5C1212 Computational Fluid Dynamics	5	D	-	-	50	10			3		
5C1213 Applied Computational Fluid Dynamics	2	D	-	-	10	14				4	
5C1992 Turbulence	4,5	D	-	-	36	3			3	4	

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Theoretical and Applied Mechanics F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5C1122 Continuum Mechanics	4	C	42	-	-	-	1				
5C1123 Mathematical Methods of Mechanics, General Course	4	D	36	-	-	-		2			
5C1125 Mathematical Methods of Mechanics, Intermediate Course	2	D	-	-	-	-			3		
5C1400 Nonlinear Dynamics in Mechanics	5	C	24	-	-	-			3		
5C1902 Advanced Dynamics of Complex Systems	4	D	24	-	-	-	1				
5C1904 Advanced Modern Mechanics	4	D	24	-	-	-		2			
5C1980 Mechanics in Research and Industry <i>The course runs the entire academic year. A few lectures during fall.</i>	4	C	24	-	-	37	1	2	3	4	

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Engineering Physics F4-

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2A1131 Plasma Physics	4	C	48	-	-	-	1	2			
2A1133 Plasma Physics, Enlarged Course	6	C	60	-	-	-	1	2	3		
2A1140 Accelerator and Radiation Technology	4	D	36	-	-	4			3		
2A1141 Accelerator and Radiation Course, Extended Course	6	D	48	-	-	4			3	4	
2A1145 Electromagnetic Waves in Dispersive Media	4	D	24	-	-	-			3		
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
2A1160 Space Physics	3	D	12	-	-	-	1				
2A1170 Chaos and Self-organization	4	D	32	17	-	-	1				
2A1830 Applied Antenna Theory	5	D	-	-	54	14			3	4	
2D1020 Master Project in Numerical Analysis	20	D	-	-	-	-					
2D1021 Master Project in Computer Science	20	D	-	-	-	-					
2D1024 Master Project in Human - Computer Interaction	20	D	-	-	-	-					
2D1025 Master Project in Biomedical Engineering	20	D	-	-	-	-					
2D1257 Visualization	4	C	20	-	-	10			3		
2D1258 Introduction to High Performance Computing <i>Please note that the course starts in august.</i>	5	C	40	-	-	40	1				
2D1272 Computational Physics <i>The course will not be on the central schedule.</i>	5	D	24	-	-	-				4	
2D1297 Advanced Individual Course in Scientific Computing	4	D	-	-	-	-	1	2	3	4	
2D1385 Software Engineering	4	C	24	12	-	18				4	
2D1387 Program System Construction Using C++	4	C	18	6	-	30	1	2			
2D1390 Internet Programming	4	C	28	-	-	26		2			
2D1392 Protocols and Principles of the Internet*	5	C	35	21	-	32		2			

2D1413 Advanced Graphics and Interaction	6	D	50	-	-	12	1	2			
2D1418 Language Engineering	4	D	42	-	-	12	1				
2D1441 Seminars on Theoretical Computer Science	4	D	30	-	-	-				4	
2D1464 Bigger Advanced, Individual Course in Computer Science	6	D	-	-	-	-					
2D1465 Advanced, Individual Course in Computer Science	4	D	-	-	-	-					
2D1490 IP Routing in Simple Computer Networks*	5	D	32	8	-	32			3		
2D1491 IP-routing in Internet and Other Complex Networks*	5	D	32	8	-	32				4	
2E1252 Control Theory and Practice, Advanced Course	5	D	28	26	-	8			3		
2E1262 Nonlinear Control	5	D	28	28	-	8		2			
2F1111 Speech Technology	4	D	36	14	-	6			3		
2F1213 Musical Communication and Music Technology	5	D	28	8	-	12				4	Project assignment 30h
2F1300 No translation	5	D	24	12	-	12	1				
2F1400 Electroacoustics	4	D	34	12	-	8	1				
2F1410 Audio Technology	5		30	12	-	12		2			Projektuppgift 20hProjektuppgift 20h
2G1120 Computer Architecture Fundamentals, Intermediate Course	4	D	18	14	-	16	1				
2H1255 Electromagnetic Wave Propagation	5	D	36	30	-	-			3	4	
2H1260 Antenna Theory	5	D	26	24	-	18			3		
2I1150 Theory of Knowledge and Philosophy of Science <i>not available 02/03</i>	4	B	30	12	-	80					
2I1263 Internet Application Protocols and Standards	4	B	24	-	-	20			3		120h
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	59	7	1	2			7 h Projektuppgift7 h Projektuppgift
4B1313 Rail Vehicle Dynamics	5	D	-	-	36	24			3		
4B1425 Ground Vehicle Dynamics, Basic Course*	7	D	33	60	-	-			3	4	
4D1026 Industrial Economy and Management, Basic Course	4	B	26	20	-	-		2			4 h Seminars4 h Seminars
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	C	36	12	-	-			3		
4K1401 History of Technology, a General Survey	4	B	12	-	-	-			3		Seminars 12h
4K1408 History of Science	4	B	20	-	-	-			3	4	Seminars 20h
5A1407 Accelerator Physics and Instrumentation at CERN <i>The course is mainly given at CERN during summertime.</i>	5	D	35	15	-	-					Laboratory work and study visits
5A1418 Physics Simulation	5	B	-	-	-	-			3		
5A1440 Astrophysics <i>Given by the Department of Astronomy at Stockholm University.</i>	4	D	18	-	-	-			3		
5A1441 Stellar Structure and Evolution <i>Given by the Department of Astronomy at Stockholm University.</i>	4	D	22	8	-	-				4	

5A1491 Femtochemistry	5	D	36	-	-	-			3		
5A1492 Femtophysics	4	D	24	-	-	-				4	
5A1590 Technical Photography	5	D	20	-	-	36			3	4	
5B1306 Introductory Financial Mathematics	5	C	-	-	54	-				4	
5B1307 Linear Algebra, Basic Course	4	D	-	-	42	-			3		
5B1308 Wavelets	4	D	24	-	-	-	1	2			
5B1310 Applied and Industrial Mathematics	5	D	26	-	-	-	1	2			
5U1201 Advanced Problems A	4	C	-	48	-	-	1	2	3	4	
5U1202 Advanced Problems B	4	D	-	36	-	-					
7E1101 Medical Engineering, Basic Course	4	C	24	-	-	-	1				
7E1110 Quality and Regulatory Aspects on Medical Devices*	2	D	20	-	-	-			3	4	
7E1112 Implants and Biomaterials*	4	D	25	-	-	-			3	4	
7E1113 Medical Instrumentation and Signal Processing*	4	D	30	-	-	6			3	4	
7E1114 Radiation Physics and Biology*	4	D	40	-	-	-				4	
7E1115 Engineering in Intensive Care and Anesthesia*	4	D	12	-	-	-			3	4	30 + 10h (field work with oral and written report)
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1				
7E1202 Systems Biology*	5	C	32	-	-	25		2			24 h Seminars24 h Seminars

*The course has limited participation

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Civil Engineering

Civil Engineering V1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
1B1031 Ecology	4	B	24	20	-	-				4	Field excursions 8h, Workshop 3h	
1C1201 Basic Engineering Tools	4	B	27	30	-	-	1				Computer 25h	
2D1311 Programming Technique with PBL	4	B	19	12	-	42	1	2				
3B1470 General Chemistry, Basic Course I	5	B	24	24	-	10				4		
5B1124 Calculus LV, part 1	5	B	-	-	-	-		2				
5B1125 Calculus LV, part 2	5	B	-	-	-	-			3			
5B1128 Linear Algebra LV	4	B	-	-	-	-	1					
5B1220 Differential Equations and Transforms LV	4	C	-	-	-	-				4		
5C1103 Mechanics, Basic Course	6	B	48	27	-	-		2	3			
Recommended Courses												
5B1120 Introductory Course in Mathematics I <i>The course is taught during the introductory-period in August.</i>	1	A	4	-	-	-	1					

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Civil Engineering

Civil Engineering V2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1B1035 Geosciences, part 1	5	C	36	-	-	-				4	14 h Field excursions, 36 h Workshop
1C1109 Structural Mechanics I	5	B	45	-	-	-			3		60 h Workshop
1C1115 Structural Mechanics II	5	C	45	-	-	-				4	60 h Workshop
1F1530 Construction Economics and Management	8	C	51	68	-	-	1	2			
2D1210 Numerical Methods, Basic Course I	4	B	24	24	-	24	1	2			
5A1215 Electricity and Heat	5	B	30	24	-	20			3		Workshop 24h
5B1501 Probability Theory and Statistics	4	C	24	36	-	-		2			
5C1114 Mechanics, Continuation Course	4	C	30	15	-	-	1				

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Civil Engineering

Civil Engineering V3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1B1045 <u>Geosciences, part 2</u>	5	C	49	-	-	16		2			Workshop 42h
1D1801 <u>Building Materials and Building Physics</u>	10	C	84	78	-	8	1	2			Computer 10h
1F1532 <u>Construction Economics and Management</u> <i>For students who has followed the first two years in Borlänge</i>	6	C	39	52	-	-	1				
1H1211 <u>Road, Traffic and Urban Design</u> <i>For students who has followed the first two years in Stockholm</i>	6	B	30	93	-	-	1				

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Civil Engineering

Civil Engineering V4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Elective Courses												
1A14TW <u>Third World Housing</u> <i>The course is given after agreement</i>	10	D	-	-	-	-						
1B1336 <u>Geological Processes - Field Course on Iceland</u>	5	C	-	-	-	-						Exkursion 80hJuly-August, 5 weeks Exkursion 80h
1B1820 <u>Risk in Technical Systems</u>	5	D	-	-	-	-	1	2	3	4		Project-course
1B1990 <u>Developing Countries, Society and Technology</u>	4	C	30	-	-	-	1	2				
1B1991 <u>Management of Development Cooperation Projects</u>	4	C	30	-	-	-			3	4		
1B1992 <u>East- and Central Europe - Our Future Market</u>	4	C	30	-	-	-	1	2				
1F1327 <u>Management</u>	5	D	30	30	-	-			3	4		
1F1385 <u>Economics</u>	5	B	33	27	-	-	1	2				
1F1446 <u>Civil and Public Law</u>	5	B	24	40	-	-		2	3			
1H1204 <u>Logistics</u>	5	C	6	-	-	-	1	2				15 h SeminarsProject-course, 15 h Seminars
1H1212 <u>Logistics, Advanced Course</u>	5	D	4	-	-	-			3			12 h SeminarsProject-course, 12 h Seminars
1H1601 <u>Mathematics and Reality</u>	5	C	20	10	-	-		2				
1H1602 <u>Good and Bad Science</u>	5	C	32	-	-	-			3	4		
1H1603 <u>Technology and Ethics</u>	5	C	24	-	-	-	1					6 h Seminars6 h Seminars
1H1603 <u>Technology and Ethics</u>	5	C	24	-	-	-			3			6 h Seminars6 h Seminars
1H1604 <u>Philosophy of Risk</u>	5	C	18	-	-	-		2				12 h Seminars12 h Seminars
1K14LV <u>Architecture, Basic Course*</u> <i>First prio: 4th academic year students within L- and V-programs.</i>	5	D	32	-	-	-				4		Seminars, Study-visits
1N1401 <u>Applied Contract Law</u> <i>The course will be given from 02/03</i>	5	B	-	-	-	-			3			60 h Seminars60 h Seminars
1N1402 <u>Civil and Public Law, Intermediate Course</u>	5	B	24	24	-	-					4	
2D1220 <u>Applied Numerical Methods I</u>	4	C	42	-	-	18			3	4		
2D1225 <u>Numerical Solutions of Differential Equations</u>	4	C	26	4	-	18	1	2				
2D1320 <u>Applied Computer Science</u>	4	B	30	14	-	20	1	2				
2D1320 <u>Applied Computer Science</u>	4	B	30	14	-	20			3	4		

2D1323 Computer Graphics and Interaction	4	C	42	-	-	12				4	
2D1378 Text and Image Processing	4	B	28	28	-	-	1				
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	59	7	1	2			7 h Projektuppgift7 h Projektuppgift
4B1313 Rail Vehicle Dynamics	5	D	-	-	36	24			3		
5B1306 Introductory Financial Mathematics	5	C	-	-	54	-				4	

*The course has limited participation

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Civic Construction Engineering V3

In addition to compulsory course at least 10 credits of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1B1431 Soil Mechanics and Foundation Engineering	5	C	43	-	-	4			3		Workshop 34h
Recommended Courses											
1B1432 Rock Mechanics and Rock Engineering	5	C	33	22	-	-			4		22 h Workshop
1C1103 Structural Mechanics III	5	D	39	-	-	-			3		4 h Computer, 48 h Workshop
1C1305 Design of Building Structures	5	C	33	-	-	-			4		Workshop 44h
1D1804 Buildings and Indoor Climate	10	C	54	84	-	-			3	4	60 h Workshop, 12 h Study visit
1H1213 Analysis and Design of Traffic Facilities	5	C	39	52	-	-			4		
1H1243 Traffic and Land-use Planning	5	C	21	65	-	-			3		5 h Exkursion5 h Exkursion
1H1308 Road and Street Engineering	5	C	33	44	-	-			4		
1H1402 Travel Demand Forecasting	5	C	28	-	-	-			3		4 h Seminars, 56 h Computer4 h Seminars, 56 h Computer

Civic Construction Engineering V4

In addition to compulsory course at least 10 credits of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1B1131 Hydraulic Engineering	5	D	33	-	-	-		2			Workshop 33h
1B1134 Water Resources Development	5	D	33	-	-	-			3		Workshop 33h
1B1234 Water Supply and Waste Water Handling	5	C	33	-	-	-				4	Workshop 33h
1B1334 Engineering Geology	5	D	27	-	-	-	1				Field excursions 24h, Workshop 27h
1B1335 Advanced Engineering Geology	5	D	33	-	-	-			3		Workshop 33h
1B1434 Soil - Structure Interaction	5	C	33	-	-	-				4	Workshop 33h
1B1435 Soil and Rock Dynamics <i>Under bearbetning</i>	5	D	33	-	-	-		2			Workshop 33h
1E1621 Geographic Information Technology for Civil Engineers	5	C	22	-	-	48	1				

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Construction Management V3

At least 15 credits of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1B1431 Soil Mechanics and Foundation Engineering	5	C	43	-	-	4			3		Workshop 34h
1B1432 Rock Mechanics and Rock Engineering	5	C	33	22	-	-				4	22 h Workshop
1C1103 Structural Mechanics III	5	D	39	-	-	-			3		4 h Computer, 48 h Workshop
1C1305 Design of Building Structures	5	C	33	-	-	-				4	Workshop 44h
1D1804 Buildings and Indoor Climate	10	C	54	84	-	-			3	4	60 h Workshop, 12 h Study visit
1H1213 Analysis and Design of Traffic Facilities	5	C	39	52	-	-				4	
1H1243 Traffic and Land-use Planning	5	C	21	65	-	-			3		5 h Exkursion5 h Exkursion
1H1308 Road and Street Engineering	5	C	33	44	-	-				4	
1H1402 Travel Demand Forecasting	5	C	28	-	-	-			3		4 h Seminars, 56 h Computer4 h Seminars, 56 h Computer

Construction Management V4

At least 15 credits of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1F1536 Leadership	5	D	-	-	66	-	1				
1F1540 Information Technology in Construction	5	D	-	-	66	-		2			
1F1547 Project Law	5	D	-	-	66	-			3		
1F1560 Project Management	5	D	-	-	66	-		2			
1F1563 Construction Management	5	D	-	-	66	-			3		
1F1565 Facilities Management	5	D	-	-	66	-				4	
1F1580 Construction Economics	5	D	-	-	66	-				4	

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Buildings and Buildings Services V3

In addition to compulsory course at least one of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1D1804 Buildings and Indoor Climate	10	C	54	84	-	-			3	4	60 h Workshop, 12 h Study visit
Recommended Courses											
1B1431 Soil Mechanics and Foundation Engineering	5	C	43	-	-	4			3		Workshop 34h
1B1432 Rock Mechanics and Rock Engineering	5	C	33	22	-	-				4	22 h Workshop
1C1103 Structural Mechanics III	5	D	39	-	-	-			3		4 h Computer, 48 h Workshop
1C1305 Design of Building Structures	5	C	33	-	-	-				4	Workshop 44h

Buildings and Buildings Services V4

In addition to compulsory course at least one of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1D1111 Building Materials, Advanced Course	5	D	33	-	-	-	1				Seminars 21h, Workshop 8h, Study visit 20h
1D1112 Fire in Buildings	5	C	21	-	-	1			3		Seminars 9h, Computer 8h, Workshop 15h, Study visit 2h
1D1113 Life Cycle Analysis and Environmental Impact in Building <i>The course will not be given the academic year 02/03</i>	5	C	54	-	-	-				4	Seminars 12h, Workshop 4h
1D1211 Building Technology, Advanced Course	5	D	33	44	-	-		2			
1D1243 Building Acoustics <i>Under bearbetning</i>	5	C	29	-	-	4	1				Workshop 31h
1D1311 Building Services Engineering, Advanced Course	5	D	33	31	-	9		2			Study visit 4h
1D1313 Indoor Climate	5	C	20	-	-	8			3		Workshop 24h, Study visit 20h
1D1314 Simulation	5	D	22	-	-	-				4	55 h Computer
1D1316 Industrial Ventilation	5	C	36	24	-	-	1	2			Study visit 12h
1D1806 Building Operation and Maintenance	5	D	46	7	-	-				4	Seminars 7h, Study visit 8h

1D1808 Building Damages	5	C	32	-	-	-				4	Seminars 18h, Workshop 6h, Study visit 8h
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Buildings and Buildings Services V5

In addition to compulsory course at least one of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1D1316 Industrial Ventilation	5	C	36	24	-	-	1	2			Study visit 12h

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Structural Engineering V3

In addition to compulsory courses at least one of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1C1103 <u>Structural Mechanics III</u>	5	D	39	-	-	-			3		4 h Computer, 48 h Workshop
1C1305 <u>Design of Building Structures</u>	5	C	33	-	-	-				4	Workshop 44h
Recommended Courses											
1B1431 <u>Soil Mechanics and Foundation Engineering</u>	5	C	43	-	-	4			3		Workshop 34h
1B1432 <u>Rock Mechanics and Rock Engineering</u>	5	C	33	22	-	-				4	22 h Workshop
1D1804 <u>Buildings and Indoor Climate</u>	10	C	54	84	-	-			3	4	60 h Workshop, 12 h Study visit

Structural Engineering V4

In addition to compulsory courses at least one of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1C1117 <u>Finite Element Methods</u>	5	D	33	-	-	-	1				Workshop 44h
1C1204 <u>Structural Design of Bridges</u>	5	D	33	-	-	-				4	Workshop 44h
1C1205 <u>Bridge Structures</u>	5	D	33	-	-	-			3		Workshop 44h
1C1206 <u>Railway Track Engineering</u>	5	D	33	-	-	-			3		Workshop 44h
1C1302 <u>Light-weight Structures</u>	5	D	33	-	-	-				4	Workshop 44h
1C1304 <u>Steel Structures</u>	5	D	33	-	-	-			3		Workshop 44h
1C1401 <u>Concrete Structures</u>	5	D	33	-	-	-	1				Workshop 44h
1C1402 <u>Concrete Infrastructures</u>	5	D	33	-	-	-		2			Workshop 44h
1C5020 <u>Finite Element Methods, Advanced Course</u> <i>The course will not be given 2002/2003</i>	5	D	33	-	-	-					Workshop 44h
1C5024 <u>Stability of Structures</u> <i>The course will not be given 2002/2003</i>	5	D	33	-	-	-					Workshop 44h
1C5032 <u>Structural Dynamics, Advanced Course</u> <i>The course will not be given 2002/2003</i>	5	D	33	-	-	-					Workshop 44h
1C5048 <u>Fracture Mechanics of Concrete and Steel</u> <i>The course will not be given 2002/2003</i>	5	D	33	-	-	-					Workshop 44h

1C5051 Advanced Structure Dynamics, Modelling and Measurements <i>The course will not be given 2002/2003</i>	5	D	33	-	-	-				44 h Workshop
1C5053 Aluminium, the Material for the Future <i>The course will not be given 2002/2003</i>	5	D	33	-	-	-				Workshop 44h
5C1840 Structural Dynamics	5	D	33	-	-	-		2		44 h Workshop
5C1860 FEM Modelling	5	D	33	-	-	-		2		44 h Workshop

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Environmental Engineering and Sustainable Infrastructure V3

At least 15 credits of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1B1431 Soil Mechanics and Foundation Engineering	5	C	43	-	-	4			3		Workshop 34h
1B1432 Rock Mechanics and Rock Engineering	5	C	33	22	-	-				4	22 h Workshop
1C1103 Structural Mechanics III	5	D	39	-	-	-			3		4 h Computer, 48 h Workshop
1C1305 Design of Building Structures	5	C	33	-	-	-				4	Workshop 44h
1D1804 Buildings and Indoor Climate	10	C	54	84	-	-			3	4	60 h Workshop, 12 h Study visit
1H1106 Planning for Housing, Workplaces and Services	5	C	-	-	66	-			3		
1H1151 Theory of Planning and Organization	5	D	-	-	33	-				4	
1H1160 Urban Ecology and Strategic Environmental Assessment	5	D	-	-	66	-				4	
1H1163 Social Planning	5	C	-	-	66	-				4	
1H1213 Analysis and Design of Traffic Facilities	5	C	39	52	-	-				4	
1H1243 Traffic and Land-use Planning	5	C	21	65	-	-			3		5 h Exkursion5 h Exkursion
1H1308 Road and Street Engineering	5	C	33	44	-	-				4	
1H1402 Travel Demand Forecasting	5	C	28	-	-	-			3		4 h Seminars, 56 h Computer4 h Seminars, 56 h Computer

Environmental Engineering and Sustainable Infrastructure V4

At least 15 credits of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1B1133 Applied Hydrology	5	D	29	29	-	-			3		
1B1233 Water and Waste Handling	5	C	-	-	77	-			3		
1B1291 Environmental Dynamics/Chemical Processes <i>Under bearbetning</i>	5	D	30	8	-	16		2			Exkursion 8h
1B1292 Environmental Dynamics/Physical Processes <i>Under bearbetning</i>	5	C	26	24	-	-		2			

1B1333 Environmental Geology and Geophysics	5	D	27	27	-	-				4	
1B1634 Environmental Impact Assessment* <i>First prio: Students within TESIM-, L- and V-programs. Second prio: Incoming exchange-students LV.</i>	5	C	30	29	-	-	1				Exkursion 8h
1B1635 Quantitative Hydrogeology	5	D	20	14	-	15				4	Field excursions 20h, Computer 6h
1B1640 Natural Resources Management	5	D	19	-	-	36				4	
1E1610 Environmental Data* <i>First prio: Students within TESIM-, L- and V-programs. Second prio: Incoming exchange-students LV.</i>	5	D	18	2	-	38			3		
1F1462 Management of Land and Water	5	D	20	20	-	-				4	20 h Seminars20 h Seminars
1H1141 Urban Infrastructure	5	D	-	-	56	-				4	
1H1142 Political Economy for Environmental Planners* <i>First prio: Students within TESIM-, L- and V-programs. Second prio: Incoming exchange-students LV.</i>	5	C	30	6	-	-	1				8 h Seminars
1H1143 Sustainable Rural and Urban Development* <i>First prio: Students within TESIM-, L- and V-programs. Second prio: Incoming exchange-students LV.</i>	5	C	32	-	16	-			2		24 h Seminars, 8 h Exkursion
1H1146 Sustainable Project Management	5	C	35	-	-	30			3		15 h Field excursions15 h Field excursions
1H1501 Human Settlements and Housing	5	D	24	20	-	-			2		
1U1030 Theory of Science, Research Methodology and Excursions	5	D	29	-	-	-	1	2		4	Exkursion 40hSeminars Exkursion 40h
Elective Courses											
1H1004 Master Project in Regional Planning	20	D	-	-	-	-					

*The course has limited participation

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Environmental Resources Engineering V1

From the academic year 2001/2002

from the academic year 2022/2023

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1C1201 Basic Engineering Tools	4	B	27	30	-	-	1				Computer 25h
1U1002 Sustainable Development	4	B	20	-	-	-				4	Seminars 12hSeminars 12h
2D1311 Programming Technique with PBL	4	B	19	12	-	42	1	2			
3B1470 General Chemistry, Basic Course I	5	B	24	24	-	10				4	
5B1124 Calculus LV, part 1	5	B	-	-	-	-		2			
5B1125 Calculus LV, part 2	5	B	-	-	-	-			3		
5B1128 Linear Algebra LV	4	B	-	-	-	-	1				
5B1220 Differential Equations and Transforms LV	4	C	-	-	-	-				4	
5C1103 Mechanics, Basic Course	6	B	48	27	-	-		2	3		
Recommended Courses											
5B1120 Introductory Course in Mathematics I <i>The course is taught during the introductory-period in August.</i>	1	A	4	-	-	-	1				

Environmental Resources Engineering V2

From the academic year 2001/2002

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1B1035 Geosciences, part 1	5	C	36	-	-	-				4	14 h Field excursions, 36 h Workshop
1C1109 Structural Mechanics I	5	B	45	-	-	-			3		60 h Workshop
1C1115 Structural Mechanics II	5	C	45	-	-	-				4	60 h Workshop
1F1530 Construction Economics and Management	8	C	51	68	-	-	1	2			
1M1050 Environmental System Analysis <i>The course will be given from 02/03</i>	4	B	20	-	-	-		2			Seminars 10h
2D1210 Numerical Methods, Basic Course I	4	B	24	24	-	24	1	2			
5A1215 Electricity and Heat	5	B	30	24	-	20			3		Workshop 24h
5B1501 Probability Theory and Statistics	4	C	24	36	-	-	1				

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Urban Planning V3

In addition to compulsory courses at least one of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1H1106 Planning for Housing, Workplaces and Services	5	C	-	-	66	-			3		
1H1151 Theory of Planning and Organization	5	D	-	-	33	-				4	
Recommended Courses											
1H1141 Urban Infrastructure	5	D	-	-	56	-				4	
1H1160 Urban Ecology and Strategic Environmental Assessment	5	D	-	-	66	-				4	
1H1163 Social Planning	5	C	-	-	66	-				4	
1H1213 Analysis and Design of Traffic Facilities	5	C	39	52	-	-				4	
1H1243 Traffic and Land-use Planning	5	C	21	65	-	-			3		5 h Exkursion 5 h Exkursion
1H1402 Travel Demand Forecasting	5	C	28	-	-	-			3		4 h Seminars, 56 h Computer 4 h Seminars, 56 h Computer

Urban Planning V4

In addition to compulsory courses at least one of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1H1157 Urban and Regional Economics	5	D	-	-	66	-		2			
1H1162 Urban Center Planning <i>The course is mainly carried out in Norrtelje</i>	5	D	-	-	-	-			3		77 h Seminars77 h Seminars
1H1170 Sustainable Cities	10	D	-	-	120	-	1				
1H1171 Urban Governance	5	D	-	-	66	-			3		
1H1172 Futures Studies and Forecasts	5	D	-	-	36	-		2			30 h Computer
1H1174 Planning for Regional Development	10	D	-	-	132	-				4	
1H1183 Spatial Planning with GIS	5	D	30	-	-	36			3		
1H1401 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3		6 h Seminars6 h Seminars
1N1501 Territorial Strategies in a Networking Economy <i>The course will be taught in Västerås.</i>	10	D	35	-	-	-			3	4	15 h Seminars, 10 h Workshop6h Tutorials15 h Seminars, 10 h Workshop



Elective Courses											
1H1004 Master Project in Regional Planning	20	D	-	-	-	-					

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Traffic and Transport Infrastructure V3

In addition to compulsory courses at least one of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1H1213 <u>Analysis and Design of Traffic Facilities</u>	5	C	39	52	-	-				4	
1H1308 <u>Road and Street Engineering</u>	5	C	33	44	-	-				4	
Recommended Courses											
1B1431 <u>Soil Mechanics and Foundation Engineering</u>	5	C	43	-	-	4			3		Workshop 34h
1B1432 <u>Rock Mechanics and Rock Engineering</u>	5	C	33	22	-	-				4	22 h Workshop
1H1106 <u>Planning for Housing, Workplaces and Services</u>	5	C	-	-	66	-			3		
1H1141 <u>Urban Infrastructure</u>	5	D	-	-	56	-				4	
1H1151 <u>Theory of Planning and Organization</u>	5	D	-	-	33	-				4	
1H1160 <u>Urban Ecology and Strategic Environmental Assessment</u>	5	D	-	-	66	-				4	
1H1163 <u>Social Planning</u>	5	C	-	-	66	-				4	
1H1243 <u>Traffic and Land-use Planning</u>	5	C	21	65	-	-			3		5 h Exkursion 5 h Exkursion
1H1402 <u>Travel Demand Forecasting</u>	5	C	28	-	-	-			3		4 h Seminars, 56 h Computer 4 h Seminars, 56 h Computer

Traffic and Transport Infrastructure V4

In addition to compulsory courses at least one of the recommended courses in the 3rd academic year must be fulfilled

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Recommended Courses												
1H1162 Urban Center Planning <i>The course is mainly carried out in Norrtelje</i>	5	D	-	-	-	-			3		77 h Seminars77 h Seminars	
1H1206 Planning of Railroad Traffic	5	C	-	-	72	-	1					
1H1214 Traffic in Urban Areas	5	C	-	-	84	-	1					
1H1215 Impact Analysis of Road Traffic Facilities	5	C	-	-	84	-		2				
1H1240 Procedure in Physical Infrastructure <i>The course is to be completed after the practical trainee period.</i>	5	C	-	-	-	-					Project	

1H1307 Computer-aided Highway Design	5	D	15	36	-	-			3	Computer 21h
1H1401 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3	6 h Seminars6 h Seminars
1L1911 Infrastructure Systems Management <i>The courses will be given from 02/03</i>	5	D	-	-	80	-			2	Taught full-time weeks 46, 49
Elective Courses										
1H1005 Master Project in Traffic and Transport Planning	20	D	-	-	-	-	1	2	3	4
1N1002 Master Project in Logistics	20	D	-	-	-	-	1	2	3	4

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Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1310 Programming Technique	4	B	26	16	-	36	1	2			
5A1362 Environmental Physics	4	B	40	-	-	25	1				
5B1121 Mathematic, Basic Course	4	A	16	-	35	-	1				
5B1135 Mathematics 1, I	6	B	-	-	-	-		2			
5B1136 Mathematics 2, I	6	B	-	-	-	-			3		
5C1103 Mechanics, Basic Course	6	B	48	27	-	-		2	3		

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