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Biotechnology

Biotechnology BIO1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1501 <u>Introduction to Biotechnology</u>	4	B	36	8	-	4	1	2			including visits for study purpose
3A1512 <u>Cellbiology</u>	4	B	44	-	-	-			3		
3B1700 <u>Introductory Chemistry</u>	4	B	24	18	-	22	1				
3B1711 <u>Chemical Equilibria</u>	4	B	12	22	-	25			3	4	
3B1750 <u>Organic Chemistry I</u>	5	B	20	14	-	42		2			
5A1225 <u>Electromagnetism and Waves</u>	5	B	38	18	-	20				4	
5B1115 <u>Mathematics I</u>	6	AB	-	-	-	-	1				
5B1116 <u>Mathematics II</u>	6	AB	60	30	-	-		2	3		
5C1102 <u>Mechanics, Smaller Course</u>	4	B	30	15	-	-				4	
Elective Courses											
3B1705 <u>Introductory Course in Chemistry</u>	1	A	-	-	-	-					
5B1120 <u>Introductory Course in Mathematics I</u>	1	AB	-	-	-	-					

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Biotechnology

Biotechnology BIO2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1109 Biochemistry	8	D	34	-	-	-				4	
3A1307 Microbiology	6	B	30	24	-	48		2	3		
3B1725 Chemical Thermodynamics	4	C	28	30	-	-	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			
5B1210 Mathematics IV	6	AB	-	-	-	-	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	20	18	-	18	1	2			
3A1109 Biochemistry	8	D	34	-	-	70	1	2			
3A1503 Molecular Biotechnology	5	D	36	-	-	15		2	3		
3B1770 Chemical Measuring Techniques	5	C	22	4	-	12	1				
4D1023 Industrial Economy and Management, Basic Course	4	A	26	16	-	-		2			4 h Seminars4 h Seminars

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Biotechnology BIO4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
3B1580 Ecological Chemistry	4	C	20	-	-	48			3	4	
3B1581 Ecological Chemistry with project 6p	6	C	20	-	-	-			3	4	

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Biomolecular chemistry BIO3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1396 Bioinformatics	4	D	30	-	-	16			3		
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
Recommended Courses											
3A1504 Structure Biology	4	D	32	-	-	20				4	

Biomolecular chemistry BIO4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1110 <u>Molecular Enzymology</u>	5	D	20	-	-	24		2			6 h Seminars6 h Seminars
3A1111 <u>Enzymatic Synthesis</u>	5	D	20	12	-	20				4	
3A1506 <u>Drug Development</u>	4	D	36	-	-	-			3		8 h Study visit8 h Study visit
Recommended Courses											
1N1109 <u>Ethics of Biotechnology</u>	5	C	24	-	-	-	1	2			Seminars 6h, individual essay-tutorials
3A1112 <u>Biochemical Analyses and Separation Techniques</u>	5	D	32	-	-	30				4	
Elective Courses											
3A1507 <u>Functional Genomics</u>	4	D	24	-	-	15	1				
3B1231 <u>NMR-spectroscopy</u>	4	D	30	-	-	12		2			
3B1531 <u>Organic Chemistry, Advanced Course</u>	4	D	-	-	-	54	1				
3B1542 <u>Organic Chemistry, Intermediate Course II</u>	5	D	24	-	-	40			3		
3B1580 <u>Ecological Chemistry</u>	4	C	20	-	-	48			3	4	
3B1581 <u>Ecological Chemistry with project 6p</u>	6	C	20	-	-	-			3	4	

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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												
2D1396 <u>Bioinformatics</u>	4	D	30	-	-	16			3			
3A1313 <u>Technical Microbiology</u>	8	D	38	6	-	-			3	4	12 h Seminars	12 h Seminars
3C1345 <u>Environmental Technology and Environmental Impact Studies</u>	4	D	32	4	-	-			3		8 h Projektuppgift	8 h Projektuppgift
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											
3A1312 Microbiology of Wastewater Treatment	5	D	30	-	-	20				4	
3B1443 Atmosphere, Aquatic and Terrestrial Chemistry	5	C	12	10	-	24				4	
Elective Courses											
1N1109 Ethics of Biotechnology	5	C	24	-	-	-	1	2			Seminars 6h, individual essay-tutorials
3A1104 Environmental Toxicology	6	D	36	14	-	-	1	2			
3A1205 Biochemical Technology	7	D	40	-	-	60			3	4	

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Molecular biotechnology BIO3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1396 Bioinformatics	4	D	30	-	-	16			3		
3A1112 Biochemical Analyses and Separation Techniques	5	D	32	-	-	30				4	
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		8 h Study visit8 h Study visit
3A1507 Functional Genomics	4	D	24	-	-	15	1				
Recommended Courses											
1N1109 Ethics of Biotechnology	5	C	24	-	-	-	1	2			Seminars 6h, individual essay-tutorials
3A1110 Molecular Enzymology	5	D	20	-	-	24		2			6 h Seminars6 h Seminars
Elective Courses											
2D1220 Applied Numerical Methods I	4	C	36	-	-	18			3	4	
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											
2D1396 <u>Bioinformatics</u>	4	D	30	-	-	16			3		
3A1313 <u>Technical Microbiology</u>	8	D	38	6	-	-			3	4	12 h Seminars12 h Seminars
Recommended Courses											
3A1112 <u>Biochemical Analyses and Separation Techniques</u>	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	5	C	24	-	-	-	1	2			Seminars 6h, individual essay-tutorials	
3A1111 Enzymatic Synthesis	5	D	20	12	-	20				4		
3A1507 Functional Genomics	4	D	24	-	-	15	1					
3A1508 Wood Biotechnology	5	D	34	-	-	-		2			5 h Seminars5 h Seminars	

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Wood biotechnology BIO3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1396 Bioinformatics	4	D	30	-	-	16			3		
3A1112 Biochemical Analyses and Separation Techniques	5	D	32	-	-	30				4	

Wood biotechnology BIO4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1508 Wood Biotechnology	5	D	34	-	-	-		2			5 h Seminars5 h Seminars

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Physics CLMFY1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2A1500 Engineering Science	5	B	24	12	8	-			3		8 h Seminars8 h Seminars
2D1310 Programming Technique	4	B	20	12	-	24		2	3		
5B1122 Mathematics 1 for Teachers	8	AB	-	-	-	-	1	2			
5B1123 Mathematics 2 for Teachers	8	AB	-	-	-	-			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			
Elective Courses											
5B1120 Introductory Course in Mathematics I	1	AB	-	-	-	-					

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Physics CLMFY2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1210 Numerical Methods, Basic Course I	4	B	20	18	-	18			3	4	
5A1201 Physics, Basic Course I	7	B	53	17	-	30	1	2			Project work
5A1202 Physics, Basic Course Part II	8	B	42	32	-	25			3	4	
5B1212 Differential Equations and Transforms III	4	C	44	10	-	-		2			
5C1103 Mechanics, Basic Course	6	B	48	27	-	-			3	4	
UCK01N Curriculum Studies and Communication	10	B	-	-	-	-	1	2			

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Physics CLMFY3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2A1860 <u>Electromagnetic Theory, Introductory Course</u>	4	C	36	36	-	-	1	2			
2D1601 <u>Communication and Media</u>	5	C	-	-	-	-					
5A1246 <u>Modern Physics</u>	6	B	30	14	-	20		2	3	4	
5B1118 <u>Discrete Mathematics</u>	5	AB	-	-	-	-			3	4	
5B1505 <u>Probability Theory and Statistics, Basic Course</u>	4	C	24	36	-	-				4	
5C1140 <u>Mechanics II</u>	4	B	30	15	-	-	1				
SCK01N <u>Social and Cultural Studies in Education</u> <i>Central kurs (CK) som läses på LHS</i>	10	C	-	-	-	-	1	2			
Elective Courses											
2A1865 <u>Electromagnetic Theory CL, Optional Course</u>	2	C	16	16	-	-	1	2			

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Physics CLMFY4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
5A1305 <u>Mathematical Methods in Physics</u>	5	C	-	-	-	-						
5A1324 <u>Quantum Physics</u>	8	C	-	-	-	-						
5A1440 <u>Astrophysics</u> <i>Given by the Department of Astronomy at Stockholm University.</i>	4	D	-	-	-	-						
5B1493 <u>Mathematics, Advanced Course</u>	5	C	-	-	-	-						
MTD1XX <i>Under bearbetning</i>	5		-	-	-	-						

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Physics CLMFY5

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
5B1XX1 <i>Under bearbetning</i>	5		-	-	-	-						
FTD1X1 <i>Under bearbetning</i>	0		-	-	-	-						
MTD1XX1 <i>Under bearbetning</i>	0		-	-	-	-						

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Information Technology and Computer Science

Master of Science in Engineering and of Education, Degree Programme in Mathematics and Information Technology and Computer Science CLMDA1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2A1500 Engineering Science	5	B	24	12	8	-			3		8 h Seminars8 h Seminars
2D1310 Programming Technique	4	B	20	12	-	24		2	3		
5B1122 Mathematics 1 for Teachers	8	AB	-	-	-	-	1	2			
5B1123 Mathematics 2 for Teachers	8	AB	-	-	-	-			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			
Elective Courses											
5B1120 Introductory Course in Mathematics I	1	AB	-	-	-	-					

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Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1210 <u>Numerical Methods, Basic Course I</u>	4	B	20	18	-	18			3	4	
2D1320 <u>Applied Computer Science</u>	4	B	28	14	-	20	1	2			
2D1385 <u>Software Engineering</u>	4	C	24	12	-	18			3		
2D1601 <u>Communication and Media</u>	5	C	40	-	-	-			3	4	20 h Seminars 20 h Seminars
2D1602 <u>Learning and Information and Communication Technology</u>	12	C	-	50	-	-	1	2	3	4	
4F1224 <u>Electrical Engineering, Basic Course Media</u>	4	B	12	21	-	13				4	
5B1212 <u>Differential Equations and Transforms III</u>	4	C	44	10	-	-		2			
UCK01N <u>Curriculum Studies and Communication</u>	10	B	-	-	-	-	1	2			

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Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1334 Database Technology	4	C	24	20	-	12			3		
2D1602 Learning and Information and Communication Technology	12	C	-	50	-	-	1	2	3	4	
2D1624 Human-Computer Interaction - a Didactive Perspective	5	C	20	7	-	-			3	4	
2G1518 Computer Hardware Engineering	5	B	20	20	-	12	1	2			
5B1118 Discrete Mathematics	5	AB	-	-	-	-			3	4	
5B1505 Probability Theory and Statistics, Basic Course	4	C	24	36	-	-				4	
SCK01N Social and Cultural Studies in Education <i>Central kurs (CK) som läses på LHS</i>	10	C	-	-	-	-	1	2			
Conditionally Elective Courses											
5A1232 Optical Communication and Imaging	4	B	24	18	-	10		2			
5A1242 Physics of Microcosmos	4	B	24	18	-	-		2			

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Information Technology and Computer Science CLMDA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1602 Learning and Information and Communication Technology	12	C	-	-	-	-					
5B1493 Mathematics, Advanced Course	5	C	-	-	-	-					
MTD1XX <i>Under bearbetning</i>	5		-	-	-	-					
Conditionally Elective Courses											
2D1220 Applied Numerical Methods I	4	C	-	-	-	-					
2D1225 Numerical Solutions of Differential Equations	4	C	-	-	-	-					
2D1323 Computer Graphics and Interaction	4	C	-	-	-	-					
2D1350 Programming Paradigms	4	C	-	-	-	-					
2D1354 Algorithms and Complexity	4	C	-	-	-	-					
2D1387 Program System Construction Using C++	4	C	-	-	-	-					
2D1390 Internet Programming	4	C	-	-	-	-					
2D1410 User Centered Program Development	6	D	-	-	-	-					
2D1413 Advanced Graphics and Interaction	6	D	-	-	-	-					
2D1418 Language Engineering	4	D	-	-	-	-					
2D1426 Robotics and Autonomous Systems	5	D	-	-	-	-					
2D1440 Advanced Algorithms	4	D	-	-	-	-					
2D1469 Database Theory	4	D	-	-	-	-					
2D1482 Programming of Web Server Applications	4	D	-	-	-	-					
2D1622 Human-Computer Interaction, Advanced Course	4	C	-	-	-	-					
5B1928 Logic	4	AB	-	-	-	-					

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Information Technology and Computer Science CLMDA5

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
5B1XX1 <i>Under bearbetning</i>	5		-	-	-	-					
DTD1XX1 <i>Under bearbetning</i>	0		-	-	-	-					
MTD1XX1 <i>Under bearbetning</i>	0		-	-	-	-					
Conditionally Elective Courses											
2D1220 Applied Numerical Methods I	4	C	-	-	-	-					
2D1225 Numerical Solutions of Differential Equations	4	C	-	-	-	-					
2D1323 Computer Graphics and Interaction	4	C	-	-	-	-					
2D1350 Programming Paradigms	4	C	-	-	-	-					
2D1354 Algorithms and Complexity	4	C	-	-	-	-					
2D1387 Program System Construction Using C++	4	C	-	-	-	-					
2D1390 Internet Programming	4	C	-	-	-	-					
2D1410 User Centered Program Development	6	D	-	-	-	-					
2D1413 Advanced Graphics and Interaction	6	D	-	-	-	-					
2D1418 Language Engineering	4	D	-	-	-	-					
2D1426 Robotics and Autonomous Systems	5	D	-	-	-	-					
2D1440 Advanced Algorithms	4	D	-	-	-	-					
2D1469 Database Theory	4	D	-	-	-	-					
2D1482 Programming of Web Server Applications	4	D	-	-	-	-					
2D1622 Human-Computer Interaction, Advanced Course	4	C	-	-	-	-					
5B1928 Logic	4	AB	-	-	-	-					

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Chemistry CLMKE1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2A1500 Engineering Science	5	B	24	12	8	-			3		8 h Seminars8 h Seminars
2D1310 Programming Technique	4	B	20	12	-	24		2	3		
5B1122 Mathematics 1 for Teachers	8	AB	-	-	-	-	1	2			
5B1123 Mathematics 2 for Teachers	8	AB	-	-	-	-			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			
Elective Courses											
5B1120 Introductory Course in Mathematics I	1	AB	-	-	-	-					

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Chemistry CLMKE2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1210 Numerical Methods, Basic Course I	4	B	20	18	-	18			3	4	
2D1601 Communication and Media	5	C	40	-	-	-			3	4	20 h Seminars 20 h Seminars
3B1700 Introductory Chemistry	4	B	24	18	-	22	1				
3B1711 Chemical Equilibria	4	B	12	22	-	25			3	4	
3C1451 Introduction to Chemical Engineering	7	B	39	26	-	-		2	3		Field Exercise 1 day, Plant Trip 1 day
5B1212 Differential Equations and Transforms III	4	C	44	10	-	-		2			
KTD140 Educational Perspective on Chemistry <i>Under bearbetning</i>	10	B	-	-	-	-	1				
UCK01N Curriculum Studies and Communication	10	B	-	-	-	-	1	2			
Elective Courses											
3B1705 Introductory Course in Chemistry	1	A	-	-	-	-					

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Chemistry CLMKE3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3B1720 <u>Chemical Thermodynamics</u>	5	C	28	30	-	15	1				
3B1730 <u>Molecular Structure</u>	5	C	36	22	-	20		2	3		
3B1750 <u>Organic Chemistry I</u>	5	B	20	14	-	42		2			
3E1700 <u>Polymer Technology</u>	4	C	42	-	-	-				4	
5B1118 <u>Discrete Mathematics</u>	5	AB	-	-	-	-			3	4	
5B1505 <u>Probability Theory and Statistics, Basic Course</u>	4	C	24	36	-	-				4	
KTD140 <u>Educational Perspective on Chemistry</u> <i>Under bearbetning</i>	10	B	-	-	-	-		2	3		
SCK01N <u>Social and Cultural Studies in Education</u> <i>Central kurs (CK) som läses på LHS</i>	10	C	-	-	-	-	1	2			

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Chemistry CLMKE4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1108 <u>Biotechnology</u>	4	B	-	-	-	-					
3B1740 <u>Chemical Dynamics</u>	4	C	-	-	-	-					
3B1775 <u>Analytical chemistry for teachers</u>	4	C	20	-	-	16	1		3		
3B1781 <u>Inorganic Chemistry</u>	4	D	-	-	-	-					
5B1493 <u>Mathematics, Advanced Course</u>	5	C	-	-	-	-					
5B1494 <u>No translation</u>	4		-	-	-	-					
<i>Under bearbetning</i>											
KTD140 <u>Educational Perspective on Chemistry</u>	10	B	-	-	-	-					
<i>Under bearbetning</i>											
MTD1XX	5		-	-	-	-					
<i>Under bearbetning</i>											

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Master of Science in Engineering and of Education, Degree Programme in Mathematics and Chemistry

Master of Science in Engineering and of Education, Degree Programme in Mathematics and Chemistry CLMKE5

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
5B1XX1 <i>Under bearbetning</i>	5		-	-	-	-						
KTD140 Educational Perspective on Chemistry <i>Under bearbetning</i>	10	B	-	-	-	-						
MTD1XX1 <i>Under bearbetning</i>	0		-	-	-	-						

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Computer Science

Computer Science D1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2A1805 Electrical Circuits	5	B	32	24	-	4			3	4	
2D1345 Introduction to Computer Science	11	B	48	48	-	48	1	2	3	4	
2D1600 Communication in Engineering Sciences	5	A	8	30	-	10	1	2			
2E1215 Introductory Matlab Course	1	A	4	-	-	-			3		8 h Computer8 h Computer
5B1104 Calculus I, part 1	5	AB	-	-	-	-		2	3		
5B1109 Linear Algebra II	5	AB	-	-	-	-	1	2			
5B1121 Mathematic, Basic Course	4	AB	-	-	-	-	1				
5B1928 Logic	4	AB	-	-	-	-				4	
Elective Courses											
5B1111 Complementary Course in Calculus	2	AB	-	-	-	-					
5B1120 Introductory Course in Mathematics I	1	AB	-	-	-	-					

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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	24	14	-	18	1	2			
2D1350 Programming Paradigms	4	C	32	-	-	20	1	2			
2D1352 Algorithms, Data Structures and Complexity	6	C	44	24	-	18			3	4	
5B1204 Discrete Mathematics	8	AB	72	-	-	-			3		
5B1212 Differential Equations and Transforms III	4	C	-	-	-	-				4	
5B1506 Mathematical Statistics, Basic Course	6	C	36	48	-	-	1	2			
5C1105 Insights in Mechanics - Modeling and Simulation	4	B	24	10	-	-				4	
Conditionally Elective Courses											
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

Computer Science D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1363 Software Engin eering <i>The course is given for the first time 04/05.</i>	8	D	40	-	-	-		2	3	4	
2G1518 Computer Hardware Engineering	5	B	20	20	-	12	1	2			
2I1100 Information Systems and Database Technology	6	C	12	12	-	80	1	2			
3C1330 Technology and Ecosystems	4	B	24	3	-	-		2			
4D1097 Organization and Knowledge-Intensive Work <i>Replaces course 4D1094 Work Environment, Computers and Business</i>	4	A	28	4	-	10	1				

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Computer Science D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2B1512 Digital Design with HDL <i>Complementary course, 2B1428 Design of digital integrated circuits- VLSI</i>	6	D	28	-	-	36	1	2			Project 20 h
2C1224 Management of Technology	5	D	32	20	-	-	1				
2D1220 Applied Numerical Methods I	4	C	36	-	-	18			3	4	
2D1250 Applied Numerical Methods II	6	C	60	-	-	36			3	4	
2D1257 Visualization	4	C	16	-	-	14			3		
2D1258 Introduction to High Performance Computing* Please note that the course starts in August. Will not be on the central schedule.	5	C	40	-	-	40	1				
2D1266 Mathematical Models, Analysis and Simulation Part I	5	C	48	-	-	12	1	2			
2D1373 Artificial Languages and Syntax Analysis	4	C	24	-	-	16			3		
2D1375 Implementation of Programming Languages	4	D	2	-	-	-	1	2			
2D1381 Industrial Applications of Artificial Intelligence	4	C	36	-	-	-			3	4	
2D1387 Program System Construction Using C++	4	C	18	6	-	30	1	2			
2D1390 Internet Programming	4	C	28	-	-	26		2			
2D1408 Evaluation Methods in Human-Computer Interaction* Computer Interaction* Development	4	D	10	14	-	-			3	4	2 h Seminars2 h Seminars
2D1410 User Centered Program Development	6	D	26	-	-	22			3	4	8 h Seminars8 h Seminars
2D1413 Advanced Graphics and Interaction	6	D	50	-	-	12	1	2			
2D1416 Computer Supported Cooperative Work Given every second year. Not given 05/06.	6	D	30	-	-	15			3	4	
2D1418 Language Engineering	4	D	42	-	-	12	1				
2D1421 No translation Replaces 2D1420.	5	D	36	4	-	8			3		
2D1425 Computer Vision, Advanced Course Replaces 2D1424.	5	D	46	6	-	12				4	

2D1426 Robotics and Autonomous Systems*	5	D	16	-	-	60			4	
2D1431 Machine Learning	4	C	26	-	-	20	2			
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	16		3		
2D1433 Artificial Neural Networks, Advanced Course	4	D	16	-	-	8			4	4 h Seminars4 h Seminars
2D1435 Mathematical Modelling of Biological Systems <i>The course is given every second year and will not be given 04/05.</i>	6	D	26	-	-	20				
2D1440 Advanced Algorithms	4	D	30	-	-	-	2			
2D1441 Seminars on Theoretical Computer Science <i>The course is given every second year and will be given in 04/05.</i>	4	D	30	-	-	-			4	
2D1446 Complexity Theory <i>The course is given every second year and will not be given in 04/05.</i>	4	D	30	-	-	-				
2D1449 Foundations of Cryptography	4	D	30	-	-	-		3		
2D1450 Algorithmic Bioinformatics	4	D	36	-	-	-			4	
2D1455 Theoretical Foundations of Object-Oriented	5	D	36	-	-	-			4	
2D1456 Advanced Functional Programming	4	D	28	-	-	14			4	
2D1458 Problem Solving and Programming under Pressure	6	C	26	-	-	52	1	2		
2D1464 Bigger Advanced, Individual Course in Computer Science <i>The course can be studied any time during the semesters.</i>	6	D	-	-	-	-				
2D1465 Advanced, Individual Course in Computer Science <i>The course can be studied any time during the semesters.</i>	4	D	-	-	-	-				
2D1469 Database Theory	4	D	31	17	-	-	1			
2D1471 Modern Database Systems and Their Application	5	D	26	8	-	-			4	
2D1482 Programming of Web Server Applications*	4	D	16	-	-	30			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	24	8	-	32			4	
2D1492 Net Design, Project Course* <i>Not given 04/05.</i>	6	D	12	4	-	8				
2D1493 Seminars on grid computing and internetworking	4	D	24	-	-	16			4	
2D1518 Audio, Video and Multimedia Production*	5	C	30	8	-	4	2	3		36 h Study visit36 h Study visit
2D1520 Graphic Arts Technology, Minor Course	4	C	26	8	-	16	2			
2D1600 Communication in Engineering Sciences	5	A	8	30	-	10	1	2		
2D1603 Technologies that transform time, space and reality	5	B	34	27	-	-	1	2		
2D1620 Human-Computer Interaction, Introductory Course	4	C	20	10	-	2	1			

2D1622 Human-Computer Interaction, Advanced Course	4	C	18	5	-	8	2			
2D1640 Graphics and Interaction Programming	6	C	42	8	-	42		3	4	
2D1650 Computer Game Design* <i>Limited number of participants.</i>	4	D	24	12	-	12	2			
2E1245 Hybrid and Embedded Control Systems	5	D	28	28	-	-		3		
2E1252 Control Theory and Practice, Advanced Course	5	D	28	26	-	8		3		
2E1262 Nonlinear Control	5	D	28	28	-	8	2			
2E1282 Modeling of Dynamical Systems	4	C	24	24	-	12			4	
2E1340 Digital Signal Processing	5	C	26	24	-	3	2			
2E1423 Signal Theory	5	C	24	24	-	10		3		
2F1111 Speech Technology	4	D	36	14	-	6		3		
2F1212 Music Acoustics	4	D	-	-	48	8			4	
2F1213 Musical Communication and Music Technology	5	D	28	8	-	12			4	Project assignment 30h
2F1300 Perception of Sound	5	D	24	12	-	12	1			
2G1117 Semantics for Programming Languages	4	D	20	10	-	-		3		
2G1118 Network Programming with Java <i>In period 2 the course is given in Kista</i>	4	D	20	10	-	8	2			
2G1118 Network Programming with Java <i>In period 4 the course is given at Campus Valhallavägen.</i>	4	D	20	10	-	8			4	
2G1121 Logic Programming <i>Given in Kista</i>	4	D	16	8	-	-	1			Individual work on project
2G1305 Internetworking <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1			
2G1305 Internetworking <i>Given in Kista</i>	4		20	14	-	8			4	
2G1316 Datacommunication and Computer Networks <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12		3		
2G1318 Queuing Theory and Teletraffic Systems	4	D	24	24	-	-	2			
2G1319 Communication System Design <i>Replaces 2G1303. Also given as 2G1711, 12 credits; 2G1712, 16 credits and 2G1713, 20 credits</i>	10	D	-	-	-	-		3	4	Project work
2G1325 Practical Voice Over IP (VoIP)	5	D	10	-	-	-			4	Assigned paper 50h
2G1330 Wireless and Mobile Network Architectures	5	D	10	-	-	-			4	Assigned paper 50h
2G1332 Management of Networks and Networked Systems <i>Given in Kista but also at Campus Valhallavägen through videoconnection</i>	5	D	20	-	-	20	2			
2G1333 Network Services and Internet-based Applications*	4	D	8	-	-	-			4	Project 120 hours
2G1503 System Modeling and Simulation <i>The course is not given 2004/05</i>	6	B	24	-	-	-				Project work 12 h
2G1505 Theory of Automata	4	D	20	10	-	-	2			
2G1509 Distributed Systems, Basic Course	5	D	24	-	-	-		3		Project work 10 hours
2G1510 Computer Architecture Fundamentals, Intermediate Course <i>replaces 2G1303</i>	5	C	14	12	-	4	2			Seminar 4h

2G1511 Computer Architecture	6	D	42	-	-	12			3	4	Individual project guidance: 2-5 h/ student Home study time: 180 h
2G1513 Distributed Systems, Advanced Course <i>Replaces 2G1126 from 2003/2004</i>	5	D	24	-	-	-				4	
2G1516 Formal Methods <i>Replaces 2G1301 from 2003/2004</i>	5	D	24	20	-	12	1				
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given at Campus Valhallavägen</i>	5	C	28	12	-	-				4	
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given in Kista</i>	5	C	28	10	-	12			3		
2G1522 Modern Methods in Software Engineering	5	D	20	10	-	-				4	
2G1523 Programming Web-Services	5	D	20	10	-	-			3		
2G1524 Distributed Artificial Intelligence and Intelligent Agents <i>The course is not elective if the student has already taken 2I1235</i>	5	D	28	10	-	-		2			
2G1701 Advanced Internetworking <i>The course is given in Kista.</i>	6	D	8	18	-	20	1				Group project, additional lectures online
2G1711 Communication System Design	12	D	-	-	-	-			3	4	project
2G1712 Communication System Design	16	D	-	-	-	-			3	4	Project
2G1713 Communication System Design	20	D	-	-	-	-			3	4	Project
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 3, the course is given at Campus Valhallavägen.</i>	5	C	36	-	-	24			3		
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 1, the course is given in Kista.</i>	5	C	36	-	-	24	1				
2I1040 Knowledge and Software Reuse	4	C	18	18	-	40			3		
2I1041 Software Evolution and Maintenance <i>not started VT2005 This course is a part-time course (75%), meaning that you accomplish 4 credits within 6 weeks.</i>	4	C	21	16	-	9					group counselling 1h
2I1050 Security Management <i>The course cannot be included in an exam together with course 2I1506</i>	5	D	27	-	-	-				4	
2I1052 Internet Information Search Techniques <i>the course is moved to spring 2005, period 4</i>	4	C	21	-	-	80				4	6 h Seminars Reading 50 h 6 h Seminars
2I1053 Internet and ERP Systems	5	C	12	-	-	-	1				Project work 80 h
2I1054 Relational Database Management Systems	4	C	24	-	-	-	1	2			Seminars 10 h. Project work 80 h.
2I1056 Relational Database Design - Logical and Physical	4	C	12	12	-	60		2			Computer tutorials and hand in assignments 80h
2I1095 Cognitive Science	4	C	25	-	-	-			3		Course assignment work 120
2I1130 Cognitive Psychology	4	B	30	12	-	-	1				
2I1140 Artificial Intelligence	6	D	39	10	-	80			3		
2I1150 Theory of Knowledge and Philosophy of Science <i>Not given 04/05.</i> <i>Under bearbetning</i>	4	B	30	12	-	80					

211224 Data Warehousing	4	D	15	10	-	30			4	
211228 Enterprise Computing and ERP Systems	5	D	14	12	-	60	1			80h
211229 Knowledge Management	4	D	28	-	-	18			4	70h
211234 Machine Learning	4	D	36	-	-	-			4	
211235 Agent Programming <i>The course are not elective if students already had read 2G1524</i>	4	D	18	-	-	3			4	Other 80 hours
211242 Models and Languages for Object and Web Databases	5	D	21	15	-	-			3	other work 75h
211258 Large-Scale Software Engineering	5	D	21	-	-	120			4	60h
211263 Internet Application Protocols and Standards	4	A	24	-	-	20			3	120h
211272 Security Architecture for Open Distributed Systems	4	D	24	-	-	-			4	Research Assignment 24h, Extra Reading Materials 36h
211273 Principles of Computer Security <i>The course cannot be included in an exam that already includes one of the courses 211030, 211501, 211502, 211278, 214075.</i>	4	D	24	-	-	12	1			Seminar paper 24 hours
211276 Security for Java Environment and Electronic Commerce	4	D	21	8	3	-	1		3	Extra Reading Materials 36h, Research Project 24h
211279 Security in Mobile and Wireless Networks	4	D	24	-	-	10		2	3	
211404 Model-driven Development of Components	5	D	20	35	-	110		2		
211405 Expert Systems <i>Not given 04/05</i>	4	D	18	3	-	100		2		Project work 30h
211406 Mobile Business	5	D	18	12	-	-			3	Project work 80 h
211407 Foundations of Information Systems <i>Not given 2004/2005</i>	5	D	15	-	-	-			4	
211408 Projects and Powergames	4	D	24	-	-	-		2		Seminars 15 hours
211409 Complex Social Networks	4	D	20	-	-	-		2		
211503 Network Security <i>Replaces 211274 from 04/05</i>	5	D	18	-	-	18		2		
211504 Software Engineering and Security Architecture	5	D	18	-	-	18			3	
211505 Legal Aspects of Information Security	5	D	24	-	-	12			3	
211506 Security Management <i>Cannot be included in an exam together with course 211050</i>	10	D	24	-	-	6			4	Seminars 18 hours
211710 Ubiquitous Computing <i>Replaces course 211236 and 211237 start in P3, end in P4</i>	4	D	29	-	50	-			3	4 tutorials 6 h, seminars 5 h
211801 Internet Programming I <i>Replaces 211264 from HT04.</i>	5	D	6	-	-	160	1			
211802 Internet Programming II <i>Replaces 211265 from HT04.</i>	5	D	6	-	-	160		2		
211803 Internet Programming III <i>Replaces 211266 from VT04</i>	5	D	6	-	-	160			3	
211901 Introduction to Software Engineering	5	C	15	-	-	-			3	Seminars 6 hours, project 120 hours
3C1355 Ecology, Advanced Course	4	C	21	4	-	-			3	4
3C1360 Environmental Consequences, Advanced Course	4	C	15	-	-	-	1			

3C1395 Technology and Sustainable Development	4	C	2	6	-	-	2			
5A1414 Radiation Detectors and Medical Imaging Systems	5	D	24	6	-	20		3	4	
5B1216 Complex Analysis, Specialized Course	5	C	40	-	-	-	1			
5B1303 Analysis, Basic Course	6	C	-	-	66	-		3	4	
5B1305 Applied Combinatorics <i>Not given 04/05.</i>	4	C	-	-	42	-				
5B1306 Financial Mathematics, Basic Course	5	C	-	-	54	-			4	
5B1308 Wavelets <i>Not given 04/05.</i>	4	C	24	-	-	-				
5B1309 Algebra, Basic Course	4	C	42	-	-	-		3		
5B1456 Seminar Course in Mathematics I <i>Given 04/05.</i>	5	D	36	-	-	-	1	2		
5B1457 Seminar Course in Mathematics II <i>Given 04/05.</i>	5	D	36	-	-	-		3	4	
5B1750 Optimization for E and D	4	C	28	14	-	9			4	
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* <i>Limited number of participants: 25</i>	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			
9E1140 Information Searching for D, E, F	1	B	-	-	-	-			4	Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1140 Information Searching for D, E, F	1	B	-	-	-	-			3	Three laborations in all together 9 hours. The course is given regularly throughout the year. See

*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's Project in Computer Science	20	D	-	-	-	-					
2D1024 Master's Project in Human - Computer Interaction	20	D	-	-	-	-					
2D1025 Master's Project in Biomedical Engineering	20	D	-	-	-	-					

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Computer Science

Autonomous Systems D3

At least 25 cr of the elective courses have to be studied. At least one of the courses 2D1420, 2D1426 and 2D1432 has to be chosen.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1421 No translation <i>Replaces 2D1420.</i>	5	D	36	4	-	8			3		
2D1425 Computer Vision, Advanced Course <i>Replaces 2D1424.</i>	5	D	46	6	-	12				4	
2E1350 Adaptive Signal Processing	4	D	24	14	-	-			3		
2E1423 Signal Theory	5	C	24	24	-	10			3		
2I1140 Artificial Intelligence	6	D	39	10	-	80			3		
5B1750 Optimization for E and D	4	C	28	14	-	9				4	

Autonomous Systems D4

At least 25 cr of the elective courses have to be studied. At least one of the courses 2D1420, 2D1426 and 2D1432 has to be chosen.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1220 <u>Applied Numerical Methods I</u>	4	C	36	-	-	18			3	4	
2D1250 <u>Applied Numerical Methods II</u>	6	C	60	-	-	36			3	4	
2D1381 <u>Industrial Applications of Artificial Intelligence</u>	4	C	36	-	-	-			3	4	
2D1421 <u>No translation</u> <i>Replaces 2D1420.</i>	5	D	36	4	-	8			3		
2D1425 <u>Computer Vision, Advanced Course</u> <i>Replaces 2D1424.</i>	5	D	46	6	-	12				4	
2D1426 <u>Robotics and Autonomous Systems*</u>	5	D	16	-	-	60				4	
2D1431 <u>Machine Learning</u>	4	C	26	-	-	20		2			
2D1432 <u>Artificial Neural Networks and Other Learning Systems</u>	4	D	26	-	-	16			3		
2D1433 <u>Artificial Neural Networks, Advanced Course</u>	4	D	16	-	-	8				4	4 h Seminars4 h Seminars
2D1435 <u>Mathematical Modelling of Biological Systems</u> <i>The course is given every second year and will not be given 04/05.</i>	6	D	26	-	-	20					

2D1620 Human-Computer Interaction, Introductory Course	4	C	20	10	-	2	1				
2E1211 Automatic Control, Basic Course E	4	C	24	26	-	12		2			
2E1245 Hybrid and Embedded Control Systems	5	D	28	28	-	-			3		
2E1340 Digital Signal Processing	5	C	26	24	-	3		2			
2E1350 Adaptive Signal Processing	4	D	24	14	-	-			3		
2E1423 Signal Theory	5	C	24	24	-	10			3		
2E1432 Digital Communications	6	C	32	30	-	12	1	2			
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 3, the course is given at Campus Valhallavägen.</i>	5	C	36	-	-	24			3		
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 1, the course is given in Kista.</i>	5	C	36	-	-	24	1				
2I1130 Cognitive Psychology	4	B	30	12	-	-	1				
2I1140 Artificial Intelligence	6	D	39	10	-	80			3		
2I1235 Agent Programming <i>The course are not electiv if students already had read 2G1524</i>	4	D	18	-	-	3				4	Other 80 hours
5B1750 Optimization for E and D	4	C	28	14	-	9				4	

*The course has limited participation

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Biomedical Engineering D3

At least 10 cr of the compulsory courses have to be studied + further more at least 16 cr of the advanced courses.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
7E1200 Cellular and Molecular Biology*_	10	C	67	-	-	18			3	4	3 h Seminars3 h Seminars
7E1201 Neuroscience*_	5	C	60	-	-	30				4	

*The course has limited participation

Biomedical Engineering D4

At least 10 cr of the compulsory courses have to be studied + further more at least 16 cr of the advanced courses.

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	-	-	12	1	2			
2D1421 No translation <i>Replaces 2D1420.</i>	5	D	36	4	-	8			3		
2D1431 Machine Learning	4	C	26	-	-	20		2			
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	16			3		
2D1433 Artificial Neural Networks, Advanced Course	4	D	16	-	-	8				4	4 h Seminars4 h Seminars
2D1435 Mathematical Modelling of Biological Systems <i>The course is given every second year and will not be given 04/05.</i>	6	D	26	-	-	20					
2D1450 Algorithmic Bioinformatics	4	D	36	-	-	-				4	
2F1300 Perception of Sound	5	D	24	12	-	12	1				
2F1510 Pattern Recognition	4	D	24	24	-	-	1				
5A1352 Complex Systems	4	D	24	-	-	-	1				
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1				

*The course has limited participation

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Computer Security D3

One of two compulsory courses has to be studied + at least 16 cr of the recommended courses marked with *. Only one of the courses 2I1050 or 2I1506 can be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2I1030 Introduction to Computer Security	4	A	-	-	-	15			3		Other 100 hours

Computer Security D4

One of two compulsory courses has to be studied + at least 16 cr of the recommended courses marked with *. Only one of the courses 2I1050 or 2I1506 can be studied.

Courses 2I1030 or 2I1030 can be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2I1030 Introduction to Computer Security	4	A	-	-	-	15			3		Other 100 hours
2I1273 Principles of Computer Security <i>The course cannot be included in an exam that already includes one of the courses 2I1030, 2I1501, 2I1502, 2I1278, 2I4075.</i>	4	D	24	-	-	12	1				Seminar paper 24 hours
Recommended Courses											
2D1440 Advanced Algorithms	4	D	30	-	-	-		2			
2G1516 Formal Methods <i>Replaces 2G1301 from 2003/2004</i>	5	D	24	20	-	12	1				
2I1050 Security Management <i>The course cannot be included in an exam together with course 2I1506 *</i>	5	D	27	-	-	-				4	
2I1263 Internet Application Protocols and Standards	4	A	24	-	-	20			3		120h
2I1276 Security for Java Environment and Electronic Commerce *	4	D	21	8	3	-	1		3		Extra Reading Materials 36h, Research Project 24h
2I1279 Security in Mobile and Wireless Networks *	4	D	24	-	-	10		2	3		
2I1503 Network Security <i>Replaces 2I1274 from 04/05 *</i>	5	D	18	-	-	18		2			
2I1504 Software Engineering and Security Architecture *	5	D	18	-	-	18			3		
2I1505 Legal Aspects of Information Security *	5	D	24	-	-	12			3		

211506 Security Management <i>Cannot be included in an exam together with course 211050 *</i>	10	D	24	-	-	6				4	Seminars 18 hours
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Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Computer Systems D3

Of the compulsory courses either 2G1513 or 2G1511 has to be studied. Please note the prerequisites! At least 25 cr of the elective courses have to be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2G1316 Datacommunication and Computer Networks <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12			3		
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05</i> <i>Given in Kista</i>	5	C	28	10	-	12			3		
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05</i> <i>Given at Campus Valhallavägen</i>	5	C	28	12	-	-				4	

Computer Systems D4

Of the compulsory courses either 2G1513 or 2G1511 has to be studied. Please note the prerequisites! At least 25 cr of the elective courses have to be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2G1511 <u>Computer Architecture</u>	6	D	42	-	-	12			3	4	Individual project guidance: 2-5 h/ student Home study time: 180 h
2G1513 <u>Distributed Systems, Advanced Course</u> <i>Replaces 2G1126 from 2003/2004</i>	5	D	24	-	-	-				4	
Elective Courses											
2B1428 <u>Design of Digital Integrated Circuits - VLSI</u>	5	D	21	8	-	16	1	2			
2B1512 <u>Digital Design with HDL</u> <i>Complementary course, 2B1428 Design of digital integrated circuits- VLSI</i>	6	D	28	-	-	36	1	2			Project 20 h
2D1258 <u>Introduction to High Performance Computing*</u> <i>Please note that the course starts in August. Will not be on the central schedule.</i>	5	C	40	-	-	40	1				
2D1426 <u>Robotics and Autonomous Systems*</u>	5	D	16	-	-	60				4	
2D1432 <u>Artificial Neural Networks and Other Learning Systems</u>	4	D	26	-	-	16			3		

2G1114 Parallel Computer Systems	5	D	-	-	24	-	2			Individual project guidance: 2-5 h/ student. Home study time: 150 h
2G1117 Semantics for Programming Languages	4	D	20	10	-	-		3		
2G1118 Network Programming with Java <i>In period 2 the course is given in Kista</i>	4	D	20	10	-	8	2			
2G1118 Network Programming with Java <i>In period 4 the course is given at Campus Valhallavägen.</i>	4	D	20	10	-	8			4	
2G1121 Logic Programming <i>Given in Kista</i>	4	D	16	8	-	-	1			Individual work on project
2G1122 Individual Studies in Computer Systems <i>The course can be taken any time during the semesters.</i>	5	D	-	-	-	-	1	2	3	4
2G1316 Datacommunication and Computer Networks <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12		3		
2G1318 Queuing Theory and Teletraffic Systems	4	D	24	24	-	-	2			
2G1503 System Modeling and Simulation <i>The course is not given 2004/05</i>	6	B	24	-	-	-				Project work 12 h
2G1508 Compilers and Virtual Machines	4	C	24	10	-	4		3		
2G1509 Distributed Systems, Basic Course	5	D	24	-	-	-		3		Project work 10 hours
2G1510 Computer Architecture Fundamentals, Intermediate Course <i>replaces 2G1303</i>	5	C	14	12	-	4	2			Seminar 4h
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 3, the course is given at Campus Valhallavägen.</i>	5	C	36	-	-	24		3		
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 1, the course is given in Kista.</i>	5	C	36	-	-	24	1			

*The course has limited participation

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Formal Design Techniques D3

At least 35 cr of the elective courses have to be studied. Only one of the courses 2D1373 och 2G1505 can be studied depending on similar content.

depending on similar content:

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1373 Artificial Languages and Syntax Analysis	4	C	24	-	-	16			3		
2G1316 Datacommunication and Computer Networks <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12			3		
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05</i> <i>Given in Kista</i>	5	C	28	10	-	12			3		
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05</i> <i>Given at Campus Valhallavägen</i>	5	C	28	12	-	-				4	
2I1273 Principles of Computer Security <i>The course cannot be included in an exam that already includes one of the courses 2I1030, 2I1501, 2I1502, 2I1278, 2I4075.</i>	4	D	24	-	-	12	1				Seminar paper 24 hours
5B1305 Applied Combinatorics <i>Not given 04/05.</i>	4	C	-	-	42	-					
5B1750 Optimization for E and D	4	C	28	14	-	9				4	

Formal Design Techniques D4

At least 35 cr of the elective courses have to be studied. Only one of the courses 2D1373 och 2G1505 can be studied depending on similar content.

depending on summer content:

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2G1117 Semantics for Programming Languages	4	D	20	10	-	-			3			
2G1516 Formal Methods <i>Replaces 2G1301 from 2003/2004</i>	5	D	24	20	-	12	1					
2G1517 Advanced Formal Methods	5	D	12	-	-	-				4	Seminars 6 hours	
Elective Courses												
2D1440 Advanced Algorithms	4	D	30	-	-	-		2				
2D1446 Complexity Theory <i>The course is given every second year and will not be given in 04/05.</i>	4	D	30	-	-	-						
2D1449 Foundations of Cryptography	4	D	30	-	-	-			3			

2G1121 Logic Programming <i>Given in Kista</i>	4	D	16	8	-	-	1			Individual work on project
2G1318 Queuing Theory and Teletraffic Systems	4	D	24	24	-	-		2		
2G1505 Theory of Automata	4	D	20	10	-	-		2		
2G1508 Compilers and Virtual Machines	4	C	24	10	-	4			3	
2G1515 Constraint Programming	5	D	24	-	-	-		2		Project work 10 hours
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 1, the course is given in Kista.</i>	5	C	36	-	-	24	1			
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 3, the course is given at Campus Valhallavägen.</i>	5	C	36	-	-	24			3	
2I1273 Principles of Computer Security <i>The course cannot be included in an exam that already includes one of the courses 2I1030, 2I1501, 2I1502, 2I1278, 2I4075.</i>	4	D	24	-	-	12	1			Seminar paper 24 hours

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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The Philosophy of Information D4

At least 2 of the compulsory courses have to be studied + 2 of the courses marked with *.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1N1001 Master's Project in Philosophy	20	D	-	-	-	-					
1N1107 Information Analysis	5	C	14	14	-	-				4	
1N1108 Computer- and Information Ethics	5	C	20	10	-	-			3		
1N1113 Aesthetics and Technology	5	C	20	10	-	-		2			
Elective Courses											
1H1601 Mathematics and Reality *	5	C	20	10	-	-				4	
1H1604 Philosophy of Risk *	5	C	18	-	-	-		2			12 h Seminars
1N1106 Philosophy of Science *	5	D	20	-	-	6			3		Seminars 4h
1N1106 Philosophy of Science *	5	D	20	-	-	6	1				Seminars 4h
1N1111 The Epistemology of Technology *	5	D	20	-	-	-				4	10 h Seminars
2D1400 Interactive Media for Computer Scientists <i>Probably not given 04/05.</i>	5	D	-	-	-	-	1				
2D1410 User Centered Program Development	6	D	26	-	-	22			3	4	8 h Seminars8 h Seminars
2D1418 Language Engineering	4	D	42	-	-	12	1				
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	16			3		
2D1441 Seminars on Theoretical Computer Science <i>The course is given every second year and will be given in 04/05.</i>	4	D	30	-	-	-				4	
2D1620 Human-Computer Interaction, Introductory Course	4	C	20	10	-	2	1				
2D1622 Human-Computer Interaction, Advanced Course	4	C	18	5	-	8		2			
2I1229 Knowledge Management	4	D	28	-	-	18				4	70h
2I1234 Machine Learning	4	D	36	-	-	-				4	
2I1710 Ubiquitous Computing <i>Replaces course 2I1236 and 2I1237 start in P3, end in P4</i>	4	D	29	-	50	-			3	4	tutorials 6 h, seminars 5 h

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Information Systems and Computer Base Technology D3

At least 20 cr of the compulsory courses have to be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
211040 Knowledge and Software Reuse	4	C	18	18	-	40			3		
211224 Data Warehousing	4	D	15	10	-	30				4	
211229 Knowledge Management	4	D	28	-	-	18				4	70h
211242 Models and Languages for Object and Web Databases	5	D	21	15	-	-			3		other work 75h
Elective Courses											
211041 Software Evolution and Maintenance <i>not started VT2005 This course is a part-time course (75%), meaning that you accomplish 4 credits within 6 weeks.</i>	4	C	21	16	-	9					group counselling 1h
211406 Mobile Business	5	D	18	12	-	-			3		Project work 80 h
211407 Foundations of Information Systems <i>Not given 2004/2005</i>	5	D	15	-	-	-				4	

Information Systems and Computer Base Technology D4

At least 20 cr of the compulsory courses have to be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
211040 Knowledge and Software Reuse	4	C	18	18	-	40			3		
211053 Internet and ERP Systems	5	C	12	-	-	-	1				Project work 80 h
211224 Data Warehousing	4	D	15	10	-	30				4	
211228 Enterprise Computing and ERP Systems	5	D	14	12	-	60	1				80h
211229 Knowledge Management	4	D	28	-	-	18				4	70h
211242 Models and Languages for Object and Web Databases	5	D	21	15	-	-			3		other work 75h
Elective Courses											
211041 Software Evolution and Maintenance <i>not started VT2005 This course is a part-time course (75%), meaning that you accomplish 4 credits within 6 weeks.</i>	4	C	21	16	-	9					group counselling 1h

211052 Internet Information Search Techniques <i>the course is moved to spring 2005, period 4</i>	4	C	21	-	-	80			4	6 h SeminarsReading 50 h 6 h Seminars
211054 Relational Database Management Systems	4	C	24	-	-	-	1	2		Seminars 10 h. Project work 80 h.
211056 Relational Database Design - Logical and Physical	4	C	12	12	-	60		2		Computer tutorials and hand in assignments 80h
211404 Model-driven Development of Components	5	D	20	35	-	110		2		
211405 Expert Systems <i>Not given 04/05</i>	4	D	18	3	-	100		2		Project work 30h
211406 Mobile Business	5	D	18	12	-	-			3	Project work 80 h
211407 Foundations of Information Systems <i>Not given 2004/2005</i>	5	D	15	-	-	-			4	
211408 Projects and Powergames	4	D	24	-	-	-		2		Seminars 15 hours

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Computer Science

Intelligent Interactive Systems D3

At least 20 cr of the compulsory courses have to be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
211140 Artificial Intelligence	6	D	39	10	-	80			3		
211234 Machine Learning	4	D	36	-	-	-				4	
211235 Agent Programming <i>The course are not electiv if students already had read 2G1524</i>	4	D	18	-	-	3				4	Other 80 hours
211710 Ubiquitous Computing <i>Replaces course 211236 and 211237 start in P3, end in P4</i>	4	D	29	-	50	-			3	4	tutorials 6 h, seminars 5 h
Recommended Courses											
211263 Internet Application Protocols and Standards	4	A	24	-	-	20			3		120h

Intelligent Interactive Systems D4

At least 20 cr of the compulsory courses have to be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
211095 Cognitive Science	4	C	25	-	-	-			3		Course assignment work 120
211703 Affective interaction	4	D	18	-	-	-	1			4	project 120 hours
211709 Collaborative computing	4	D	20	-	-	30			3		
Recommended Courses											
211130 Cognitive Psychology	4	B	30	12	-	-	1				
211263 Internet Application Protocols and Standards	4	A	24	-	-	20			3		120h
211409 Complex Social Networks	4	D	20	-	-	-		2			
211703 Affective interaction	4	D	18	-	-	-	1			4	project 120 hours
211708 Microsimulation <i>Under bearbetning</i>	4	D	16	-	1	6			3		Total 40 h guidancetime in computerhall
211801 Internet Programming I <i>Replaces 211264 from HT04.</i>	5	D	6	-	-	160	1				
211802 Internet Programming II <i>Replaces 211265 from HT04.</i>	5	D	6	-	-	160		2			

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Internet Working Technology D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1490 IP Routing in Simple Computer Networks*	5	D	32	8	-	32			3		
2G1316 Datacommunication and Computer Networks <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12			3		
Elective Courses											
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05</i> <i>Given at Campus Valhallavägen</i>	5	C	28	12	-	-				4	
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05</i> <i>Given in Kista</i>	5	C	28	10	-	12			3		

*The course has limited participation

Internet Working Technology D4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1490 IP Routing in Simple Computer Networks*_	5	D	32	8	-	32			3		
2G1316 Datacommunication and Computer Networks <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12			3		
Elective Courses											
2D1390 Internet Programming	4	C	28	-	-	26		2			
2D1491 IP-routing in Internet and Other Complex Networks*_	5	D	24	8	-	32				4	
2D1492 Net Design, Project Course*_ <i>Not given 04/05.</i>	6	D	12	4	-	8					
2D1493 Seminars on grid computing and internetworking	4	D	24	-	-	16				4	
2G1305 Internetworking <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1				
2G1318 Queuing Theory and Teletraffic Systems	4	D	24	24	-	-		2			
2G1325 Practical Voice Over IP (VoIP)	5	D	10	-	-	-				4	Assigned paper 50h

2G1330 Wireless and Mobile Network Architectures	5	D	10	-	-	-				4	Assigned paper 50h
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given at Campus Valhallavägen</i>	5	C	28	12	-	-				4	
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given in Kista</i>	5	C	28	10	-	12				3	

*The course has limited participation

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Communication Systems D3

At least 7 cr of the elective courses have to be studied. One of the courses 2G1305, 2G1319, 2G1711, 2G1712 or 2G1713 has to be studied during the fourth year.

has to be studied during the fourth year.											
Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2G1316 Datacommunication and Computer Networks <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12			3		
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given at Campus Valhallavägen</i>	5	C	28	12	-	-				4	
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given in Kista</i>	5	C	28	10	-	12			3		

Communication Systems D4

At least 7 cr of the elective courses have to be studied. One of the courses 2G1305, 2G1319, 2G1711, 2G1712 or 2G1713 has to be studied during the fourth year.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2G1305 Internetworking <i>Given in Kista</i>	4		20	14	-	8				4	
2G1305 Internetworking <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1				
2G1319 Communication System Design <i>Replaces 2G1303. Also given as 2G1711, 12 credits; 2G1712, 16 credits and 2G1713, 20 credits</i>	10	D	-	-	-	-			3	4	Project work
2G1711 Communication System Design	12	D	-	-	-	-			3	4	project
2G1712 Communication System Design	16	D	-	-	-	-			3	4	Project
2G1713 Communication System Design	20	D	-	-	-	-			3	4	Project
Elective Courses											
2G1318 Queuing Theory and Teletraffic Systems	4	D	24	24	-	-		2			
2G1330 Wireless and Mobile Network Architectures	5	D	10	-	-	-				4	Assigned paper 50h
2G1332 Management of Networks and Networked Systems <i>Given in Kista but also at Campus Valhallavägen through videoconnection</i>	5	D	20	-	-	20		2			

2G1510 Computer Architecture Fundamentals, Intermediate Course <i>replaces 2G1303</i>	5	C	14	12	-	4	2		Seminar 4h
2G1516 Formal Methods <i>Replaces 2G1301 from 2003/2004</i>	5	D	24	20	-	12	1		
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 1, the course is given in Kista.</i>	5	C	36	-	-	24	1		
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 3, the course is given at Campus Valhallavägen.</i>	5	C	36	-	-	24		3	

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Human-Computer Interaction D3

At least 2 of the recommended courses have to be studied.

At least 2 of the recommended courses have to be studied.											
Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1640 Graphics and Interaction Programming	6	C	42	8	-	42			3	4	
Elective Courses											
4K1401 History of Technology, a General Survey <i>English on request. English on request.</i>	4	B	12	-	-	-				4	12 h Seminars12 h Seminars

Human-Computer Interaction D4

At least 2 of the recommended courses have to be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1620 Human-Computer Interaction, Introductory Course	4	C	20	10	-	2	1				
2D1622 Human-Computer Interaction, Advanced Course	4	C	18	5	-	8		2			
Recommended Courses											
2D1408 Evaluation Methods in Human-Computer Interaction*_	4	D	10	14	-	-			3	4	2 h Seminars2 h Seminars
2D1410 User Centered Program Development	6	D	26	-	-	22			3	4	8 h Seminars8 h Seminars
2D1416 Computer Supported Cooperative Work <i>Given every second year. Not given 05/06.</i>	6	D	30	-	-	15			3	4	
2D1625 IT-design for the Disabled	4	A	18	-	-	-				4	Seminars 8 h
Elective Courses											
2D1378 Text and Image Processing	4	B	28	18	-	-		2			
2D1381 Industrial Applications of Artificial Intelligence	4	C	36	-	-	-			3	4	
2D1413 Advanced Graphics and Interaction	6	D	50	-	-	12	1	2			
2D1418 Language Engineering	4	D	42	-	-	12	1				
2D1421 No translation <i>Replaces 2D1420.</i>	5	D	36	4	-	8			3		
2D1518 Audio, Video and Multimedia Production*_	5	C	30	8	-	4		2	3		36 h Study visit36 h Study visit

2D1521 Communication and Information*_	5	C	16	12	-	-			3		
2D1603 Technologies that transform time, space and reality	5	B	34	27	-	-	1	2			
2D1650 Computer Game Design*_ <i>Limited number of participants.</i>	4	D	24	12	-	12		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
2F1510 Pattern Recognition	4	D	24	24	-	-	1				
2I1130 Cognitive Psychology	4	B	30	12	-	-	1				
2I1150 Theory of Knowledge and Philosophy of Science <i>Not given 04/05.</i> <i>Under bearbetning</i>	4	B	30	12	-	80					
4D1093 Psychology for Engineers <i>Replaces 4D1088 Technical Work Psychology</i>	4	B	24	3	-	4		2			

*The course has limited participation

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Software Systems Technology D3

1 = at least 25 credits of the courses have to be studied. 2 = at least 2 of the courses have to be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1373 Artificial Languages and Syntax Analysis 2	4	C	24	-	-	16			3		
2D1450 Algorithmic Bioinformatics 1	4	D	36	-	-	-				4	
2D1455 Theoretical Foundations of Object-Oriented 1	5	D	36	-	-	-				4	
2D1456 Advanced Functional Programming 1	4	D	28	-	-	14				4	
2D1471 Modern Database Systems and Their Application 1	5	D	26	8	-	-				4	
2D1482 Programming of Web Server Applications* 1	4	D	16	-	-	30				4	
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given in Kista 1</i>	5	C	28	10	-	12			3		
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given at Campus Valhallavägen 1</i>	5	C	28	12	-	-				4	
2I1140 Artificial Intelligence 1	6	D	39	10	-	80			3		
5B1305 Applied Combinatorics <i>Not given 04/05. 1</i>	4	C	-	-	42	-					

*The course has limited participation

Software Systems Technology D4

1 = at least 25 credits of the courses have to be studied. 2 = at least 2 of the courses have to be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1373 Artificial Languages and Syntax Analysis 2	4	C	24	-	-	16			3		
2D1375 Implementation of Programming Languages 2	4	D	2	-	-	-	1	2			

2D1381 Industrial Applications of Artificial Intelligence 1	4	C	36	-	-	-			3	4	
2D1387 Program System Construction Using C++ 1	4	C	18	6	-	30	1	2			
2D1390 Internet Programming 1	4	C	28	-	-	26		2			
2D1410 User Centered Program Development 1	6	D	26	-	-	22			3	4	8 h Seminars 8 h Seminars
2D1418 Language Engineering 2	4	D	42	-	-	12	1				
2D1431 Machine Learning	4	C	26	-	-	20		2			
2D1440 Advanced Algorithms 2	4	D	30	-	-	-		2			
2D1450 Algorithmic Bioinformatics 1	4	D	36	-	-	-				4	
2D1455 Theoretical Foundations of Object-Oriented 1	5	D	36	-	-	-				4	
2D1456 Advanced Functional Programming 1	4	D	28	-	-	14				4	
2D1458 Problem Solving and Programming under Pressure 1	6	C	26	-	-	52	1	2			
2D1469 Database Theory 1	4	D	31	17	-	-	1				
2D1471 Modern Database Systems and Their Application 1	5	D	26	8	-	-				4	
2D1482 Programming of Web Server Applications* 1	4	D	16	-	-	30				4	
2D1482 Programming of Web Server Applications 1	4	D	16	-	-	30	1				
2G1117 Semantics for Programming Languages 2	4	D	20	10	-	-			3		
2G1516 Formal Methods <i>Replaces 2G1301 from 2003/2004 1</i>	5	D	24	20	-	12	1				
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given at Campus Valhallavägen 1</i>	5	C	28	12	-	-				4	
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given in Kista 1</i>	5	C	28	10	-	12			3		
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 1, the course is given in Kista. 1</i>	5	C	36	-	-	24	1				
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 3, the course is given at Campus Valhallavägen. 1</i>	5	C	36	-	-	24			3		
2I1140 Artificial Intelligence 1	6	D	39	10	-	80			3		
5B1305 Applied Combinatorics <i>Not given 04/05. 1</i>	4	C	-	-	42	-					

*The course has limited participation

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Soft Ware Technology D3

At least 20 cr of the recommended courses have to be studied.

At least 20 of the recommended courses have to be studied.											
Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
2I1255 <u>Quality Models and Standards</u>	4	D	21	-	-	140			3		
2I1258 <u>Large-Scale Software Engineering</u>	5	D	21	-	-	120				4	60h
2I1259 <u>Value-Based Software Engineering</u> <i>The course is not given 2004/05</i>	5	D	28	-	-	-				4	Seminar 14 h
2I1903 <u>Software Testing and Metrics</u> <i>the curse replace 2I1251(for information about 2I1251,search in study handbook 2003/04)</i>	4	D	36	-	-	-			3	4	Seminars 3 h
Elective Courses											
2D1410 <u>User Centered Program Development</u>	6	D	26	-	-	22			3	4	8 h Seminars8 h Seminars
2I1901 <u>Introduction to Software Engineering</u>	5	C	15	-	-	-			3		Seminars 6 hours, project 120 hours

Soft Ware Technology D4

At least 20 cr of the recommended courses have to be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
2I1255 Quality Models and Standards	4	D	21	-	-	140			3		
2I1256 Current Problems in Software Engineering	4	D	-	-	-	-	1	2	3	4	160h
2I1258 Large-Scale Software Engineering	5	D	21	-	-	120				4	60h
2I1259 Value-Based Software Engineering <i>The course is not given 2004/05</i>	5	D	28	-	-	-				4	Seminar 14 h
2I1903 Software Testing and Metrics <i>the curse replace 2I1251(for information about 2I1251,search in study handbook 2003/04)</i>	4	D	36	-	-	-			3	4	Seminars 3 h
Elective Courses											
2D1410 User Centered Program Development	6	D	26	-	-	22			3	4	8 h Seminars8 h Seminars
2G1117 Semantics for Programming Languages	4	D	20	10	-	-			3		
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 3, the course is given at Campus Valhallavägen.</i>	5	C	36	-	-	24			3		

<u>2G1915 Concurrent Programming</u> <i>Replaces 2G1506, Programming with Processes In period 1, the course is given in Kista.</i>	5	C	36	-	-	24	1				
<u>2I1041 Software Evolution and Maintenance</u> <i>not started VT2005 This course is a part-time course (75%), meaning that you accomplish 4 credits within 6 weeks.</i>	4	C	21	16	-	9					group counselling 1h
<u>2I1228 Enterprise Computing and ERP Systems</u>	5	D	14	12	-	60	1				80h
<u>2I1273 Principles of Computer Security</u> <i>The course cannot be included in an exam that already includes one of the courses 2I1030, 2I1501, 2I1502, 2I1278, 2I4075.</i>	4	D	24	-	-	12	1				Seminar paper 24 hours
<u>2I1504 Software Engineering and Security Architecture</u>	5	D	18	-	-	18			3		
<u>2I1901 Introduction to Software Engineering</u>	5	C	15	-	-	-			3		Seminars 6 hours, project 120 hours
<u>2I1902 Advanced Issues in Object-Oriented</u>	5	D	30	10	-	-		2			assignment 120 hours

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Publishing Technology D3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1521 Communication and Information*_	5	C	16	12	-	-			3		
2D1522 Computer Technology and Communication*_	4	C	30	-	-	20				4	
2D1526 Publishing Technology, General Course	6	C	40	-	-	20			3		30h; A one week study tour is made in period 4.

*The course has limited participation

Publishing Technology D4

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	36	8	-	8		2			
2D1517 XML for Publishing*_	5	D	30	-	-	40	1	2			
2D1518 Audio, Video and Multimedia Production*_	5	C	30	8	-	4		2	3		36 h Study visit36 h Study visit
2D1524 Image Processing and Reprographic Methods*_ <i>Limited number of participants</i>	6	C	26	16	-	12	1				
2D1527 Publishing Technology, Advanced Course <i>Open only to students of the specialization Publishing Technology.</i>	10	D	60	8	-	32			3	4	

*The course has limited participation

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Theoretical Computer Science D3

1 = at least 25 cr of the courses have to be studied. 2 = at least 2 of the courses have to be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1373 Artificial Languages and Syntax Analysis 1	4	C	24	-	-	16			3		
2D1450 Algorithmic Bioinformatics 1	4	D	36	-	-	-				4	
2E1423 Signal Theory 1	5	C	24	24	-	10			3		
2I1140 Artificial Intelligence 1	6	D	39	10	-	80			3		
5B1305 Applied Combinatorics Not given 04/05. 1	4	C	-	-	42	-					
5B1750 Optimization for E and D 1	4	C	28	14	-	9				4	

Theoretical Computer Science D4

1 = at least 25 cr of the courses have to be studied. 2 = at least 2 of the courses have to be studied.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1373 Artificial Languages and Syntax Analysis 1	4	C	24	-	-	16			3		
2D1440 Advanced Algorithms 2	4	D	30	-	-	-		2			
2D1441 Seminars on Theoretical Computer Science <i>The course is given every second year and will be given in 04/05. 2</i>	4	D	30	-	-	-				4	
2D1446 Complexity Theory <i>The course is given every second year and will not be given in 04/05. 2</i>	4	D	30	-	-	-					
2D1449 Foundations of Cryptography 2	4	D	30	-	-	-			3		
2D1450 Algorithmic Bioinformatics 1	4	D	36	-	-	-				4	
2D1458 Problem Solving and Programming under Pressure 2	6	C	26	-	-	52	1	2			
2E1423 Signal Theory 1	5	C	24	24	-	10			3		

2G1117 Semantics for Programming Languages 1	4	D	20	10	-	-			3	
2G1121 Logic Programming <i>Given in Kista</i>	4	D	16	8	-	-	1			Individual work on project
2G1516 Formal Methods <i>Replaces 2G1301 from 2003/2004 1</i>	5	D	24	20	-	12	1			
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 1, the course is given in Kista. 1</i>	5	C	36	-	-	24	1			
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 3, the course is given at Campus Valhallavägen. 1</i>	5	C	36	-	-	24			3	
2I1140 Artificial Intelligence 1	6	D	39	10	-	80			3	
5B1305 Applied Combinatorics <i>Not given 04/05. 1</i>	4	C	-	-	42	-				
5B1309 Algebra, Basic Course 2	4	C	42	-	-	-			3	
5B1475 Combinatorics, Advanced Course <i>Not given 04/05. 2</i>	5	D	36	-	-	-				
5B1750 Optimization for E and D 1	4	C	28	14	-	9				4

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Design and Product Realisation

Design and Product Realisation P1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1212 Numerical Methods and Fundamentals of Programming	6	AB	34	34	-	28			3	4	
4F1811 Design and product realisation	6	A	30	50	-	40	1	2			
5A1226 Physics I	6	AB	38	-	-	30	1	2			
5B1132 Analytical Methods and Linear Algebra I	8	AB	80	40	-	-	1	2			
5B1133 Analytical Methods and Linear Algebra II	8	AB	80	40	-	-			3	4	
5C1130 Mechanics I	6	AB	48	-	27	-			3	4	
Recommended Courses											
5B1120 Introductory Course in Mathematics I	1	AB	-	-	-	-					

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Design and Product Realisation

Design and Product Realisation P2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4A1112 Applied Thermodynamics	6	AB	48	48	-	-			3	4		
4C1010 Solid Mechanics, basic course	8	B	52	30	-	2	1	2			60 h Projektuppgift60 h Projektuppgift	
4F1812 Design and Product Realisation, A	4	B	20	40	-	12	1	2				
4F1813 Design and Product Realisation, B	8	C	30	60	-	16			3	4	Workshop 28 h	
4F1816	6	B	22	24	-	22			3	4		
5B1206 Differential Equations	4	C	40	20	-	-	1	2				
5C1140 Mechanics II	4	B	30	-	15	-	2					

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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	26	30	-	-			3		
2B1520 Electronics	8	C	-	-	-	-	1				
2D1343 Computer Science	8	B	44	28	-	28		2	3		
2U1700 Project Course in Electrical Engineering	5	B	12	-	-	50			3	4	
5B1115 Mathematics I	6	AB	-	-	-	-	1	2			
5B1116 Mathematics II	6	AB	60	30	-	-		2	3		
5B1117 Mathematics III	6	AB	-	-	-	-			3	4	
5C1102 Mechanics, Smaller Course	4	B	30	15	-	-		2			
Elective Courses											
2E1215 Introductory Matlab Course	1	A	4	-	-	-			3		8 h Computer8 h Computer
5B1120 Introductory Course in Mathematics I	1	AB	-	-	-	-					

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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	26	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	24	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.</i>	5	C	10	6	-	8			3		Räknestuga 4h
2E1313 Signals and Systems, part II	5	C	30	24	-	4				4	10 h Computer10 h Computer
5B1209 Signals and Systems, part I	5	AB	-	-	-	-		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	-	8		2			
2E1117 Measurement Technology <i>2 cr are studied during the second year and 3 cr during the third year.</i>	5	C	10	8	-	12	1	2			Räknestuga 8h
2E1211 Automatic Control, Basic Course E	4	C	24	26	-	12		2			
5B1307 Linear Algebra, Basic Course	4	C	48	14	-	-	1				
Elective Courses											
2B1430 Design of Digital Integrated Circuits - LSI <i>The course is given on Campus. The course is similar to 2B1480.</i>	5	C	20	8	-	16				4	Project 16h The course is given in Campus. (Valhallavägen)
2B1453 Design of Fault-tolerant Systems <i>Under bearbetning</i>	4	D	24	6	-	-				4	
2B1455 Anatomy of EDA CAD-tools <i>Under bearbetning</i>	5	D	24	6	-	-			3		
2C1117 Wind Power Systems <i>Replaces 2C1114.</i>	5	C	58	-	-	-			3	4	
2C1149 Electric Traction	4	C	36	-	-	-				4	
2D1220 Applied Numerical Methods I	4	C	36	-	-	18			3	4	
2D1334 Database Technology	4	C	24	20	-	12			3		
2D1421 No translation <i>Replaces 2D1420.</i>	5	D	36	4	-	8			3		
2E1282 Modeling of Dynamical Systems	4	C	24	24	-	12				4	
2F1212 Music Acoustics	4	D	-	-	48	8				4	
2F1213 Musical Communication and Music Technology	5	D	28	8	-	12				4	Project assignment 30h
2F1400 Electroacoustics	4	D	34	12	-	8	1				

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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											
2A1170 Chaos and Self-organization	4	D	32	17	-	-	1				
2B1430 Design of Digital Integrated Circuits - LSI <i>The course is given on Campus. The course is similar to 2B1480.</i>	5	C	20	8	-	16				4	Project 16h The course is given in Campus. (Valhallavägen)
2B1453 Design of Fault-tolerant Systems <i>Under bearbetning</i>	4	D	24	6	-	-				4	
2B1455 Anatomy of EDA CAD-tools <i>Under bearbetning</i>	5	D	24	6	-	-			3		
2C1117 Wind Power Systems <i>Replaces 2C1114.</i>	5	C	58	-	-	-			3	4	
2C1149 Electric Traction	4	C	36	-	-	-				4	
2C1224 Management of Technology	5	D	32	20	-	-	1				
2C1243 Hybrid Vehicle Drives*	5	D	-	-	-	-		2			3 course meetings, 2-3 days each
2C1244 Seminars in Electrical Machines and Power Electronics	1	D	8	-	-	-			3	4	
2C1522 Business Development and Quality Management	5	C	36	10	-	-		2			
2D1220 Applied Numerical Methods I	4	C	36	-	-	18			3	4	
2D1274 Computational Electromagnetics <i>Not on the central schedule.</i>	5	D	24	-	-	12	1	2			
2D1334 Database Technology	4	C	24	20	-	12			3		
2D1387 Program System Construction Using C++	4	C	18	6	-	30	1	2			
2D1390 Internet Programming	4	C	28	-	-	26		2			
2D1421 No translation <i>Replaces 2D1420.</i>	5	D	36	4	-	8			3		
2D1620 Human-Computer Interaction, Introductory Course	4	C	20	10	-	2	1				
2D1622 Human-Computer Interaction, Advanced Course	4	C	18	5	-	8		2			
2E1282 Modeling of Dynamical Systems	4	C	24	24	-	12				4	
2E1405 Image Processing	4	D	24	24	-	-				4	
2F1212 Music Acoustics	4	D	-	-	48	8				4	
2F1213 Musical Communication and Music Technology	5	D	28	8	-	12				4	Project assignment 30h

2F1400 Electroacoustics	4	D	34	12	-	8	1				
2F1410 Audio Technology	5	D	30	12	-	12		2			20 h Projektuppgift20 h Projektuppgift
2G1114 Parallel Computer Systems	5	D	-	-	24	-		2			Individual project guidance: 2-5 h/ student. Home study time: 150 h
2G1117 Semantics for Programming Languages	4	D	20	10	-	-			3		
2G1118 Network Programming with Java <i>In period 2 the course is given in Kista</i>	4	D	20	10	-	8		2			
2G1118 Network Programming with Java <i>In period 4 the course is given at Campus Valhallavägen.</i>	4	D	20	10	-	8				4	
2G1121 Logic Programming <i>Given in Kista</i>	4	D	16	8	-	-	1				Individual work on project
2G1503 System Modeling and Simulation <i>The course is not given 2004/05</i>	6	B	24	-	-	-					Project work 12 h
2G1509 Distributed Systems, Basic Course	5	D	24	-	-	-			3		Project work 10 hours
2G1513 Distributed Systems, Advanced Course <i>Replaces 2G1126 from 2003/2004</i>	5	D	24	-	-	-				4	
2G1515 Constraint Programming	5	D	24	-	-	-		2			Project work 10 hours
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given in Kista</i>	5	C	28	10	-	12			3		
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given at Campus Valhallavägen</i>	5	C	28	12	-	-				4	
2G1701 Advanced Internetworking <i>The course is given in Kista.</i>	6	D	8	18	-	20	1				Group project, additional lectures online
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 1, the course is given in Kista.</i>	5	C	36	-	-	24	1				
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 3, the course is given at Campus Valhallavägen.</i>	5	C	36	-	-	24			3		
4B1424 Vehicle systems for a better environment* <i>There are 50 places to be shared among universities engaged in this set of courses.</i>	5	C	26	26	-	8	1				
4B1428 Environmental friendly vehicle - Project course*	5	D	10	-	-	-		2	3	4	
5A1320 Introduction to Quantum Mechanics <i>Not given 04/05.</i>	4	C	30	24	-	-					
5A1340 Thermodynamics and Statistical Mechanics, Basic Course <i>Not given 04/05.</i>	4	C	30	24	-	-					
5A1412 Atomic Nuclei - Radiation - Energy <i>Given if there are enough interest. Please contact course administrator.</i>	5	B	24	-	-	15			3		
5B1216 Complex Analysis, Specialized Course	5	C	40	-	-	-	1				

*The course has limited participation

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Biomedical Engineering E3

At least three of the conditionally elective courses have to be studied and 20 cr elective courses within the specialization. Only two of the courses 5A1414, 7E1112, 7E1113, 7E1114 and 7E1115 are allowed to be studied within the specialization.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2B1252 Semiconductor Devices <i>Under bearbetning</i>	6	C	32	10	-	12				4	
2D1385 Software Engineering	4	C	24	12	-	18			3		
2E1423 Signal Theory	5	C	24	24	-	10			3		
5B1750 Optimization for E and D	4	C	28	14	-	9				4	
7E1200 Cellular and Molecular Biology*	10	C	67	-	-	18			3	4	3 h Seminars 3 h Seminars

*The course has limited participation

Biomedical Engineering E4

At least three of the conditionally elective courses have to be studied and 20 cr elective courses within the specialization. Only two of the courses 5A1414, 7E1112, 7E1113, 7E1114 and 7E1115 are allowed to be studied within the specialization.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2B1252 Semiconductor Devices <i>Under bearbetning</i>	6	C	32	10	-	12				4	
2D1385 Software Engineering	4	C	24	12	-	18			3		
2E1423 Signal Theory	5	C	24	24	-	10			3		
5B1750 Optimization for E and D	4	C	28	14	-	9				4	
7E1120 Biomedical Engineering, Basic Course	5	C	30	-	-	-	1				
7E1200 Cellular and Molecular Biology*_-	10	C	67	-	-	18			3	4	3 h Seminars3 h Seminars
Elective Courses											
2A1140 Accelerator and Radiation Technology	4	D	36	-	-	-			3		8 h Study visit8 h Study visit
2B1242 Design and Characterisation of Nano- and Microdevices	5	D	24	-	-	16			3		
2B1248 Simulation of Semiconductor Devices	5	D	24	-	-	32		2			
2B1252 Semiconductor Devices <i>Under bearbetning</i>	6	C	32	10	-	12				4	
2D1426 Robotics and Autonomous Systems*_-	5	D	16	-	-	60				4	

2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	16			3	
2D1435 Mathematical Modelling of Biological Systems <i>The course is given every second year and will not be given 04/05.</i>	6	D	26	-	-	20				
2D1450 Algorithmic Bioinformatics	4	D	36	-	-	-			4	
2E1126 Measurement Systems, Project Course	4	C	6	-	-	50			3	
2E1135 Micro System Technology*₋	5	D	28	-	-	40			4	Industry Site Visit 4h
2E1340 Digital Signal Processing	5	C	26	24	-	3		2		
2E1410 Information Theory and Source Coding, Accel Program Course	5	D	36	12	-	-			3	
2E1432 Digital Communications	6	C	32	30	-	12	1	2		
2F1111 Speech Technology	4	D	36	14	-	6			3	
2F1300 Perception of Sound	5	D	24	12	-	12	1			
2F1510 Pattern Recognition	4	D	24	24	-	-	1			
5A1414 Radiation Detectors and Medical Imaging Systems	5	D	24	6	-	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*₋ <i>Limited number of participants: 25</i>	4	D	40	-	-	-				4
7E1115 Engineering in Intensive Care and Anesthesia*₋	4	D	12	-	-	-			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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Electronics E3

At least three of the conditionally elective courses have to be studied and 20 cr elective courses within the specialization.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Conditionally Elective Courses												
2B1252 Semiconductor Devices <i>Under bearbetning</i>	6	C	32	10	-	12				4		
2B1430 Design of Digital Integrated Circuits - LSI <i>The course is given on Campus. The course is similar to 2B1480.</i>	5	C	20	8	-	16				4	Project 16h The course is given in Campus. (Valhallavägen)	
2B1515 Analog Electronics, Advanced Course <i>Under bearbetning</i>	5	C	30	14	-	20			3		Project work	
2E1423 Signal Theory	5	C	24	24	-	10			3			
2G1518 Computer Hardware Engineering	5	B	20	20	-	12			3	4		

Electronics E4

At least three of the conditionally elective courses have to be studied and 20 cr elective courses within the specialization.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2B1211 Physics of Electronic Materials <i>Under bearbetning</i>	5	C	40	24	-	8	1				
2B1252 Semiconductor Devices <i>Under bearbetning</i>	6	C	32	10	-	12				4	
2B1430 Design of Digital Integrated Circuits - LSI <i>The course is given on Campus. The course is similar to 2B1480.</i>	5	C	20	8	-	16				4	Project 16h The course is given in Campus. (Valhallavägen)
2B1515 Analog Electronics, Advanced Course <i>Under bearbetning</i>	5	C	30	14	-	20			3		Project work
2E1423 Signal Theory	5	C	24	24	-	10			3		
2G1518 Computer Hardware Engineering	5	B	20	20	-	12			3	4	
Elective Courses											
2B1221 Methods and Instruments of Analysis <i>Not offered 2004/05</i>	5	D	32	-	-	16		2			
2B1230 Power Semiconductor Devices <i>Under bearbetning</i>	5	D	40	-	-	-			3		Project 40h
2B1240 VLSI-technology II	5	D	24	-	-	16			3		

2B1242 Design and Characterisation of Nano- and Microdevices	5	D	24	-	-	16			3		
2B1245 Advanced VLSI-Devices	5	D	20	-	-	32				4	
2B1248 Simulation of Semiconductor Devices	5	D	24	-	-	32		2			
2B1260 Semiconductor Theory and Device Physics, General Course	5	D	30	-	-	10	1				Individual assignments 20h
2B1310 Microwave Engineering	5	C	36	18	-	10		2			
2B1322 Fibre Optical Communication	5	D	28	14	-	8			3		
2B1325 Photonics <i>Under bearbetning</i>	5	D	38	-	-	8				4	
2B1423 ASIC-design Methodology with High-level Languages	5	D	20	-	-	16				4	Project 12 hours
2B1428 Design of Digital Integrated Circuits - VLSI	5	D	21	8	-	16	1	2			
2B1429 System Modelling	5	D	20	12	-	-			3		
2B1512 Digital Design with HDL <i>Complementary course, 2B1428 Design of digital integrated circuits- VLSI</i>	6	D	28	-	-	36	1	2			Project 20 h
2B1600 Radio Electronics	5	D	26	12	-	16				4	
2B1611 Low Power Analog and Mixed Signal IC's <i>The course replaces 2B1610</i>	5	D	-	14	42	-				4	
2B1700 Advanced Semiconductor Materials	5	D	34	-	-	16			3		
2B1824 Optical Networking	5	D	28	-	-	-				4	
2C1242 Power Electronics	5	D	28	20	-	8	1				
2E1135 Micro System Technology*	5	D	28	-	-	40				4	Industry Site Visit 4h
2G1510 Computer Architecture Fundamentals, Intermediate Course <i>replaces 2G1303</i>	5	C	14	12	-	4		2			Seminar 4h
2G1511 Computer Architecture	6	D	42	-	-	12			3	4	Individual project guidance: 2-5 h/ student Home study time: 180 h

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At least three of the conditionally elective courses have to be studied and 20 cr elective courses within the specialization.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2C1115 <u>Power Systems, Basic Course</u>	5	C	32	36	-	-			3		
2C1133 <u>Electrotechnical Modelling</u>	5	C	44	-	-	-				4	
2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3		

Electrical Engineering E4

At least three of the conditionally elective courses have to be studied and 20 cr elective courses within the specialization.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2B1211 Physics of Electronic Materials <i>Under bearbetning</i>	5	C	40	24	-	8	1				
2C1115 Power Systems, Basic Course	5	C	32	36	-	-			3		
2C1115 Power Systems, Basic Course	5	C	32	36	-	-	1				
2C1133 Electrotechnical Modelling	5	C	44	-	-	-				4	
2E1423 Signal Theory	5	C	24	24	-	10			3		
5A1301 Mathematical Methods in Physics, Course I <i>Not given 04/05.</i>	4	C	26	28	-	-					
5B1201 Complex Analysis	4	C	40	20	-	-	1				
Elective Courses											
2A1131 Plasma Physics	4	C	48	-	-	-	1	2			
2A1137 Plasma Physics, Supplementary Course	2	D	12	-	-	-			3		
2A1140 Accelerator and Radiation Technology	4	D	36	-	-	-			3		8 h Study visit8 h Study visit
2A1142 Accelerator and Radiation Technology, Supplementary Course	2	D	12	-	-	-				4	
2A1145 Electromagnetic Processes in Dispersive Media	4	D	24	6	-	-			3		
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
2A1830 Applied Antenna Theory	5	D	-	-	54	14			3	4	
2B1230 Power Semiconductor Devices <i>Under bearbetning</i>	5	D	40	-	-	-			3		Project 40h
2B1310 Microwave Engineering	5	C	36	18	-	10		2			

2B1812 Microwave Engineering	5	D	36	18	-	10	2			
2C1111 System Planning	4	D	60	-	-	-		3		
2C1116 Power Systems, Advanced Course	5	D	72	-	-	-	2			
2C1132 High-voltage Engineering	5	C	26	-	-	12		3		Projects 50h
2C1134 Electrotechnical Design	5	C	36	-	-	8	2			
2C1148 Analysis of Electrical Machines	5	D	28	20	-	4			4	
2C1228 Industrial Information Systems, Systems Engineering*	5	D	24	-	-	-		3		
2C1241 Electrical Machines and Drives	5	D	30	20	-	12		3		
2C1242 Power Electronics	5	D	28	20	-	8	1			
2C1521 Industrial Control and Information Systems	5	D	36	10	-	3	2			
2E1252 Control Theory and Practice, Advanced Course	5	D	28	26	-	8		3		
2H1250 Electromagnetic Field Theory	5	C	-	-	60	-	1	2		
2H1255 Electromagnetic Wave Propagation	5	D	-	-	56	-		3	4	

*The course has limited participation

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At least three of the conditionally elective courses have to be studied and 20 cr elective courses within the specialization.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2D1385 <u>Software Engineering</u>	4	C	24	12	-	18			3		
2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3		
2G1316 <u>Datacommunication and Computer Networks</u> <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12			3		
2G1518 <u>Computer Hardware Engineering</u>	5	B	20	20	-	12			3	4	
5B1750 <u>Optimization for E and D</u>	4	C	28	14	-	9				4	

Communication Systems E4

At least three of the conditionally elective courses have to be studied and 20 cr elective courses within the specialization.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2D1385 Software Engineering	4	C	24	12	-	18			3		
2E1423 Signal Theory	5	C	24	24	-	10			3		
2E1511 Radio Communication, Basic Course	4	D	24	24	-	8	1				
2G1316 Datacommunication and Computer Networks <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12			3		
2G1518 Computer Hardware Engineering	5	B	20	20	-	12			3	4	
5B1750 Optimization for E and D	4	C	28	14	-	9				4	
Elective Courses											
2B1310 Microwave Engineering	5	C	36	18	-	10		2			
2B1512 Digital Design with HDL <i>Complementary course, 2B1428 Design of digital integrated circuits- VLSI</i>	6	D	28	-	-	36	1	2			Project 20 h
2B1600 Radio Electronics	5	D	26	12	-	16				4	
2E1340 Digital Signal Processing	5	C	26	24	-	3		2			
2E1350 Adaptive Signal Processing	4	D	24	14	-	-			3		
2E1367 Project Course in Signal Processing&Digital Communications	8	D	-	-	-	-				4	Project work 8 cr.
2E1380 Seminars in Signals, Sensors and Systems	2	D	-	-	-	-			3	4	16 h Seminars16 h Seminars

2E1400 Speech Signal Processing <i>Replaces 2F1521.</i>	4	D	24	24	-	-	2			
2E1432 Digital Communications	6	C	32	30	-	12	1	2		
2E1436 Advanced Digital Communications	4	D	26	26	-	-			3	
2E1512 Wireless Networks*	8	D	30	24	-	12				4 80 h Projektuppgift80 h Projektuppgift
2G1305 Internetworking <i>Given in Kista</i>	4		20	14	-	8				4
2G1305 Internetworking <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1			
2G1318 Queuing Theory and Teletraffic Systems	4	D	24	24	-	-		2		
2G1319 Communication System Design <i>Replaces 2G1303. Also given as 2G1711, 12 credits; 2G1712, 16 credits and 2G1713, 20 credits</i>	10	D	-	-	-	-			3	4 Project work
2G1330 Wireless and Mobile Network Architectures	5	D	10	-	-	-				4 Assigned paper 50h
2G1332 Management of Networks and Networked Systems <i>Given in Kista but also at Campus Valhallavägen through videoconnection</i>	5	D	20	-	-	20		2		
2H1260 Antenna Theory	5	D	26	24	-	18			3	

*The course has limited participation

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Electrical Engineering

Systems Engineering E3

At least three of the conditionally elective courses have to be studied and 20 cr elective courses within the specialization.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2C1115 <u>Power Systems, Basic Course</u>	5	C	32	36	-	-			3		
2D1385 <u>Software Engineering</u>	4	C	24	12	-	18			3		
2E1282 <u>Modeling of Dynamical Systems</u>	4	C	24	24	-	12				4	
2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3		
2G1518 <u>Computer Hardware Engineering</u>	5	B	20	20	-	12			3	4	
5B1750 <u>Optimization for E and D</u>	4	C	28	14	-	9				4	

Systems Engineering E4

At least three of the conditionally elective courses have to be studied and 20 cr elective courses within the specialization.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2C1115 Power Systems, Basic Course	5	C	32	36	-	-	1				
2C1115 Power Systems, Basic Course	5	C	32	36	-	-			3		
2D1385 Software Engineering	4	C	24	12	-	18			3		
2E1282 Modeling of Dynamical Systems	4	C	24	24	-	12				4	
2E1423 Signal Theory	5	C	24	24	-	10			3		
2G1518 Computer Hardware Engineering	5	B	20	20	-	12			3	4	
5B1750 Optimization for E and D	4	C	28	14	-	9				4	
Elective Courses											
2C1111 System Planning	4	D	60	-	-	-			3		
2C1116 Power Systems, Advanced Course	5	D	72	-	-	-		2			
2C1228 Industrial Information Systems, Systems Engineering*	5	D	24	-	-	-			3		
2C1229 Industrial Information Systems, Case Studies*	5	D	16	-	-	-				4	
2C1241 Electrical Machines and Drives	5	D	30	20	-	12			3		
2C1521 Industrial Control and Information Systems	5	D	36	10	-	3		2			
2D1421 No translation <i>Replaces 2D1420.</i>	5	D	36	4	-	8			3		

2D1426 Robotics and Autonomous Systems*_	5	D	16	-	-	60			4	
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	16			3	
2E1126 Measurement Systems, Project Course	4	C	6	-	-	50			3	
2E1135 Micro System Technology*_	5	D	28	-	-	40			4	Industry Site Visit 4h
2E1242 Automatic Control, Project Course*_	8	D	4	-	-	50			4	
2E1245 Hybrid and Embedded Control Systems	5	D	28	28	-	-			3	
2E1252 Control Theory and Practice, Advanced Course	5	D	28	26	-	8			3	
2E1262 Nonlinear Control	5	D	28	28	-	8		2		
2E1333 Optimal Filtering, accelerated program course <i>Given every second year. Given 04/05.</i>	4	D	-	-	24	-	1			
2E1340 Digital Signal Processing	5	C	26	24	-	3		2		
2E1350 Adaptive Signal Processing	4	D	24	14	-	-			3	
2G1332 Management of Networks and Networked Systems <i>Given in Kista but also at Campus Valhallavägen through videoconnection</i>	5	D	20	-	-	20		2		
5B1201 Complex Analysis	4	C	40	20	-	-	1			
5B1822 Mathematical Systems Theory, Advanced Course	4	D	24	24	-	6		2		
5B1872 Optimal Control Theory	4	D	32	16	-	-			3	

*The course has limited participation

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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											
2D1212 Numerical Methods and Fundamentals of Programming	6	AB	34	34	-	28			3	4	
4B1052 Perspectives of Vehicle Engineering	6	AB	60	8	24	-	1	2			Selfstudies MATLAB 48h Projektuppgift 52h
5A1226 Physics I	6	AB	38	-	-	30	1	2			
5B1132 Analytical Methods and Linear Algebra I	8	AB	80	40	-	-	1	2			
5B1133 Analytical Methods and Linear Algebra II	8	AB	80	40	-	-			3	4	
5C1130 Mechanics I	6	AB	48	-	27	-			3	4	
Recommended Courses											
5B1120 Introductory Course in Mathematics I	1	AB	-	-	-	-					

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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											
4B1117	6	C	38	44	-	4			3	4	
4C1010 Solid Mechanics, basic course	8	B	52	30	-	2	1	2			60 h Projektuppgift60 h Projektuppgift
4F1815	8	B	30	60	-	-	1	2			
5B1207 Differential Equations II	6	C	60	30	-	-			3		
5C1140 Mechanics II	4	B	30	15	-	-	1				
5C1216 Thermodynamics for vehicle technology	4	B	12	12	-	3				4	12 h Seminars12 h Seminars
5C1217 Fluid Mechanics, Basic Course	4	B	26	14	-	6			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				
Conditionally Elective Courses											
5C1840 Structural Dynamics	5	D	33	-	-	-				4	44 h Workshop44 h Workshop
Elective Courses											
2C1111 System Planning	4	D	60	-	-	-			3		
2C1117 Wind Power Systems <i>Replaces 2C1114.</i>	5	C	58	-	-	-			3	4	
2D1250 Applied Numerical Methods II	6	C	60	-	-	36			3	4	
2D1263 Program Construction for Scientific Computing	4	C	24	-	-	12			3	4	
2D1335 Basic Internet Programming* <i>The number of participants is limited.</i>	5	B	22	-	-	24			3		
2D1522 Computer Technology and Communication*	4	C	30	-	-	20				4	
3C1395 Technology and Sustainable Development	4	C	2	6	-	-		2			
3D1112 Fiber 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	-	24	-	22				4	
4B1168 Energy Methods	4	D	-	-	28	-			3	4	
4B1170 Numerical Methods for Acoustics and Vibration	4	D	-	-	24	-			3	4	
4B1172 Non-Linear Acoustics	4	D	-	-	24	-			3	4	

4B1174 Ultrasonics	4	D	-	-	24	-		3	4	
4B1176 Vehicle Acoustics and Vibration	4	D	-	-	24	-		3	4	
4D1026 Industrial Economy and Management, Basic Course	4	A	20	16	-	-	2			4 h Seminars4 h Seminars
4D1051 Commercial Law	4	B	14	18	-	-		3		
4D1073 Industrial Project Management	4	B	40	8	-	-		3		
4E1102 Lightweight Structures and FEM I	5	C	64	-	-	22		3	4	
4E1401 Introduction to Naval Architecture	5	C	54	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	30	10	-	-		3	4	Project work
4H1202 Mechanical Metallurgy I	6	D	24	12	-	48		3	4	Home assignments
4H1204 Experimental Methods in Materials Science	5	C	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 <i>English on request. English on request.</i>	4	B	12	-	-	-			4	12 h Seminars12 h Seminars
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	24	-	-			4	
5B1722 Applied Optimization	4	C	28	14	-	9		3		
5C1121 Analytical Mechanics	4	C	48	-	-	-		3		
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4			4	4 h Seminars4 h Seminars
5C1214 Fluid Mechanics	5	C	-	30	30	3	1			
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			4	Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-	1			Three laborations in all together 9 hours. The course is given regularly throughout the year. See

9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			3		Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			2		Three laborations on all together 9 hours. The course is given regularly throughout the year. See
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	
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	-	15	-			3	4	E-learning exercises make up appr. 75 % of the course. 15 classroom hours in the evening.
9E1330 French, Elementary Level*_	4	B	-	-	56	-			3	4	
9E1334 Technical French, Intermediate Level*_	6	B	-	-	56	-			3	4	
9E1342 Spanish, Elementary 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	

*The course has limited participation

Kungl Tekniska Högskolan

Studentwebben

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Vehicle Engineering

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	-	-	-			3		8 h Study visit8 h Study visit
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
2A1160 Space Physics	3	D	14	-	4	-	1				
2C1111 System Planning	4	D	60	-	-	-			3		
2C1117 Wind Power Systems <i>Replaces 2C1114.</i>	5	C	58	-	-	-			3	4	
2C1243 Hybrid Vehicle Drives*	5	D	-	-	-	-		2			3 course meetings, 2-3 days each
2D1225 Numerical Solutions of Differential Equations	4	C	24	4	-	16	1	2			
2D1250 Applied Numerical Methods II	6	C	60	-	-	36			3	4	
2D1255 Numerical Solutions of Differential Equations	5	D	30	-	-	4			3	4	
2D1257 Visualization	4	C	16	-	-	14			3		
2D1258 Introduction to High Performance Computing* <i>Please note that the course starts in August. Will not be on the central schedule.</i>	5	C	40	-	-	40	1				
2D1260 The Finite Element Method	4	C	18	14	-	12		2			
2D1263 Program Construction for Scientific Computing	4	C	24	-	-	12			3	4	
2D1266 Mathematical Models, Analysis and Simulation Part I	5	C	48	-	-	12	1	2			
2D1269 Mathematical Models, Analysis and Simulation, part II <i>Not given 04/05.</i>	5	D	42	-	-	12					
2D1297 Advanced Individual Course in Scientific Computing <i>Course may start any time during the semester.</i>	4	D	-	-	-	-					
2D1320 Applied Computer Science	4	B	28	14	-	20			3	4	
2D1320 Applied Computer Science	4	B	28	14	-	20	1	2			
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	

2D1421 No translation <i>Replaces 2D1420.</i>	5	D	36	4	-	8		3		
2D1426 Robotics and Autonomous Systems*	5	D	16	-	-	60			4	
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	16		3		
2D1520 Graphic Arts Technology, Minor Course	4	C	26	8	-	16	2			
2D1521 Communication and Information*	5	C	16	12	-	-		3		
2D1522 Computer Technology and Communication*	4	C	30	-	-	20			4	
2D1524 Image Processing and Reprographic Methods* <i>Limited number of participants</i>	6	C	26	16	-	12	1			
2E1242 Automatic Control, Project Course*	8	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		
3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	18	-	-	-			4	Project work 20h
3C1355 Ecology, Advanced Course	4	C	21	4	-	-		3	4	
3C1360 Environmental Consequences, Advanced Course	4	C	15	-	-	-	1			
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	C	10	-	-	-		3		12 h Seminars 12 h Seminars
3C1385 Biology	4	C	30	6	-	6	1			Field exercise 8h
3C1387 Environmental Systems Analysis	4	C	16	8	-	6	2			
3C1395 Technology and Sustainable Development	4	C	2	6	-	-	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 I	4	D	14	32	-	-			4	9 h Seminars 9 H 9 h Seminars
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 <i>The course will not be given 2004/05</i>	4	D	27	10	-	6			4	
4A1605 Sustainable Power Generation	6	D	30	48	-	18	1	2		
4A1607 Sustainable Energy Utilisation	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	-	-	-	2	3		

4A1611 Renewable Energy Technology	4	D	-	-	52	-	1			Study visit 8h
4A1612 Renewable Energy Technology, Advanced Course	4	D	26	-	-	-			3	Study visit 4 h
4A1613 Energy and Environment <i>Examinator: Björn Palm, Tel 790 7453</i>	4	D	50	-	-	-			3 4	Study visit 6h
4A1620 Combustion Theory	4	C	18	18	-	15	1	2		
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	-			3	
4A1626 Applied Heat and Power Technology	4	D	36	12	-	8			3 4	Project assignment 8h
4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3 4	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, Project Course	5	D	-	48	-	12			3 4	Study tour to industry 40h
4B1162 Vibro-Acoustics	7	D	-	-	64	8	1	2		
4B1164 Signal Analysis	5	D	-	-	26	22	1	2		
4B1166 Acoustical Measurements	5	D	-	-	18	18	1	2	3	
4B1168 Energy Methods	4	D	-	-	28	-			3 4	
4B1170 Numerical Methods for Acoustics and Vibration	4	D	-	-	24	-			3 4	
4B1172 Non-Linear Acoustics	4	D	-	-	24	-			3 4	
4B1174 Ultrasonics	4	D	-	-	24	-			3 4	
4B1176 Vehicle Acoustics and Vibration	4	D	-	-	24	-			3 4	
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	60	9	1	2		Project assignment 9h
4B1313 Rail Vehicle Dynamics	5	D	-	-	36	24			3	
4B1420 Ground Vehicle Engineering, Basic Course*	6	C	36	36	-	-	1	2		
4B1424 Vehicle systems for a better environment* <i>There are 50 places to be shared among universities engaged in this set of courses.</i>	5	C	26	26	-	8	1			
4B1428 Environmental friendly vehicle - Project course*	5	D	10	-	-	-		2	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	
4C1120 Experimental methods in mechanics	4	D	20	-	-	20			3	Seminars 4h

4D1027 Industrial Economics and Management, Basic Course	4	A	20	16	-	-		2			4 h SeminarsSeminars 4h 4 h Seminars
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	B	36	12	-	10				4	
4D1051 Commercial Law	4	B	14	18	-	-			3		
4D1057 Advanced Patent Law	4	C	4	14	-	-	1				14 h SeminarsSeminars 14h 14 h Seminars
4D1060 Industrial Development	4	B	40	8	-	-			3		
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3		
4D1075 Work Organization and Leadership	4	B	24	24	-	-			3		
4D1092 Man - Machine System	4	B	24	6	-	3			3		
4D1093 Psychology for Engineers <i>Replaces 4D1088 Technical Work Psychology</i>	4	B	24	3	-	4		2			
4E1124 Fibre Composites I: materials and processes	4	D	40	-	-	8	1				
4E1125 Fibre Composites II, Analysis and Design	4	D	2	-	-	6		2			
4E1126 Structural Design and Optimisation	4	D	40	-	-	18			3		
4E1140 Flight Dynamics and Aeroelasticity	4	D	38	21	-	4			3		
4E1150 Biomechanics and Neurronics	4	D	34	-	-	8				4	
4E1231 Flight Mechanics	4	D	28	18	-	4	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		2			
4F1343 Fluid Systems and Machines	4	C	24	24	-	12	1				
4F1430 Combustion Engines, general course*	4	C	42	6	-	12	1				
4F1431 Combustion Engines, Advanced Course*	6	D	48	-	-	28		2	3		
4F1460 Combustion Engines, Project Course <i>The course is open only to students specializing in combustion engines. Open only for students with individual specialization of Combustion engines.</i>	6	D	-	-	18	-			3	4	
4F1540 Tribology	4	C	18	9	-	5				4	
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*	4	C	24	36	-	-		2			
4F1641 Environmentally Adapted Product Design <i>80% participation.</i>	4	C	-	-	42	-		2			

4F1643 Eco Design Project*	4	C	-	-	-	-	1	2	3	4	
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			
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			
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				
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-			3		
4H1505 Structure and Properties of Ceramic Materials	4	B	12	-	-	18		2			
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1610 Advanced Materials	4	C	18	-	-	6			3		Study visit 8h Seminars 18h
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				
4H1803 Physics of Nanostructured Materials	4	D	20	4	-	6				4	
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 <i>Not given 2004/05. Not given 2004/05.</i>	4	B	-	-	-	-					12 h Seminars12 h Seminars
4K1409 History of Industry	4	B	12	-	-	10	1	2			12 h Seminars, 10 h Study visit12 h Seminars, 10 h Study visit
4K1601 Wood Material's Science, Basic Course	5	C	36	24	-	32			3	4	
4K1602 Industrial Wood Processing, Basic Course	4	C	26	16	-	16	1				
4M1051 Project Assignment	4	D	-	160	-	-	1	2			
4M1341 Foundry Processing	4	D	12	-	-	-			3		Seminarier 24h Other 28h
4M1342 Space Systems and Technology	4	D	36	-	-	-		2			
4M1343 Materials Processing, Project Support	4	D	72	48	-	40	1	2			
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	-	-	1	2			
4M1370 Solidification Processing	4	D	36	24	-	-	1	2			
5A1370 Solid State Theory	4	D	36	-	-	-	1				
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	C	26	-	-	-	1	2			
5B1538 Reliability Theory	6	D	-	-	72	-			3	4	
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				
5B1814 Applied Mathematical Programming - Linear Problems	4	D	18	12	-	-	1				18 h Projektuppgift18 h Projektuppgift
5B1816 Applied Mathematical Programming - Nonlinear Problems	4	D	18	12	-	-		2			18 h Projektuppgift18 h Projektuppgift
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		
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4				4	4 h Seminars4 h Seminars
5C1213 Applied Computational Fluid Dynamics	2	D	-	-	10	14				4	
5C1218 Turbulence <i>Replaces 5C1992.</i>	5	D	-	-	36	3			3	4	
5C1219 Advanced Compressible Flows <i>Under bearbetning</i>	5	D	-	-	48	-			3	4	
5C1400 Nonlinear Dynamics in Mechanics	5	C	24	-	-	-			3		
5C1860 FEM Modelling	5	D	33	-	-	-		2			33 h Workshop33 h Workshop
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	
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* <i>Limited number of participants: 25</i>	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	67	-	-	18			3	4	3 h Seminars 3 h Seminars
7E1202 Systems Biology*	5	C	32	-	-	25		2			24 h Seminars 24 h Seminars
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			3		Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-		2			Three laborations on all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-	1				Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-				4	Three laborations in all together 9 hours. The course is given regularly throughout the year. See
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	-	1	2			
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	-	15	-	1	2			E-learning exercises appr. 75 % of the course. 15 classroom hours in the evening.
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			
9E1334 Technical French, Intermediate Level*	6	B	-	-	56	-	1	2			
9E1342 Spanish, Elementary Level*	4	B	-	-	56	-	1	2			
9E1350 Italian, Elementary Level*	4	B	-	-	56	-	1	2			
9E1360 Communicative Swedish*	4	B	-	-	56	-	1	2			

*The course has limited participation

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Vehicle Engineering

Aeronautics T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1140 Flight Dynamics and Aeroelasticity	4	D	45	15	-	4			3		
4E1212 Aerodynamics	6	D	56	10	-	14	1	2			
4E1231 Flight Mechanics	4	D	28	18	-	4	1				
4E1233 Project in Aerinautics	6	D	28	-	-	48			3	4	
Conditionally Elective Courses											
2E1252 Control Theory and Practice, Advanced Course	5	D	28	26	-	8			3		
4A1341 Introductory Airbreathing Propulsion	4	C	21	24	-	8		2			
4B1131 Experimental Structure Dynamics	5	D	-	58	-	12		2	3		
4E1125 Fibre Composites II, Analysis and Design	4	D	48	-	-	6		2			
9E1300 Technical English, Lower Intermediate Level*_	4	B	-	-	56	-	1	2			
9E1300 Technical English, Lower Intermediate Level*_	4	B	-	-	56	-			3	4	
9E1301 Technical English, Intermediate Level*_	6	B	-	-	56	-	1	2			
9E1301 Technical English, Intermediate Level*_	6	B	-	-	56	-			3	4	
9E1302 Technical English, Intermediate Level*_	6	B	-	-	56	-	1	2			
9E1302 Technical English, Intermediate Level*_	6	B	-	-	56	-			3	4	
9E1304 Technical English, Advanced Level*_	6	C	-	-	56	-	1	2			
9E1304 Technical English, Advanced Level*_	6	C	-	-	56	-			3	4	
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	-	18	-	1	2			E-learning exercises
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	-	18	-			3	4	E-learning exercises
9E1326 Technical German, Advanced Level*_	6	C	-	-	56	-	1	2			
9E1326 Technical German, Advanced Level*_	6	C	-	-	56	-			3	4	

9E1334 <u>Technical French, Intermediate Level*</u>	6	B	-	-	56	-	1	2			
9E1336 <u>Technical French, Advanced Level*</u>	6	C	-	-	56	-	1	2			
9E1336 <u>Technical French, Advanced Level*</u>	6	C	-	-	56	-			3	4	
9E1348 <u>Technical Spanish, Intermediate Level*</u>	6	B	-	-	56	-			3	4	
9E1348 <u>Technical Spanish, Intermediate Level</u>	6	B	-	-	56	-	1	2			
Elective Courses											
1C1103 <u>Structural Mechanics III</u>	5	D	33	-	-	-			3		4 h Computer, 40 h Workshop 4 h Computer, 40 h Workshop
4A1346 <u>Rocket Propulsion</u> <i>Under bearbetning</i>	4	D	36	10	-	-			4		Project work 6h
4A1347 <u>Airbreathing Propulsion for High Speed Flight</u> <i>Under bearbetning</i>	4	D	27	10	-	6			4		
4B1131 <u>Experimental Structure Dynamics</u>	5	D	-	58	-	12	2	3			
5C1215 <u>Compressible Flow</u>	5	D	-	-	52	9	2				

*The course has limited participation

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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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 8h Seminars 18h	
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	B	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	67	-	-	18			3	4	3 h Seminars3 h Seminars
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 04/05.</i>	6	D	26	-	-	20					

*The course has limited participation

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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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	28	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	18	26	-	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	26	34	-	17	1	2			

*The course has limited participation

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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 Utilisation	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 I	4	D	14	32	-	-				4	9 h Seminars 9 H 9 h Seminars
4A1610 Energy Management	4	D	50	-	-	-		2	3		
4A1611 Renewable Energy Technology	4	D	-	-	52	-	1				Study visit 8h
4A1613 Energy and Environment <i>Examinator: Björn Palm, Tel 790 7453</i>	4	D	50	-	-	-			3	4	Study visit 6h
4A1620 Combustion Theory	4	C	18	18	-	15	1	2			
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	54	-	-	-			3	4	Study visits 6h
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	1	2			
4A1625 Cooling of Electronics	4	D	-	-	48	-			3		
4A1626 Applied Heat and Power Technology	4	D	36	12	-	8			3	4	Project assignment 8h
4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3	4	Study visits 12h

4A1629 Fluid Machinery	4	C	30	18	-	12	1	2			
4A1630 Thermal Fluid Machinery	4	D	36	12	-	12			3		
5C1215 Compressible Flow	5	D	-	-	52	9		2			

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Vehicle Engineering

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	
4E1230 <u>Elements of Aeronautics</u>	8	C	116	-	-	4			3	4	

T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1140 <u>Flight Dynamics and Aeroelasticity</u>	4	D	38	21	-	4			3		
4E1212 <u>Aerodynamics</u>	6	D	56	10	-	14	1	2			
4E1231 <u>Flight Mechanics</u>	4	D	28	18	-	4	1				
Conditionally Elective Courses											
4A1341 <u>Introductory Airbreathing Propulsion</u>	4	C	21	24	-	8		2			
4B1131 <u>Experimental Structure Dynamics</u>	5	D	-	58	-	12		2	3		
4E1125 <u>Fibre Comositer II, Analysis and Design</u>	4	D	2	-	-	6		2			
4E1126 <u>Structural Design and Optimisation</u>	4	D	40	-	-	18			3		
4E1233 <u>Project in Aeronautics*</u>	6	D	28	-	-	48			3	4	
4M1342 <u>Space Systems and Technology</u>	4	D	36	-	-	-		2			
5B1816 <u>Applied Mathematical Programming - Nonlinear Problems</u>	4	D	18	12	-	-		2			18 h Projektuppgift18 h Projektuppgift

*The course has limited participation

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Vehicle Engineering

Ground Vehicle Engineering T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1120 Signal Analysis with Applications	5	D	-	24	-	22				4	
4F1242 Introduction to Microcomputer Systems	4	C	12	22	-	14				4	

Ground Vehicle Engineering T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1026 Industrial Economy and Management, Basic Course	4	A	20	16	-	-		2			4 h Seminars4 h Seminars
Conditionally Elective Courses											
1C1206 Railway Track Engineering	5	D	33	-	-	-			3		44 h Workshop
1H1206 Planning of Railroad Traffic	5	C	-	-	72	-	1				
2C1149 Electric Traction	4	C	36	-	-	-				4	
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	60	9	1	2			Project assignment 9h
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	
4F1430 Combustion Engines, general course*_	4	C	42	6	-	12	1				
Recommended Courses											
4B1131 Experimental Structure Dynamics	5	D	-	58	-	12		2	3		
4E1102 Lightweight Structures and FEM I	5	C	64	-	-	22			3	4	
4F1131 Microcomputers in Embedded Systems*_	5	D	-	36	-	36		2			
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4F1640 Industrial Design*_ <i>Limited number of participants.</i>	4	C	24	36	-	-			3		
5C1121 Analytical Mechanics	4	C	48	-	-	-			3		
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4				4	4 h Seminars4 h Seminars

Elective Courses[4E1102](#) Lightweight Structures and FEM I

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*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												
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			
Conditionally Elective Courses											
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		
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				
4B1420 Ground Vehicle Engineering, Basic Course*	6	C	36	36	-	-	1	2			
4E1125 Fibre Composites II, Analysis and Design	4	D	2	-	-	6		2			
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	B	12	-	-	18		2			
5A1301 Mathematical Methods in Physics, Course I <i>Not given 04/05.</i>	4	C	26	28	-	-					
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		
5C1214 Fluid Mechanics	5	C	-	30	30	3	1				
5C1902 Advanced Dynamics of Complex Systems	4	D	24	-	-	-	1				

*The course has limited participation

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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											
4D1024 Industrial Economy and Management, Basic Course	4	A	26	18	-	-			3		4 h Seminars4 h Seminars
4D1028 Industrial Economics and Management, Advanced Course	4	B	26	20	-	-				4	8 h SeminarsSeminars 4 H 8 h Seminars
Conditionally Elective Courses											
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	B	36	12	-	10				4	
4D1043 Business Negotiations*_	4	C	24	8	-	-			3		
4D1075 Work Organization and Leadership	4	B	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	B	36	12	-	10				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 Advanced Industrial Economics and Management*_	12	C	68	72	-	16		2	3	4	Roll-play 16h	
Conditionally Elective Courses												
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3			
4D1071 Industrial Project Management, Basic Course	4	B	40	8	-	-	1					
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2				
4K1102 Manufacturing Automation I	4	C	18	26	-	12	1					
Elective Courses												
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3			

4D1152 Industrial Marketing, Advanced Course	4	C	36	-	-	-	1				12 h Seminars12 h Seminars
4D1170 Advanced Production and Product Development	4	C	36	12	-	-		2			
4D1174 Management and Analysis of Innovations and Technology	4	C	38	-	-	-		2			10 h Seminars10 h Seminars
4K1103 Manufacturing Automation II	6	C	26	34	-	17	1	2			

*The course has limited participation

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Vehicle Engineering

Industrial Engineering T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1032 <u>Production</u> <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	B	36	12	-	10				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	
4M1320 <u>Manufacturing Technology</u>	4	C	26	22	-	20				4	Preparatory course 20h Computer work 20h Home assignments 20h Study visit 12h

Industrial Engineering T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1146 Advanced Industrial Engineering*	12	D	67	22	-	-	1	2			120 h Projektuppgift120 h Projektuppgift
Conditionally Elective Courses											
4G1634 Manufacturing Engineering, Basic Course	6	C	32	20	-	12	1	2			
Elective Courses											
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		
3C1360 Environmental Consequences, Advanced Course	4	C	15	-	-	-	1				
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3		
4D1093 Psychology for Engineers <i>Replaces 4D1088 Technical Work Psychology</i>	4	B	24	3	-	4		2			
4G1053 Materials Processing, Project Support	4	D	72	48	-	40			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		
4G1540 Laser Metrology Methods and Non-Destructive Testing	4	C	28	22	-	4		2		
4K1102 Manufacturing Automation I	4	C	18	26	-	12	1			
4M1320 Manufacturing Technology	4	C	26	22	-	20			4	Preparatory course 20h Computer work 20h Home assignments 20h Study visit 12h

*The course has limited participation

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Vehicle Engineering

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	B	24	24	-	-			3		
Conditionally Elective Courses											
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											
4F1760 <u>Integrated Product Development, Advanced Course*</u>	20	D	-	180	-	-	1	2	3	4	
Conditionally Elective Courses											
4F1541 <u>CAD 3D-modelling and Visualization for Personal Computers*</u>	4	C	8	36	-	-		2			
Elective Courses											
4F1131 <u>Microcomputers in Embedded Systems*</u>	5	D	-	36	-	36		2			
4F1641 <u>Environmentally Adapted Product Design</u> <i>80% participation.</i>	4	C	-	-	42	-		2			
4F1642 <u>Modelling and Computer Support in Mechanical Design</u>	4	C	24	36	-	-			3		

*The course has limited participation

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Vehicle Engineering

Sound and Vibrations T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4B1120 Signal Analysis with Applications	5	D	-	24	-	22			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, Project Course</u>	5	D	-	48	-	12			3	4	Study tour to industry 40h

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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												
4E1230 <u>Elements of Aeronautics</u>	8	C	116	-	-	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	-	-	8	1				
4E1125 <u>Fibre Composites II, Analysis and Design</u>	4	D	2	-	-	6		2			
4E1126 <u>Structural Design and Optimisation</u>	4	D	40	-	-	18			3		
4E1132 <u>Lightweight Design*</u> <i>Open only to students on the specialisation LKR.</i>	10	D	-	-	336	-	1	2	3	4	
4E1150 <u>Biomechanics and Neuronics</u>	4	D	34	-	-	8				4	
Elective Courses											
4B1304 <u>Railway Systems and Rail Vehicles</u>	6	C	-	-	60	9	1	2			Project assignment 9h
4B1420 <u>Ground Vehicle Engineering, Basic Course*</u>	6	C	36	36	-	-	1	2			
4E1212 <u>Aerodynamics</u>	6	D	56	10	-	14	1	2			
4F1630 <u>Introduction to Machine Design</u>	5	C	24	36	-	-	1	2			
5B1722 <u>Applied Optimization</u>	4	C	28	14	-	9			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	-	-	15	-	1	2			E-learning exercises appr. 75 % of the course. 15 classroom hours in the evening.

9E1326 <u>Technical German, Advanced</u> 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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Naval systems T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1102 Lightweight Structures and FEM I	5	C	64	-	-	22			3	4	
4E1401 Introduction to Naval Architecture	5	C	54	10	-	10			3	4	

Naval systems T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1402 Naval design*_ <i>Only open to MSY students.</i>	10	D	-	336	-	-	1	2	3	4	
Conditionally Elective Courses											
2C1224 Management of Technology_	5	D	32	20	-	-	1				
4E1124 Fibre Composites I:materials and processes_	4	D	40	-	-	8	1				
4E1125 Fibre Composites II, Analysis and Design_	4	D	2	-	-	6		2			
4E1126 Structural Design and Optimisation_	4	D	40	-	-	18			3		
5C1212 Computational Fluid Dynamics_	5	D	-	-	50	10			3		
5C1213 Applied Computational Fluid Dynamics_	2	D	-	-	10	14				4	
5C1214 Fluid Mechanics_	5	C	-	30	30	3	1				
Elective Courses											
4B1120 Signal Analysis with Applications_	5	D	-	24	-	22				4	
4B1131 Experimental Structure Dynamics_	5	D	-	58	-	12		2	3		
4E1140 Flight Dynamics and Aeroelasticity_	4	D	38	21	-	4			3		
4E1150 Biomechanics and Neuronics_	4	D	34	-	-	8				4	
4F1430 Combustion Engines, general course*_ course*_	4	C	42	6	-	12	1				
4G1230 Introductory Welding Technology_	4	C	24	18	-	12	1				
5B1722 Applied Optimization_	4	C	28	14	-	9			3		
9E1300 Technical English, Lower Intermediate Level*_ Intermediate Level*_	4	B	-	-	56	-	1	2			

*The course has limited participation

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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	
4F1560 Advanced Machine Elements*	12	D	-	120	-	-			3	4	
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4K1132 Modularisation of Products Some parts of the course are outlined in 4K1131 Assembly Systems and 4K1104 Manufacturing Systems, advanced course.	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	1				
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			
4F1644 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*_ <i>Limited attendance due to limited number of available projects</i>	4	C	8	36	-	-				4	
4F1641 Environmentally Adapted Product Design <i>80% participation.</i>	4	C	-	-	42	-		2			
4K1102 Manufacturing Automation I	4	C	18	26	-	12	1				

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Vehicle Engineering

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			
Conditionally Elective Courses												
5C1218 Turbulence <i>Replaces 5C1992.</i>	5	D	-	-	36	3			3	4		
5C1400 Nonlinear Dynamics in Mechanics	5	C	24	-	-	-			3			

Mechanics T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2D1225 Numerical Solutions of Differential Equations	4	C	24	4	-	16	1	2			
4C1120 Experimental methods in mechanics	4	D	20	-	-	20			3		Seminars 4h
5C1123 Mathematical Methods of Mechanics, General Course	4	D	36	-	-	-		2			
5C1125 Mathematical Methods of Mechanics, Intermediate Course	2	D	-	-	-	-			3		
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	
5C1214 Fluid Mechanics	5	C	-	30	30	3	1				
5C1215 Compressible Flow	5	D	-	-	52	9		2			
5C1850 Finite Element Methods	5	D	33	-	-	-	1				33 h Workshop33 h Workshop
5C1860 FEM Modelling	5	D	33	-	-	-		2			33 h Workshop33 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	



Elective Courses										
5C1122 Continuum Mechanics	4	C	42	-	-	-	1			

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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	28	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 Microcomputers in Embedded Systems	5	D	-	36	-	36	1				
4F1142 Motion control and Real-time implementation*_	5	D	22	10	-	30		2			
4F1162 Mechatronics, Advanced Course II*_	15	D	-	116	-	80		2	3	4	

*The course has limited participation

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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			
Elective Courses												
4D1060 Industrial Development	4	B	40	8	-	-			3			

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	15	-	-	-	1				
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2			
3C1387 Environmental Systems Analysis	4	C	16	8	-	6		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	18	-	-	-				4	Project work 20h
3C1365 Environmental Consequences, Advanced Course II	4	D	15	15	-	40	1	2			Field exercises

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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											
3D1112 Fiber Technology	4	D	26	-	-	15				4	
Elective Courses											
3D1107 Paper Technology	6	D	42	-	-	56			3	4	2 days studytrip

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	26	8	-	16		2			
3D1113 <u>Paper Physics</u>	4	D	20	-	-	20		2			
3D1114 <u>Paper Processes Technology</u>	4	D	20	-	-	20			3		
3D1115 <u>Pulp and Paper Processes</u>	6	D	40	-	-	48	1	2			
3D1117 <u>Paper Technology, project</u>	4	D	-	-	-	-			3	4	Project work
3D1163 <u>Pulp Technology</u>	4	D	20	-	-	24	1				

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Publiceringsteknik T3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1521 Communication and Information*_	5	C	16	12	-	-			3		
2D1522 Computer Technology and Communication*_	4	C	30	-	-	20				4	
2D1526 Publishing Technology, General Course	6	C	40	-	-	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	36	8	-	8		2			
2D1517 XML for Publishing*_	5	D	30	-	-	40	1	2			
2D1518 Audio, Video and Multimedia Production*_	5	C	30	8	-	4		2	3		36 h Study visit36 h Study visit
2D1524 Image Processing and Reprographic Methods*_ <i>Limited number of participants</i>	6	C	26	16	-	12	1				
2D1527 Publishing Technology, Advanced Course <i>Open only to students of the specialization Publishing Technology.</i>	10	D	60	8	-	32			3	4	
Elective Courses											
2D1334 Database Technology	4	C	24	20	-	12			3		

*The course has limited participation

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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	28	14	-	20			3	4	
5B1538 Reliability Theory	6	D	-	-	72	-			3	4	
5B1722 Applied Optimization	4	C	28	14	-	9			3		
Conditionally Elective Courses											
2D1220 Applied Numerical Methods I	4	C	36	-	-	18			3	4	
Elective Courses											
2D1250 Applied Numerical Methods II	6	C	60	-	-	36			3	4	

Systems Engineering T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1026 Industrial Economy and Management, Basic Course	4	A	20	16	-	-		2			4 h Seminars4 h Seminars
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		Project-course, 12h Seminars
1H1401 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3		6 h Seminars
1N1150 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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Vehicle Engineering

Materials Processing T3

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

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1134 Effective Production	6	D	30	10	-	-			3	4	Project work
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	26	22	-	20				4	Preparatory course 20h Computer work 20h Home assignments 20h Study visit 12h

Materials Processing T4

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

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1051 <u>Project Assignment, Materials Processing</u>	4	D	-	160	-	-			3	4	160 h Projektuppgift160 h Projektuppgift
4G1053 <u>Materials Processing, Project Support</u>	4	D	72	48	-	40			3	4	Home assignments 48h
Conditionally Elective Courses											
4G1170 <u>Intelligent Machining, Advanced Course</u>	4	D	36	20	-	-		2	3	4	
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		
4M1346 <u>Simulation and Modelling</u>	4	D	10	80	-	-	1	2			
4M1370 <u>Solidification Processing</u>	4	D	36	24	-	-	1	2			

Elective Courses

4C1110 Material Mechanics	4	D	52	-	-	3	1				
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			
4G1541 Measurement Technology & Statistics f Manufact. Processes	4	D	30	-	-	8			3		
4M1320 Manufacturing Technology	4	C	26	22	-	20				4	Preparatory course 20h Computer work 20h Home assignments 20h Study visit 12h
4M1341 Foundry Processing	4	D	12	-	-	-			3		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												
4G1160 <u>Manufacturing Engineering, Intermediate Course I</u>	5	C	42	42	-	-				4		
4G1161 <u>Quality</u>	6	C	40	16	-	-			3			
4K1201 <u>Computer Aided Design and Manufacturing, Introductory course</u>	5	C	48	-	-	24				4	Graded exercise	
Conditionally Elective Courses												
4G1634 <u>Manufacturing Engineering, Basic Course</u>	6	C	32	20	-	12	1	2				

Assembly Systems T4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1026 Industrial Economy and Management, Basic Course	4	A	20	16	-	-		2			4 h Seminars4 h Seminars
4K1102 Manufacturing Automation I	4	C	18	26	-	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				
Conditionally Elective Courses											
4G1634 Manufacturing Engineering, Basic Course	6	C	32	20	-	12	1	2			

*The course has limited participation

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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´s 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	B	36	12	-	-			3		
4K1102 Manufacturing Automation I	4	C	18	26	-	12	1				

*The course has limited participation

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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 <u>Programming Technique</u>	4	B	20	12	-	24		2	3		
4D1112 <u>Engineering, Technique and Humanities</u>	5	A	42	-	-	-			3		10 h Seminars, 20 h Study visit 10 h Seminars, 20 h Study visit
4D1123 <u>Industrial Economics and Management, Basic Course</u>	6	A	46	27	-	-	1	2			8 h Seminars 8 h Seminars
5B1120 <u>Introductory Course in Mathematics I</u>	1	AB	-	-	-	-					
5B1135 <u>Mathematics I for I</u>	6	AB	30	16	30	-	1	2			
5B1136 <u>Mathematics II for I</u>	6	B	36	18	36	-		2	3		
5B1230 <u>Mathematics IV</u>	6	AB	30	16	30	-				4	
5C1103 <u>Mechanics, Basic Course</u>	6	B	48	27	-	-			3	4	

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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	20	18	-	18			3	4	
4D1124 Industrial Economics and Management, Advanced Course	4	B	34	-	-	-	1				6 h Seminars6 h Seminars
4D1160 Economics With Focus on Microeconomic Theory	4	A	40	8	-	-		2			

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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												
4D1113 Knowledge Formation in Technology and Natural Science	4	C	20	-	-	-			3		8 h Seminars8 h Seminars	
Conditionally Elective Courses												
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	B	36	12	-	10				4		
4D1045 Technology - based Entrepreneurship	4	B	24	-	-	-	1				10 h Seminars10 h Seminars	
4D1046 Technology Venture Management <i>Not given. Not given.</i>	4	C	24	-	-	-			3		12 h Seminars12 h Seminars	
4D1051 Commercial Law	4	B	14	18	-	-			3			
4D1052 Intellectual Property Law	4	C	18	8	-	-				4	6 h SeminarsSeminars 6h 6 h Seminars	
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3			
4D1071 Industrial Project Management, Basic Course	4	B	40	8	-	-				4		
4D1071 Industrial Project Management, Basic Course	4	B	40	8	-	-	1					
4D1072 Industrial Project Management, Advanced Course	4	C	36	12	-	-			3			
4D1096 Human Resource Management	4	B	28	12	-	-			3			
4D1098 Organizational Change and Change Management*	4	C	-	8	-	-				4	36 h Seminars36 h Seminars	
4D1152 Industrial Marketing, Advanced Course	4	C	36	-	-	-	1				12 h Seminars12 h Seminars	
4D1162 Management Control: Strategic and Behavioural Perspectives	4	B	32	-	-	-		2			6 h Seminars6 h Seminars	
4D1164 Cost Management and Performance Measurement	4	C	32	-	-	-				4	6 h Seminars6 h Seminars	
4D1166 Finance	4	B	30	18	-	-		2				
4D1168 Industrial Dynamics	4	B	40	-	-	-	1				8 h Seminars8 h Seminars	
4D1170 Advanced Production and Product Development	4	C	36	12	-	-		2				
4D1174 Management and Analysis of Innovations and Technology	4	C	38	-	-	-		2			10 h Seminars10 h Seminars	

4D1176 Internet Economics	4	C	30	8	-	12			4	
5B1306 Financial Mathematics, Basic Course	5	C	-	-	54	-			4	
5B1574 Portfolio Theory and Risk Management	4	D	30	12	-	-	1			
Elective Courses										
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			4	Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-	1			Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			3	Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			2	Three laborations on all together 9 hours. The course is given regularly throughout the year. See

*The course has limited participation

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Industrial Engineering and Management

Industrial Engineering and Management I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
1H1212 Logistics, Advanced Course	5	D	4	-	-	-			3		Project-course, 12h Seminars
1N1119 Management Ethics	5	C	20	-	-	-	1				Seminars 8h
2I1228 Enterprise Computing and ERP Systems	5	D	14	12	-	60	1				80h
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	B	36	12	-	10				4	
4D1043 Business Negotiations*_ 	4	C	24	8	-	-			3		
4D1045 Technology - based Entrepreneurship	4	B	24	-	-	-	1				10 h Seminars10 h Seminars
4D1046 Technology Venture Management <i>Not given. Not given.</i>	4	C	24	-	-	-			3		12 h Seminars12 h Seminars
4D1051 Commercial Law	4	B	14	18	-	-			3		
4D1052 Intellectual Property Law	4	C	18	8	-	-				4	6 h SeminarsSeminars 6h 6 h Seminars
4D1057 Advanced Patent Law	4	C	4	14	-	-	1				14 h SeminarsSeminars 14h 14 h Seminars
4D1061 Strategic Management	4	B	20	-	-	-				4	
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3		
4D1063 Managing Innovation	4	C	20	-	-	-			3		12 h Seminars12 h Seminars
4D1064 Management of Software Development Projects*_ 	4	C	28	-	-	-				4	
4D1071 Industrial Project Management, Basic Course	4	B	40	8	-	-				4	
4D1071 Industrial Project Management, Basic Course	4	B	40	8	-	-	1				
4D1072 Industrial Project Management, Advanced Course	4	C	36	12	-	-			3		
4D1076 Leadership in Cross-Cultural Context*_ The course is maximized to 60 students.	4	C	22	12	-	-		2			12 h Seminars12 h Seminars
4D1096 Human Resource Management	4	B	28	12	-	-			3		
4D1098 Organizational Change and Change Management*_ 	4	C	-	8	-	-				4	36 h Seminars36 h Seminars

4D1099 Managing Risks in Complex Technical Systems	4	C	-	-	-	-	1			16 h Seminars16 h Seminars
4D1141 Leadership	4	B	16	12	-	-	1			12 h Seminars12 h Seminars
4D1152 Industrial Marketing, Advanced Course	4	C	36	-	-	-	1			12 h Seminars12 h Seminars
4D1162 Management Control: Strategic and Behavioural Perspectives	4	B	32	-	-	-		2		6 h Seminars6 h Seminars
4D1164 Cost Management and Performance Measurement	4	C	32	-	-	-			4	6 h Seminars6 h Seminars
4D1166 Finance	4	B	30	18	-	-		2		
4D1168 Industrial Dynamics	4	B	40	-	-	-	1			8 h Seminars8 h Seminars
4D1170 Advanced Production and Product Development	4	C	36	12	-	-		2		
4D1174 Management and Analysis of Innovations and Technology	4	C	38	-	-	-		2		10 h Seminars10 h Seminars
4D1176 Internet Economics	4	C	30	8	-	12			4	
4D1178 Work Science and Economics	4	C	32	12	-	-		2		4 h SeminarsProjectwork 12h 4 h Seminars
4D1180 Knowledge Perspectives: Investigations in Ethics and Leadership	4	D	28	-	-	-	1			
4D1181 Knowledge Perspectives: Practice and Philosophy	4	D	28	-	-	-	1			
4D1182 Knowledge Perspectives: Images of Organization	4	D	28	-	-	-	1			
4D1188 Knowledge Perspectives: Strategy, Rationality and Judgement	4	D	28	-	-	-	1			
4D1302 Management Control Frontiers <i>Under bearbetning</i>	4	D	-	-	-	-			4	36 h Seminars36 h Seminars
4D1531 ICT Entrepreneurship www.sses.se www.sses.se	5	C	-	-	-	-	1			
4D1534 From Science to Business www.sses.se www.sses.se	5	C	-	-	-	-			4	
4G1161 Quality	6	C	40	16	-	-			3	
5B1306 Financial Mathematics, Basic Course	5	C	-	-	54	-			4	
5B1574 Portfolio Theory and Risk Management	4	D	30	12	-	-	1			
Elective Courses										
4D1154 Writing - A Method for Reflection* <i>Not given. Not given.</i>	4	B	4	-	-	-			3	20 h Seminars20 h Seminars
4D1157 Dialogue Seminar Method: Leadership and Skill <i>Not given. Not given.</i>	4	D	10	-	-	-			3	10 h Seminars10 h Seminars
4D1167 Behavioral Finance	4	C	20	-	-	-			4	10 h Seminars10 h Seminars
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			4	Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-	1			Three laborations in all together 9 hours. The course is given regularly throughout the year. See

9E1131 Information Searching for B, I, M, T Also BD and P	1	B	-	-	-	-		3	Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T Also BD and P	1	B	-	-	-	-		2	Three laborations on all together 9 hours. The course is given regularly throughout the year. See

*The course has limited participation

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Biotechnology and Industrial Engineering I2

I2: Course 3A1502 Cellbiology, New Code Name: 3A1512.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2E1215 <u>Introductory Matlab Course</u>	1	A	4	-	-	-			3		8 h Computer8 h Computer
3A1501 <u>Introduction to Biotechnology</u>	4	B	36	8	-	4	1	2			including visits for study purpose
3A1512 <u>Cellbiology</u>	4	B	44	-	-	-			3		
3B1700 <u>Introductory Chemistry</u>	4	B	24	18	-	22	1				
3B1711 <u>Chemical Equilibria</u>	4	B	12	22	-	25			3	4	
3B1750 <u>Organic Chemistry I</u>	5	B	20	14	-	42		2			
5A1225 <u>Electromagnetism and Waves</u>	5	B	38	18	-	20				4	

Biotechnology and Industrial Engineering I3

I2: Course 3A1502 Cellbiology, New Code Name: 3A1512.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1396 Bioinformatics	4	D	30	-	-	16			3		
3A1115 Biochemistry	4	D	34	-	-	-				4	
3A1307 Microbiology	6	B	30	24	-	48		2	3		
3A1503 Molecular Biotechnology	5	D	36	-	-	15		2	3		
3B1725 Chemical Thermodynamics	4	C	28	30	-	-	1				
3B1770 Chemical Measuring Techniques	5	C	22	4	-	12	1				
3C1330 Technology and Ecosystems	4	B	24	3	-	-		2			

Biotechnology and Industrial Engineering I4

I2: Course 3A1502 Cellbiology, New Code Name: 3A1512.

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4D1144 <u>Management in Technology Intensive Organisations</u>	4	D	28	-	-	-		2				4 h Seminars4 h Seminars
4D1190 <i>Under bearbetning</i>	8	D	-	-	-	-			3	4		20 h Seminars, 20 h Projektuppgift20 h Seminars, 20 h Projektuppgift

Recommended Courses

3A1506 Drug Development	4	D	36	-	-	-			3	8 h Study visit8 h Study visit
3A1507 Functional Genomics	4	D	24	-	-	15	1			

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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											
4A1112 Applied Thermodynamics	6	AB	48	48	-	-	1	2			Math exercises
4A1601 Heat Transfer	4	C	24	24	-	20			3		
4A1603 Energy Technology	4	C	48	12	-	-				4	
5A1225 Electromagnetism and Waves	5	B	38	18	-	20	1				
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 <u>System Planning</u>	4	D	60	-	-	-			3			
4A1140 <u>Energy Systems and Models I</u>	4	D	14	32	-	-				4	9 h SeminarsSeminars 9 H 9 h Seminars	
4A1607 <u>Sustainable Energy Utilisation</u>	6	D	-	-	72	16	1	2				
4F1221 <u>Electrical Engineering, Basic Course, B</u>	4	B	12	18	-	14		2				
Elective Courses												
4D1191 <u>Energy Business</u> <i>Not given 2004/05 Not given 2004/05.</i> <i>Under bearbetning</i>	4	D	12	-	-	-						12 h Seminars, 16 h Study visit12 h Seminars, 16 h Study visit

Energy Systems and Industrial Engineering I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4A1145 Energysystems - Business - Leadership <i>The course will be given from 03/04</i> <i>Under bearbetning</i>	8	D	24	24	-	4			3	4		
4D1144 Management in Technology Intensive Organisations	4	D	28	-	-	-		2			4 h Seminars4 h Seminars	
Recommended Courses												

4A1605 Sustainable Power Generation	6	D	30	48	-	18	1	2			
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Industrial Engineering and Management

Financial Mathematics and Industrial Engineering I2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 Applied Computer Science	4	B	28	14	-	20			3	4	
5A1225 Electromagnetism and Waves	5	B	38	18	-	20	1				
5B1506 Mathematical Statistics, Basic Course	6	C	36	48	-	-	1	2			
5B1540 Probability Theory	5	D	24	24	-	-				4	
5B1712 Optimization	4	C	28	14	-	6			3		

Financial Mathematics and Industrial Engineering I3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1166 Finance	4	B	30	18	-	-		2			
5B1306 Financial Mathematics, Basic Course	5	C	-	-	54	-				4	
5B1550 Applied Mathematical Statistics	5	D	-	-	60	-			3		
5B1574 Portfolio Theory and Risk Management	4	D	30	12	-	-	1				
5B1580 Risk Management	5	D	24	24	-	-		2			

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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 Strength of Materials and Solid Mechanics, Basic Course <i>Under bearbetning</i>	6	B	42	42	-	2		2	3		4 written assignments
4F1221 Electrical Engineering, Basic Course, B	4	B	12	18	-	14		2			
4F1531 Machine Elements, basic course for I and T	4	B	24	40	-	-				4	
4K1101 Control Systems	4	C	18	28	-	12				4	
5A1225 Electromagnetism and Waves	5	B	38	18	-	20	1				
5B1501 Probability Theory and Statistics	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	50	-	-	15			3		
4K1211 Computer Aided Design and Manufacturing, Introductory Course II <i>Under bearbetning</i>	4	C	48	-	-	24				4	Graded exercise

Integrated Production and Industrial Engineering I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4D1144 Management in Technology Intensive Organisations	4	D	28	-	-	-		2			4 h Seminars4 h Seminars
4K1110 Production - Business - Leadership	8	D	-	-	18	-			3	4	Project work

4K1112 Integrated Production <i>Under bearbetning</i>	8	D	-	-	84	-	1	2			
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Industrial Engineering and Management

Communication Systems and Industrial Engineering I2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2E1215 <u>Introductory Matlab Course</u>	1	A	4	-	-	-			3		8 h Computer8 h Computer
2E1313 <u>Signals and Systems, part II</u>	5	C	30	24	-	4				4	10 h Computer10 h Computer
2G1316 <u>Datacommunication and Computer Networks</u> <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12			3		
2G1518 <u>Computer Hardware Engineering</u>	5	B	20	20	-	12			3	4	
5A1225 <u>Electromagnetism and Waves</u>	5	B	38	18	-	20	1				
5B1506 <u>Mathematical Statistics, Basic Course</u>	6	C	36	48	-	-	1	2			

Communication Systems and Industrial Engineering I3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1545 <u>Digital Electronics</u> <i>Given on Campus Valhallavägen</i> <i>Under bearbetning</i>	5	B	26	18	-	16	1				
2G1305 <u>Internetworking</u> <i>Given in Kista</i>	4		20	14	-	8				4	
2G1318 <u>Queuing Theory and Teletraffic Systems</u>	4	D	24	24	-	-		2			
2G1518 <u>Computer Hardware Engineering</u>	5	B	20	20	-	12			3	4	
2G1520 <u>Operating Systems</u> <i>Replaces 2G1113 and 2G1504 from 04/05</i> <i>Given in Kista</i>	5	C	28	10	-	12			3		
5B1506 <u>Mathematical Statistics, Basic Course</u>	6	C	36	48	-	-	1	2			

Communication Systems and Industrial Engineering I4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											

4D1144 Management in Technology Intensive Organisations	4	D	28	-	-	-	2			4 h Seminars4 h Seminars
Conditionally Elective Courses										
2G1320 Communication - Business - Leadership <i>replaces 2G1303</i>	10	D	50	20	-	20		3	4	80 h Projektuppgift80 h Projektuppgift
2G1332 Management of Networks and Networked Systems <i>Given in Kista but also at Campus Valhallavägen through videoconnection</i>	5	D	20	-	-	20	2			
2G1403 Data Communications - Economics - Leadership*_	8	D	-	-	-	-		3	4	
Recommended Courses										
2G1524 Distributed Artificial Intelligence and Intelligent Agents <i>The course is not elective if the student has already taken 2I1235</i>	5	D	28	10	-	-	2			

*The course has limited participation

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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> <i>Under bearbetning</i>	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	
5A1225 <u>Electromagnetism and Waves</u>	5	B	38	18	-	20	1				
5B1501 <u>Probability Theory and Statistics</u>	4	C	24	36	-	-			3		
Elective Courses											
4F1241 <u>Microcomputer, Sensors and Actuators</u>	6	C	18	26	-	29				4	

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	28	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	
5C1140 <u>Mechanics II</u>	4	B	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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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	28	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	
5A1225 <u>Electromagnetism and Waves</u>	5	B	38	18	-	20	1				
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											
2B1545 Digital Electronics <i>Given on Campus Valhallavägen</i> <i>Under bearbetning</i>	5	B	26	18	-	16	1				
2D1363 Software Engineering <i>The course is given for the first time 04/05.</i>	8	D	40	-	-	-		2	3	4	
2D1620 Human-Computer Interaction, Introductory Course	4	C	20	10	-	2	1				
2D1622 Human-Computer Interaction, Advanced Course	4	C	18	5	-	8		2			
2D1640 Graphics and Interaction Programming	6	C	42	8	-	42			3	4	
2G1518 Computer Hardware Engineering	5	B	20	20	-	12			3	4	
Recommended Courses											
2I1228 Enterprise Computing and ERP Systems	5	D	14	12	-	60	1				80h

Program Design 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	24	-	-	50			3	4	12 h Seminars12 h Seminars	

4D1144 Management in Technology Intensive Organisations	4	D	28	-	-	-	2		4 h Seminars4 h Seminars
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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											
2B1115 Engineering Fundamentals	4	A	32	30	-	12	1				
2B1545 Digital Electronics <i>Given in Kista</i> <i>Under bearbetning</i>	5	B	26	18	-	16			3	4	
2G1518 Computer Hardware Engineering	5	B	20	20	-	12				4	
2I1027 Computer Science, Basic Course <i>Under bearbetning</i>	6	B	25	21	24	44	1	2	3		
5B1118 Discrete Mathematics	5	AB	-	-	-	-		2			
5B1140 Analytical Methods and Linear Algebra I, IT	8	AB	-	-	-	-	1	2			
5B1141 Analytical Methods and Linear Algebra II, IT	8	AB	-	-	-	-			3	4	
Recommended Courses											
9E1362 Spoken and Written Swedish*	4	B	-	-	42	-		2	3		
Elective Courses											
5B1120 Introductory Course in Mathematics I	1	AB	-	-	-	-					

*The course has limited participation

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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		
2G1316 Datacommunication and Computer Networks <i>Given in Kista</i>	4	A	-	-	-	-	1				
2G1519 Programming Concepts and Techniques, Advanced Course	8	C	38	28	-	30	1	2	3		Individual work approx 200 hours
2G1525 IT Project Course, part 2 <i>Under bearbetning</i>	5	C	-	-	-	-			3	4	
2I1074 No translation <i>Under bearbetning</i>	5	C	-	-	-	-			3	4	
5B1506 Mathematical Statistics, Basic Course	6	C	36	48	-	-	1	2			
6B3023 No translation <i>Under bearbetning</i>	4	C	16	16	-	-				4	
9E1363 Written and Spoken Communication	4	B	-	-	42	-			3	4	

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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	16	18	-	-			3	4		
9E1363 Written and Spoken Communication	4	B	-	-	42	-			3	4		
Elective Courses												
2B1140 Frontiers of Microelectronics and Information Technology <i>Not offered fall 2004, only spring 2005</i> <i>Offered twice a year, either fall or spring.</i>	4	D	20	-	-	-	1	2	3	4		
2G1722 Developing Mobile Applications	5	D	20	-	-	10	1					
2G1723 GSM Network and Services	5	D	24	-	-	-			3		Exercises, 5 sessions Laboratory, 2 sessions	

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Information and Communication Technology

Information and Communication Technology IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
3C1320 Environment and Technology	4	C	24	3	-	-			3		
3C1330 Technology and Ecosystems	4	B	24	3	-	-		2			
3C1330 Technology and Ecosystems	4	B	24	3	-	-	1				
6B2913 Sustainable Technology	4	B	6	12	-	4			3	4	
Elective Courses											
2B1140 Frontiers of Microelectronics and Information Technology <i>Not offered fall 2004, only spring 2005</i> <i>Offered twice a year, either fall or spring.</i>	4	D	20	-	-	-	1	2	3	4	
2G1722 Developing Mobile Applications	5	D	20	-	-	10	1				
2G1723 GSM Network and Services	5	D	24	-	-	-			3		Exercises, 5 sessions Laboratory, 2 sessions

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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	
Conditionally Elective Courses											
2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3		
2G1305 <u>Internetworking</u> <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1				
2G1505 <u>Theory of Automata</u>	4	D	20	10	-	-		2			
2G1510 <u>Computer Architecture</u> <u>Fundamentals, Intermediate Course</u> <i>replaces 2G1303</i>	5	C	14	12	-	4		2			Seminar 4h

Electronic and Computer Systems - Computer Systems IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2D1373 <u>Artificial Languages and Syntax Analysis</u>	4	C	24	-	-	16			3		
2D1426 <u>Robotics and Autonomous Systems*</u>	5	D	16	-	-	60				4	
2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3		
2G1114 <u>Parallel Computer Systems</u>	5	D	-	-	24	-		2			Individual project guidance: 2-5 h/ student. Home study time: 150 h
2G1121 <u>Logic Programming</u> <i>Given in Kista</i>	4	D	16	8	-	-	1				Individual work on project
2G1305 <u>Internetworking</u> <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1				
2G1505 <u>Theory of Automata</u>	4	D	20	10	-	-		2			
2G1510 <u>Computer Architecture Fundamentals, Intermediate Course</u> <i>replaces 2G1303</i>	5	C	14	12	-	4		2			Seminar 4h
2G1511 <u>Computer Architecture</u>	6	D	42	-	-	12			3	4	Individual project guidance: 2-5 h/ student Home study time: 180 h

*The course has limited participation

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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	
Conditionally Elective Courses											
2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3		
2G1305 <u>Internetworking</u> <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1				
2G1505 <u>Theory of Automata</u>	4	D	20	10	-	-		2			
2G1510 <u>Computer Architecture</u> <u>Fundamentals, Intermediate Course</u> <i>replaces 2G1303</i>	5	C	14	12	-	4		2			Seminar 4h

Electronic and Computer Systems - Electronic Systems IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Conditionally Elective Courses												
2B1423 <u>ASIC-design Methodology with High-level Languages</u>	5	D	20	-	-	16				4	Project 12 hours	
2B1428 <u>Design of Digital Integrated Circuits - VLSI</u>	5	D	21	8	-	16	1	2				
2B1429 <u>System Modelling</u>	5	D	20	12	-	-			3			
2B1453 <u>Design of Fault-tolerant Systems</u> <i>Under bearbetning</i>	4	D	24	6	-	-				4		
2B1455 <u>Anatomy of EDA CAD-tools</u> <i>Under bearbetning</i>	5	D	24	6	-	-			3			
2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3			
2G1121 <u>Logic Programming</u> <i>Given in Kista</i>	4	D	16	8	-	-	1				Individual work on project	
2G1305 <u>Internetworking</u> <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1					
2G1505 <u>Theory of Automata</u>	4	D	20	10	-	-		2				
2G1510 <u>Computer Architecture Fundamentals, Intermediate Course</u> <i>replaces 2G1303</i>	5	C	14	12	-	4		2			Seminar 4h	

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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	
Conditionally Elective Courses											
2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3		
2G1305 <u>Internetworking</u> <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1				
2G1505 <u>Theory of Automata</u>	4	D	20	10	-	-		2			
2G1510 <u>Computer Architecture</u> <u>Fundamentals, Intermediate Course</u> <i>replaces 2G1303</i>	5	C	14	12	-	4		2			Seminar 4h

Electronic and Computer Systems - Embedded Systems IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2B1423 <u>ASIC-design Methodology with High-level Languages</u>	5	D	20	-	-	16				4	Project 12 hours
2B1429 <u>System Modelling</u>	5	D	20	12	-	-			3		
2B1453 <u>Design of Fault-tolerant Systems</u> <i>Under bearbetning</i>	4	D	24	6	-	-				4	
2D1426 <u>Robotics and Autonomous Systems*</u>	5	D	16	-	-	60				4	
2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3		
2G1305 <u>Internetworking</u> <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1				
2G1505 <u>Theory of Automata</u>	4	D	20	10	-	-		2			
2G1508 <u>Compilers and Virtual Machines</u>	4	C	24	10	-	4			3		
2G1510 <u>Computer Architecture</u> <u>Fundamentals, Intermediate Course</u> <i>replaces 2G1303</i>	5	C	14	12	-	4		2			Seminar 4h

*The course has limited participation

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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> <i>The course is given on Campus. The course is similar to 2B1480.</i>	5	C	20	8	-	16				4	Project 16h The course is given in Campus. (Valhallavägen)
2B1512 <u>Digital Design with HDL</u> <i>Complementary course, 2B1428 Design of digital integrated circuits- VLSI</i>	6	D	28	-	-	36	1	2			Project 20 h
2E1313 <u>Signals and Systems, part II</u>	5	C	-	-	-	-	1				
2G1520 <u>Operating Systems</u> <i>Replaces 2G1113 and 2G1504 from 04/05 Given in Kista</i>	5	C	28	10	-	12			3		

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Information Systems - Interactive Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2I1042 <u>Design and Construction of Interactive Systems</u>	5	C	-	-	-	-		2			
2I1235 <u>Agent Programming</u> <i>The course are not electiv if students already had read 2G1524</i>	4	D	18	-	-	3				4	Other 80 hours
2I1706 <u>Programming of Interactive Systems</u>	4	D	26	-	6	50	1	2			
2I1710 <u>Ubiquitous Computing</u> <i>Replaces course 2I1236 and 2I1237 start in P3, end in P4</i>	4	D	29	-	50	-			3	4	tutorials 6 h, seminars 5 h

Information Systems - Interactive Systems IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2F1111 <u>Speech Technology</u>	4	D	36	14	-	6			3		
2I1042 <u>Design and Construction of Interactive Systems</u>	5	C	-	-	-	-		2			
2I1055 <u>Methods for the Design of Multimedia & Interactive Systems</u>	6	D	25	-	-	64				4	Seminars 24 hours. Project work 128 hours
2I1095 <u>Cognitive Science</u>	4	C	25	-	-	-			3		Course assignment work 120
2I1234 <u>Machine Learning</u>	4	D	36	-	-	-				4	
2I1235 <u>Agent Programming</u> <i>The course are not electiv if students already had read 2G1524</i>	4	D	18	-	-	3				4	Other 80 hours
2I1409 <u>Complex Social Networks</u>	4	D	20	-	-	-		2			
2I1703 <u>Affective interaction</u>	4	D	18	-	-	-	1			4	project 120 hours
2I1706 <u>Programming of Interactive Systems</u>	4	D	26	-	6	50	1	2			
2I1710 <u>Ubiquitous Computing</u> <i>Replaces course 2I1236 and 2I1237 start in P3, end in P4</i>	4	D	29	-	50	-			3	4	tutorials 6 h, seminars 5 h
2I1803 <u>Internet Programming III</u> <i>Replaces 2I1266 from VT04</i>	5	D	6	-	-	160			3		

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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	
Conditionally Elective Courses											
2I1040 Knowledge and Software Reuse	4	C	18	18	-	40			3		
2I1052 Internet Information Search Techniques <i>the course is moved to spring 2005, period 4</i>	4	C	21	-	-	80				4	6 h SeminarsReading 50 h 6 h Seminars
2I1054 Relational Database Management Systems	4	C	24	-	-	-	1	2			Seminars 10 h. Project work 80 h.
2I1224 Data Warehousing	4	D	15	10	-	30				4	
2I1242 Models and Languages for Object and Web Databases	5	D	21	15	-	-			3		other work 75h
2I1406 Mobile Business	5	D	18	12	-	-			3		Project work 80 h
2I1413 Business Intelligence	4	D	12	-	-	4	1				

Information Systems - Management of Information Technology and Systems IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2I1040 Knowledge and Software Reuse	4	C	18	18	-	40			3		
2I1052 Internet Information Search Techniques <i>the course is moved to spring 2005, period 4</i>	4	C	21	-	-	80				4	6 h Seminars Reading 50 h 6 h Seminars
2I1053 Internet and ERP Systems	5	C	12	-	-	-	1				Project work 80 h
2I1054 Relational Database Management Systems	4	C	24	-	-	-	1	2			Seminars 10 h. Project work 80 h.
2I1056 Relational Database Design - Logical and Physical	4	C	12	12	-	60		2			Computer tutorials and hand in assignments 80h
2I1190 Organisations, IT-Systems and Management	7	C	36	-	14	9			3	4	Seminars 6h
2I1191 IT-Platform: Strategy, Architecture and Design	5	C	30	-	-	-				4	Seminars 6h
2I1198 IT-Management	5	C	27	-	7	-				4	Seminars 8 hours
2I1224 Data Warehousing	4	D	15	10	-	30				4	

211228 Enterprise Computing and ERP Systems	5	D	14	12	-	60	1				80h
211229 Knowledge Management	4	D	28	-	-	18				4	70h
211242 Models and Languages for Object and Web Databases	5	D	21	15	-	-				3	other work 75h
211404 Model-driven Development of Components	5	D	20	35	-	110	2				
211406 Mobile Business	5	D	18	12	-	-				3	Project work 80 h
211408 Projects and Powergames	4	D	24	-	-	-	2				Seminars 15 hours
211412 Managing Organisational Learning	4	D	12	-	-	-	2				16 Seminars
211413 Business Intelligence	4	D	12	-	-	4	1				

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Information and Communication Technology

Information Systems - Software Engineering and Security IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2G1121 Logic Programming <i>Given in Kista</i>	4	D	16	8	-	-	1				Individual work on project
2G1505 Theory of Automata	4	D	20	10	-	-		2			
2I1050 Security Management <i>The course cannot be included in an exam together with course 2I1506</i>	5	D	27	-	-	-				4	
2I1258 Large-Scale Software Engineering	5	D	21	-	-	120				4	60h
2I1274 Security Protocols and Applications in Computer Network <i>Replaced by 2I1503 04/05</i>	4	D	24	-	-	24				4	Extra reading material 36 hours
2I1276 Security for Java Environment and Electronic Commerce	4	D	21	8	3	-	1		3		Extra Reading Materials 36h, Research Project 24h
2I1502 Introduction to Cryptography	5	D	28	-	-	12		2			
2I1503 Network Security <i>Replaces 2I1274 from 04/05</i>	5	D	18	-	-	18		2			
2I1902 Advanced Issues in Object-Oriented	5	D	30	10	-	-		2			assignment 120 hours
2I1903 Software Testing and Metrics <i>the curse replace 2I1251(for information about 2I1251,search in study handbook 2003/04)</i>	4	D	36	-	-	-			3	4	Seminars 3 h

Information Systems - Software Engineering and Security IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2G1121 Logic Programming <i>Given in Kista</i>	4	D	16	8	-	-	1				Individual work on project
2G1505 Theory of Automata	4	D	20	10	-	-		2			
2G1516 Formal Methods <i>Replaces 2G1301 from 2003/2004</i>	5	D	24	20	-	12	1				
2I1050 Security Management <i>The course cannot be included in an exam together with course 2I1506</i>	5	D	27	-	-	-				4	
2I1258 Large-Scale Software Engineering	5	D	21	-	-	120				4	60h
2I1259 Value-Based Software Engineering <i>The course is not given 2004/05</i>	5	D	28	-	-	-				4	Seminar 14 h

211272 Security Architecture for Open Distributed Systems	4	D	24	-	-	-			4	Research Assignment 24h, Extra Reading Materials 36h
211274 Security Protocols and Applications in Computer Network <i>Replaced by 211503 04/05</i>	4	D	24	-	-	24			4	Extra reading material 36 hours
211276 Security for Java Environment and Electronic Commerce	4	D	21	8	3	-	1	3		Extra Reading Materials 36h, Research Project 24h
211279 Security in Mobile and Wireless Networks	4	D	24	-	-	10		2	3	
211502 Introduction to Cryptography	5	D	28	-	-	12		2		
211503 Network Security <i>Replaces 211274 from 04/05</i>	5	D	18	-	-	18		2		
211504 Software Engineering and Security Architecture	5	D	18	-	-	18			3	
211505 Legal Aspects of Information Security	5	D	24	-	-	12			3	
211511 Value Based Risk Management	5	D	12	12	-	-	1			
211902 Advanced Issues in Object-Oriented	5	D	30	10	-	-		2		assignment 120 hours
211903 Software Testing and Metrics <i>the course replace 211251(for information about 211251,search in study handbook 2003/04)</i>	4	D	36	-	-	-			3	4 Seminars 3 h

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Information and Communication Technology

Information Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
211033 IT in Organisations and Databases	8	C	24	18	-	200	1	2			
211130 Cognitive Psychology	4	B	30	12	-	-	1				
211140 Artificial Intelligence	6	D	39	10	-	80			3		
211402 Processes for IT Project Management	4	D	24	-	-	-		2			9h

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Computer and Communication Systems - Computer Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2B1512 Digital Design with HDL <i>Complementary course, 2B1428 Design of digital integrated circuits- VLSI</i>	6	D	28	-	-	36	1	2			Project 20 h
2G1121 Logic Programming <i>Given in Kista</i>	4	D	16	8	-	-	1				Individual work on project
2G1505 Theory of Automata	4	D	20	10	-	-		2			

Computer and Communication Systems - Computer Systems IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2B1512 Digital Design with HDL <i>Complementary course, 2B1428 Design of digital integrated circuits- VLSI</i>	6	D	28	-	-	36	1	2			Project 20 h
2D1373 Artificial Languages and Syntax Analysis	4	C	24	-	-	16			3		
2D1426 Robotics and Autonomous Systems*	5	D	16	-	-	60				4	
2G1114 Parallel Computer Systems	5	D	-	-	24	-		2			Individual project guidance: 2-5 h/ student. Home study time: 150 h
2G1121 Logic Programming <i>Given in Kista</i>	4	D	16	8	-	-	1				Individual work on project
2G1505 Theory of Automata	4	D	20	10	-	-		2			
2G1511 Computer Architecture	6	D	42	-	-	12			3	4	Individual project guidance: 2-5 h/ student Home study time: 180 h

*The course has limited participation

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Computer and Communication Systems - Communication Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2G1318 <u>Queuing Theory and Teletraffic Systems</u>	4	D	24	24	-	-		2			
2G1332 <u>Management of Networks and Networked Systems</u> <i>Given in Kista but also at Campus Valhallavägen through videoconnection</i>	5	D	20	-	-	20		2			

Computer and Communication Systems - Communication Systems IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2G1318 <u>Queuing Theory and Teletraffic Systems</u>	4	D	24	24	-	-		2			
2G1319 <u>Communication System Design</u> <i>Replaces 2G1303. Also given as 2G1711, 12 credits; 2G1712, 16 credits and 2G1713, 20 credits</i>	10	D	-	-	-	-			3	4	Project work
2G1325 <u>Practical Voice Over IP (VoIP)</u>	5	D	10	-	-	-				4	Assigned paper 50h
2G1330 <u>Wireless and Mobile Network Architectures</u>	5	D	10	-	-	-				4	Assigned paper 50h
2G1332 <u>Management of Networks and Networked Systems</u> <i>Given in Kista but also at Campus Valhallavägen through videoconnection</i>	5	D	20	-	-	20		2			
2G1333 <u>Network Services and Internet-based Applications*</u>	4	D	8	-	-	-				4	Project 120 hours
2G1509 <u>Distributed Systems, Basic Course</u>	5	D	24	-	-	-			3		Project work 10 hours
2G1511 <u>Computer Architecture</u>	6	D	42	-	-	12			3	4	Individual project guidance: 2-5 h/ student Home study time: 180 h
2G1703 <u>Inter Domain Routing</u>	5	D	10	-	-	20		2			Home assignment
2G1704 <u>Internet Security and Privacy</u>	5	D	30	10	-	-		2			assigned paper

*The course has limited participation

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Computer and Communication Systems - Parallel and Distributed Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2G1121 <u>Logic Programming</u> <i>Given in Kista</i>	4	D	16	8	-	-	1				Individual work on project
2G1505 <u>Theory of Automata</u>	4	D	20	10	-	-		2			
2G1524 <u>Distributed Artificial Intelligence and Intelligent Agents</u> <i>The course is not electiv if the student has already taken 2I1235</i>	5	D	28	10	-	-		2			
2I1235 <u>Agent Programming</u> <i>The course are not electiv if students already had read 2G1524</i>	4	D	18	-	-	3				4	Other 80 hours

Computer and Communication Systems - Parallel and Distributed Systems IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Conditionally Elective Courses												
2G1114 <u>Parallel Computer Systems</u>	5	D	-	-	24	-		2			Individual project guidance: 2-5 h/ student. Home study time: 150 h	
2G1117 <u>Semantics for Programming Languages</u>	4	D	20	10	-	-			3			
2G1118 <u>Network Programming with Java</u> <i>In period 2 the course is given in Kista</i>	4	D	20	10	-	8		2				
2G1118 <u>Network Programming with Java</u> <i>In period 4 the course is given at Campus Valhallavägen.</i>	4	D	20	10	-	8				4		
2G1121 <u>Logic Programming</u> <i>Given in Kista</i>	4	D	16	8	-	-	1				Individual work on project	
2G1505 <u>Theory of Automata</u>	4	D	20	10	-	-		2				
2G1509 <u>Distributed Systems, Basic Course</u>	5	D	24	-	-	-			3		Project work 10 hours	
2G1513 <u>Distributed Systems, Advanced Course</u> <i>Replaces 2G1126 from 2003/2004</i>	5	D	24	-	-	-				4		
2G1515 <u>Constraint Programming</u>	5	D	24	-	-	-		2			Project work 10 hours	
2G1516 <u>Formal Methods</u> <i>Replaces 2G1301 from 2003/2004</i>	5	D	24	20	-	12	1					
2G1517 <u>Advanced Formal Methods</u>	5	D	12	-	-	-				4	Seminars 6 hours	

2G1522 Modern Methods in Software Engineering	5	D	20	10	-	-			4	
2G1523 Programming Web-Services	5	D	20	10	-	-			3	
2G1524 Distributed Artificial Intelligence and Intelligent Agents <i>The course is not elective if the student has already taken 2I1235</i>	5	D	28	10	-	-		2		
2G1704 Internet Security and Privacy	5	D	30	10	-	-		2		assigned paper
2I1235 Agent Programming <i>The course are not elective if students already had read 2G1524</i>	4	D	18	-	-	3			4	Other 80 hours

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Computer and Communication Systems - Wireless Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2E1313 <u>Signals and Systems, part II</u>	5	C	-	-	-	-	1				
2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3		
2G1305 <u>Internetworking</u> <i>Given in Kista</i>	4		20	14	-	8				4	
Conditionally Elective Courses											
2B1512 <u>Digital Design with HDL</u> <i>Complementary course, 2B1428 Design of digital integrated circuits- VLSI</i>	6	D	28	-	-	36	1	2			Project 20 h
2G1332 <u>Management of Networks and Networked Systems</u> <i>Given in Kista but also at Campus Valhallavägen through videoconnection</i>	5	D	20	-	-	20		2			
2G1510 <u>Computer Architecture Fundamentals, Intermediate Course</u> <i>replaces 2G1303</i>	5	C	14	12	-	4		2			Seminar 4h

Computer and Communication Systems - Wireless Systems IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2B1512 <u>Digital Design with HDL</u> <i>Complementary course, 2B1428 Design of digital integrated circuits- VLSI</i>	6	D	28	-	-	36	1	2			Project 20 h
2B1600 <u>Radio Electronics</u>	5	D	26	12	-	16				4	
2E1340 <u>Digital Signal Processing</u>	5	C	26	24	-	3		2			
2E1350 <u>Adaptive Signal Processing</u>	4	D	24	14	-	-			3		
2E1400 <u>Speech Signal Processing</u> <i>Replaces 2F1521.</i>	4	D	24	24	-	-		2			
2E1410 <u>Information Theory and Source Coding, Accel Program Course</u>	5	D	36	12	-	-			3		
2E1511 <u>Radio Communication, Basic Course</u>	4	D	24	24	-	8	1				
2G1318 <u>Queuing Theory and Teletraffic Systems</u>	4	D	24	24	-	-		2			
2G1330 <u>Wireless and Mobile Network Architectures</u>	5	D	10	-	-	-				4	Assigned paper 50h

2G1332 Management of Networks and Networked Systems <i>Given in Kista but also at Campus Valhallavägen through videoconnection</i>	5	D	20	-	-	20	2			
2G1509 Distributed Systems, Basic Course	5	D	24	-	-	-		3		Project work 10 hours
2G1510 Computer Architecture Fundamentals, Intermediate Course <i>replaces 2G1303</i>	5	C	14	12	-	4	2			Seminar 4h
2G1522 Modern Methods in Software Engineering	5	D	20	10	-	-			4	
2G1523 Programming Web-Services	5	D	20	10	-	-		3		

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Information and Communication Technology

Computer and Communication Systems IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2G1305 Internetworking <i>Given in Kista</i>	4		20	14	-	8				4	
2G1508 Compilers and Virtual Machines	4	C	24	10	-	4			3		
2G1510 Computer Architecture <i>Fundamentals, Intermediate Course</i> <i>replaces 2G1303</i>	5	C	14	12	-	4		2			Seminar 4h
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes</i> <i>In period 1, the course is given in Kista.</i>	5	C	36	-	-	24	1				

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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	
Conditionally Elective Courses											
2B1221 <u>Methods and Instruments of Analysis</u> <i>Not offered 2004/05</i>	5	D	32	-	-	16		2			
2B1240 <u>VLSI-technology II</u>	5	D	24	-	-	16			3		
2B1242 <u>Design and Characterisation of Nano- and Microdevices</u>	5	D	24	-	-	16			3		
2B1245 <u>Advanced VLSI-Devices</u>	5	D	20	-	-	32				4	
2B1248 <u>Simulation of Semiconductor Devices</u>	5	D	24	-	-	32		2			
2B1700 <u>Advanced Semiconductor Materials</u>	5	D	34	-	-	16			3		

Microelectronics - Semiconductor technology IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2B1221 <u>Methods and Instruments of Analysis</u> <i>Not offered 2004/05</i>	5	D	32	-	-	16		2			
2B1240 <u>VLSI-technology II</u>	5	D	24	-	-	16			3		
2B1242 <u>Design and Characterisation of Nano- and Microdevices</u>	5	D	24	-	-	16			3		
2B1245 <u>Advanced VLSI-Devices</u>	5	D	20	-	-	32				4	
2B1248 <u>Simulation of Semiconductor Devices</u>	5	D	24	-	-	32		2			
2B1700 <u>Advanced Semiconductor Materials</u>	5	D	34	-	-	16			3		

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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	
Conditionally Elective Courses											
2B1248 <u>Simulation of Semiconductor Devices</u>	5	D	24	-	-	32		2			
2B1450 <u>Electronic System Packaging</u>	5	D	20	-	-	16			3		
2B1512 <u>Digital Design with HDL</u> <i>Complementary course, 2B1428 Design of digital integrated circuits- VLSI</i>	6	D	28	-	-	36	1	2			Project 20 h
2G1305 <u>Internetworking</u> <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1				

Microelectronics - Circuit Design IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2B1248 <u>Simulation of Semiconductor Devices</u>	5	D	24	-	-	32		2			
2B1428 <u>Design of Digital Integrated Circuits - VLSI</u>	5	D	21	8	-	16	1	2			
2B1450 <u>Electronic System Packaging</u>	5	D	20	-	-	16			3		
2B1512 <u>Digital Design with HDL</u> <i>Complementary course, 2B1428 Design of digital integrated circuits- VLSI</i>	6	D	28	-	-	36	1	2			Project 20 h
2B1600 <u>Radio Electronics</u>	5	D	26	12	-	16				4	
2B1611 <u>Low Power Analog and Mixed Signal IC's</u> <i>The course replaces 2B1610</i>	5	D	-	14	42	-				4	
2E1511 <u>Radio Communication, Basic Course</u>	4	D	24	24	-	8	1				
2G1305 <u>Internetworking</u> <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1				
2G1305 <u>Internetworking</u> <i>Given in Kista</i>	4		20	14	-	8				4	

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Information and Communication Technology

Microelectronics IT3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1311 <u>Microwave Engineering, Minor Course</u>	4	C	-	-	-	-		2			
2B1430 <u>Design of Digital Integrated Circuits - LSI</u> <i>The course is given on Campus. The course is similar to 2B1480.</i>	5	C	20	8	-	16				4	Project 16h The course is given in Campus. (Valhallavägen)
2E1313 <u>Signals and Systems, part II</u>	5	C	-	-	-	-	1				
2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3		

Microelectronics IT4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1515 Analog Electronics, Advanced Course <i>Under bearbetning</i>	5	C	30	14	-	20			3		Project work

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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											
3B1700 <u>Introductory Chemistry</u>	4	B	24	18	-	22	1				
3B1711 <u>Chemical Equilibria</u>	4	B	12	22	-	25			3	4	
3B1750 <u>Organic Chemistry I</u>	5	B	20	14	-	42		2			
3C1451 <u>Introduction to Chemical Engineering</u>	7	B	39	26	-	-		2	3		Field Exercise 1 day, Plant Trip 1 day
5A1225 <u>Electromagnetism and Waves</u>	5	B	38	18	-	20				4	
5B1115 <u>Mathematics I</u>	6	AB	-	-	-	-	1				
5B1116 <u>Mathematics II</u>	6	AB	60	30	-	-		2	3		
5C1102 <u>Mechanics, Smaller Course</u>	4	B	30	15	-	-				4	
Elective Courses											
3B1705 <u>Introductory Course in Chemistry</u>	1	A	-	-	-	-					
3C1921 <u>Oral and Written Presentation for Chemists</u>	4	B	4	12	2	2		2			
5B1120 <u>Introductory Course in Mathematics I</u>	1	AB	-	-	-	-					

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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	20	18	-	18		2	3		
3B1720 Chemical Thermodynamics	5	C	28	30	-	15	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	
3E1200 Polymer Technology with Cellulose Technology	5	C	34	25	-	-				4	
5A1225 Electromagnetism and Waves	5	B	38	18	-	20		2			
5B1210 Mathematics IV	6	AB	-	-	-	-	1				
Elective Courses											
3C1921 Oral and Written Presentation for Chemists	4	B	4	12	2	2		2			

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Chemical Engineering

Chemical Engineering K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3A1108 Biotechnology	4	B	36	-	-	-		2			
3B1770 Chemical Measuring Techniques	5	C	22	4	-	12	1				
3C1616 Reaction and Separation Engineering	7	C	28	30	-	12		2	3		8 h Seminars, 10 h Computer16 hour 8 h Seminars, 10 h Computer
3C1715 Transport Phenomena and Engineering Thermodynamics	7	C	28	40	-	12	1	2			6 h Seminars, 12 h Computer6 h Seminars, 12 h Computer
Elective Courses											
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1511 Organic Chemistry, Advanced Course 1	9	D	12	6	54	-	1			4	
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	-			3		8 h Projektuppgift8 h Projektuppgift
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	15	-	-	-	1				
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2			
3C1383 Risk Management	4	C	16	30	-	-	1				
3C1387 Environmental Systems Analysis	4	C	16	8	-	6		2			
3C1395 Technology and Sustainable Development	4	C	2	6	-	-		2			
3C1621 Process Chemistry	5	D	36	72	-	-			3		
3C1626 Chemical Engineering, Laboratory Course	4	D	2	-	80	-			3		
3C1723 Transport Phenomena, Advanced Course	5	D	18	12	-	-			3		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	4	12	2	2		2			

3D1058 Wood Chemistry and Wood Biotechnology	4	D	26	-	-	15			3	
3D1112 Fiber 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 <i>Under bearbetning</i>	4	B	-	-	-	-				
5B1301 Mathematics, Advanced Course, Partial Differential Equations	4	C	-	-	42	-			3	
9E1230 Information Searching for K	1	B	-	-	-	-	1			A total of 9h, a written examination and a written report, see
9E1230 Information Searching for K	1	B	-	-	-	-		2		A total of 9h, a written examination and a written report, see
9E1230 Information Searching for K	1	B	-	-	-	-			3	A total of 9h, a written examination and a written report, see
9E1230 Information Searching for K	1	B	-	-	-	-			4	A total of 9h, a written examination and a written report, see

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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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												
3B1580 Ecological Chemistry	4	C	20	-	-	48			3	4		
3B1581 Ecological Chemistry with project 6p	6	C	20	-	-	-			3	4		
3B1650 Molecular Simulations Using a Computer	5	D	14	10	-	40			3			
3B1655 Optical Processes and Properties	5	D	10	10	-	-				4		
9E1230 Information Searching for K	1	B	-	-	-	-			3		A total of 9h, a written examination and a written report, see	
9E1230 Information Searching for K	1	B	-	-	-	-	1				A total of 9h, a written examination and a written report, see	
9E1230 Information Searching for K	1	B	-	-	-	-		2			A total of 9h, a written examination and a written report, see	
9E1230 Information Searching for K	1	B	-	-	-	-				4	A total of 9h, a written examination and a written report, see	

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Chemical Engineering

Business Development and Media Technology K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
2D1550 Market Systems	5	C	-	-	-	-	1					Seminars 40h
2D1551 Consumer Markets <i>Open only to AFM-students.</i>	5	C	-	-	-	-	1					Seminars 40h
2D1552 Media Management	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	52	-	-	88		2				Only open for AFM-students.
2D1555 Information Technology and Organizations*	5	D	20	20	-	-					4	Open only to AMF-students.

*The course has limited participation

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Chemical Engineering

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	67	-	-	18			3	4	3 h Seminars3 h Seminars
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 <u>Biomedical Engineering, Basic Course</u>	5	C	30	-	-	-	1				
7E1202 <u>Systems Biology*_</u>	5	C	32	-	-	25		2			24 h Seminars 24 h Seminars
Recommended Courses											
3A1115 <u>Biochemistry</u>	4	D	34	-	-	-				4	

*The course has limited participation

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Chemical Engineering

Biomolecular technology K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3A1109 Biochemistry	8	D	34	-	-	-				4		
3A1305 Microbiology, General Course	6	D	36	16	-	54			3	4		
3B1102 Analytical Chemistry	4	C	20	-	-	16			3			
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4		
Recommended Courses												
3A1111 Enzymatic Synthesis	5	D	20	12	-	20				4		
3A1504 Structure Biology	4	D	32	-	-	20				4		
3B1321 Radical Chemistry	5	D	30	-	-	-			3			

Biomolecular technology K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
3A1109 Biochemistry	8	D	34	-	-	70	1	2				
3A1510 Molecular Biotechnology, Theory	4	D	36	-	-	-		2				
Recommended Courses												
1N1109 Ethics of Biotechnology	5	C	24	-	-	-	1	2				Seminars 6h, individual essay-tutorials
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	
3A1112 Biochemical Analyses and Separation Techniques	5	D	32	-	-	30					4	
3A1205 Biochemical Technology	7	D	40	-	-	60			3	4		
3A1206 Biochemical Technology, Theory	5	D	40	10	-	-			3	4		
3A1313 Technical Microbiology	8	D	38	6	-	-			3	4		12 h Seminars12 h Seminars
3A1314 Technical Microbiology, Theory	5	D	38	-	-	-			3			
3A1314 Technical Microbiology, Theory	5	D	38	-	-	-			3			
3A1504 Structure Biology	4	D	32	-	-	20					4	

3A1506 Drug Development	4	D	36	-	-	-		3	8 h Study visit8 h Study visit
3A1507 Functional Genomics	4	D	24	-	-	15	1		
3A1508 Wood Biotechnology	5	D	34	-	-	-	2		5 h Seminars5 h Seminars
3B1121 Organic and Biochemical Analytical Separations	5	D	28	20	-	36		4	
3B1211 Quantum Chemistry and Spectroscopy	6	D	48	-	-	8	1		
3B1231 NMR-spectroscopy	4	D	30	-	-	12	2		
3B1321 Radical Chemistry	5	D	30	-	-	-		3	
3B1482 Structural Chemistry	5	D	16	6	-	16	1		
3B1531 Organic Chemistry, Advanced Course	4	D	-	-	-	54	1		
3B1542 Organic Chemistry, Intermediate Course II	5	D	24	-	-	40		3	
3B1580 Ecological Chemistry	4	C	20	-	-	48		3	4
3B1581 Ecological Chemistry with project 6p	6	C	20	-	-	-		3	4

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Industrial ecology K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3C1347 Env. Technology and Env. Impact Studies, Larger Course	8	D	32	16	-	24			3	4	
3C1380 Environmental Management	4	C	10	-	-	-			3		12 h Seminars12 h Seminars
Recommended Courses											
3A1115 Biochemistry	4	D	34	-	-	-				4	
3B1102 Analytical Chemistry	4	C	20	-	-	16			3		
3B1443 Atmosphere, Aquatic and Terrestrial Chemistry	5	C	12	10	-	24				4	
3B1511 Organic Chemistry, Advanced Course 1	9	D	12	6	54	-	1			4	
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	
3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	18	-	-	-				4	Project work 20h
3C1351 International Intensive Course in Solid Waste Management	4	D	-	-	-	-			3		
3C1390 Environmental Management, Larger Course	8	D	36	3	-	24			3	4	Project work, field exercise
3C1651 Environmental Catalysis	4	D	32	-	-	-			3		6 h Study visit6 h Study visit

Industrial ecology 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	C	10	-	-	-			3		12 h Seminars12 h Seminars
3C1387 Environmental Systems Analysis	4	C	16	8	-	6		2			
3C1395 Technology and Sustainable Development	4	C	2	6	-	-		2			
Recommended Courses											

3A1104 Environmental Toxicology	6	D	36	14	-	-	1	2			
3A1115 Biochemistry	4	D	34	-	-	-				4	
3A1305 Microbiology, General Course	6	D	36	16	-	54			3	4	
3B1443 Atmosphere, Aquatic and Terrestrial Chemistry	5	C	12	10	-	24				4	
3C1343 Environmental Technology, Advanced Course II	6	D	-	-	-	-					
3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	18	-	-	-				4	Project work 20h
3C1351 International Intensive Course in Solid Waste Management	4	D	-	-	-	-			3		
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

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Chemical Engineering

K1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3B1700 <u>Introductory Chemistry</u>	4	B	24	18	-	22	1				
3B1711 <u>Chemical Equilibria</u>	4	B	12	22	-	25			3	4	
3B1750 <u>Organic Chemistry I</u>	5	B	20	14	-	42		2			
3C1451 <u>Introduction to Chemical Engineering</u>	7	B	39	26	-	-		2	3		Field Exercise 1 day, Plant Trip 1 day
5A1225 <u>Electromagnetism and Waves</u>	5	B	38	18	-	20				4	
5B1115 <u>Mathematics I</u>	6	AB	-	-	-	-	1				
5B1116 <u>Mathematics II</u>	6	AB	60	30	-	-		2	3		
5C1102 <u>Mechanics, Smaller Course</u>	4	B	30	15	-	-				4	
9E1339 <u>French, Advanced Beginners' Level</u>	5	B	-	-	56	-			3	4	
Elective Courses											
3B1705 <u>Introductory Course in Chemistry</u>	1	A	-	-	-	-					
5B1120 <u>Introductory Course in Mathematics I</u>	1	AB	-	-	-	-					

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Chemical Engineering

K1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3B1700 Introductory Chemistry	4	B	24	18	-	22	1				
3B1711 Chemical Equilibria	4	B	12	22	-	25			3	4	
3B1750 Organic Chemistry I	5	B	20	14	-	42		2			
3C1451 Introduction to Chemical Engineering	7	B	39	26	-	-		2	3		Field Exercise 1 day, Plant Trip 1 day
5A1225 Electromagnetism and Waves	5	B	38	18	-	20				4	
5B1115 Mathematics I	6	AB	-	-	-	-	1				
5B1116 Mathematics II	6	AB	60	30	-	-		2	3		
5C1102 Mechanics, Smaller Course	4	B	30	15	-	-				4	
9E1381 Elementary Japanese and Japanese Studies	4	B	-	-	56	-			3	4	
Elective Courses											
3B1705 Introductory Course in Chemistry	1	A	-	-	-	-					
5B1120 Introductory Course in Mathematics I	1	AB	-	-	-	-					

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Chemical Engineering

K1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3B1700 <u>Introductory Chemistry</u>	4	B	24	18	-	22	1				
3B1711 <u>Chemical Equilibria</u>	4	B	12	22	-	25			3	4	
3B1750 <u>Organic Chemistry I</u>	5	B	20	14	-	42		2			
3C1451 <u>Introduction to Chemical Engineering</u>	7	B	39	26	-	-		2	3		Field Exercise 1 day, Plant Trip 1 day
5A1225 <u>Electromagnetism and Waves</u>	5	B	38	18	-	20				4	
5B1115 <u>Mathematics I</u>	6	AB	-	-	-	-	1				
5B1116 <u>Mathematics II</u>	6	AB	60	30	-	-		2	3		
5C1102 <u>Mechanics, Smaller Course</u>	4	B	30	15	-	-				4	
9E1390 <u>Elementary Chinese and Chinese Studies</u>	4	B	-	-	56	-			3	4	
Elective Courses											
3B1705 <u>Introductory Course in Chemistry</u>	1	A	-	-	-	-					
5B1120 <u>Introductory Course in Mathematics I</u>	1	AB	-	-	-	-					

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Chemical Engineering

K1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3B1700 <u>Introductory Chemistry</u>	4	B	24	18	-	22	1				
3B1711 <u>Chemical Equilibria</u>	4	B	12	22	-	25			3	4	
3B1750 <u>Organic Chemistry I</u>	5	B	20	14	-	42		2			
3C1451 <u>Introduction to Chemical Engineering</u>	7	B	39	26	-	-		2	3		Field Exercise 1 day, Plant Trip 1 day
5A1225 <u>Electromagnetism and Waves</u>	5	B	38	18	-	20				4	
5B1115 <u>Mathematics I</u>	6	AB	-	-	-	-	1				
5B1116 <u>Mathematics II</u>	6	AB	60	30	-	-		2	3		
5C1102 <u>Mechanics, Smaller Course</u>	4	B	30	15	-	-				4	
9E1344 <u>Spanish, Advanced Beginners' Level</u>	5	B	-	-	56	-			3	4	
Elective Courses											
3B1705 <u>Introductory Course in Chemistry</u>	1	A	-	-	-	-					
5B1120 <u>Introductory Course in Mathematics I</u>	1	AB	-	-	-	-					

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Chemical Engineering

K1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3B1700 <u>Introductory Chemistry</u>	4	B	24	18	-	22	1				
3B1711 <u>Chemical Equilibria</u>	4	B	12	22	-	25			3	4	
3B1750 <u>Organic Chemistry I</u>	5	B	20	14	-	42		2			
3C1451 <u>Introduction to Chemical Engineering</u>	7	B	39	26	-	-		2	3		Field Exercise 1 day, Plant Trip 1 day
5A1225 <u>Electromagnetism and Waves</u>	5	B	38	18	-	20				4	
5B1115 <u>Mathematics I</u>	6	AB	-	-	-	-	1				
5B1116 <u>Mathematics II</u>	6	AB	60	30	-	-		2	3		
5C1102 <u>Mechanics, Smaller Course</u>	4	B	30	15	-	-				4	
9E1323 <u>German, Advanced Beginner's Level</u>	5	B	-	-	56	-			3	4	
Elective Courses											
3B1705 <u>Introductory Course in Chemistry</u>	1	A	-	-	-	-					
5B1120 <u>Introductory Course in Mathematics I</u>	1	AB	-	-	-	-					

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Chemical Engineering

Chemical engineering K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
3C1524 Chemical Engineering	6	D	16	18	-	12				4	
3C1723 Transport Phenomena, Advanced Course	5	D	18	12	-	-			3		6 h Seminars, 12 h Computer 6 h Seminars, 12 h Computer
Recommended Courses											
2E1291 Chemical Process Control	4	C	20	28	-	8			3		
3A1305 Microbiology, General Course	6	D	36	16	-	54			3	4	
3B1102 Analytical Chemistry	4	C	20	-	-	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	
3C1347 Env. Technology and Env. Impact Studies, Larger Course	8	D	32	16	-	24			3	4	
3C1621 Process Chemistry	5	D	36	72	-	-			3		
3C1626 Chemical Engineering, Laboratory Course	4	D	2	-	80	-			3		
3C1651 Environmental Catalysis	4	D	32	-	-	-			3		6 h Study visit 6 h Study visit
3C1823 Applied Electrochemistry	5	D	32	16	-	15			3		
3D1058 Wood Chemistry and Wood Biotechnology	4	D	26	-	-	15			3		
3D1112 Fiber Technology	4	D	26	-	-	15				4	
3E1120 Mechanical Properties of Materials	5	C	30	15	-	12				4	
5B1301 Mathematics, Advanced Course, Partial Differential Equations	4	C	-	-	42	-			3		
5B1304 Mathematics, Extended Course	5	C	-	-	54	-			3	4	
5C1212 Computational Fluid Dynamics	5	D	-	-	50	10			3		

Chemical engineering K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	

Conditionally Elective Courses

3C1422 Industrial Energy Processes	5	D	20	20	-	-	1	2			
3C1633 Chemical Reaction Engineering	6	D	16	24	-	34	1	2			
3C1781 Chemical Engineering in Fine and Specialty Chemicals	5	D	20	12	42	27	1				8h industry visit

Recommended Courses

2D1225 Numerical Solutions of Differential Equations	4	C	24	4	-	16	1	2			
2D1263 Program Construction for Scientific Computing	4	C	24	-	-	12			3	4	
2D1320 Applied Computer Science	4	B	28	14	-	20	1	2			
2E1200 Automatic Control, General Course	4	C	24	26	-	12	1				
2E1291 Chemical Process Control	4	C	20	28	-	8			3		
3A1205 Biochemical Technology	7	D	40	-	-	60			3	4	
3A1206 Biochemical Technology, Theory	5	D	40	10	-	-			3	4	
3A1305 Microbiology, General Course	6	D	36	16	-	54			3	4	
3A1313 Technical Microbiology	8	D	38	6	-	-			3	4	12 h Seminars 12 h Seminars
3A1314 Technical Microbiology, Theory	5	D	38	-	-	-			3		
3B1102 Analytical Chemistry	4	C	20	-	-	16			3		
3B1301 Nuclear Chemistry	5	D	30	-	-	20		2			
3B1443 Atmosphere, Aquatic and Terrestrial Chemistry	5	C	12	10	-	24				4	
3B1511 Organic Chemistry, Advanced Course 1	9	D	12	6	54	-	1			4	
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-				4	
3B1781 Inorganic Chemistry	4	D	20	6	-	16				4	
3C1422 Industrial Energy Processes	5	D	20	20	-	-	1	2			
3C1621 Process Chemistry	5	D	36	72	-	-			3		
3C1626 Chemical Engineering, Laboratory Course	4	D	2	-	80	-			3		
3C1651 Environmental Catalysis	4	D	32	-	-	-			3		6 h Study visit 6 h Study visit
3C1654 Computational Project in Chemical Engineering	5	D	-	-	-	-				4	
3C1823 Applied Electrochemistry	5	D	32	16	-	15			3		
3C1941 Chemical Engineering, Design Course	10	D	40	120	-	-				4	
3D1059 The Chemistry of Pulping and Bleaching	5	D	26	-	-	-		2			24 h Seminars 24 h Seminars
3D1114 Paper Processes Technology	4	D	20	-	-	20			3		
3D1115 Pulp and Paper Processes	6	D	40	-	-	48	1	2			
3D1116 Pulp and Paper Processes, Minor Course	4	D	20	-	-	-	1	2			
3D1164 Pulp Technology	4	D	24	-	-	-				4	24 h Seminars 24 h Seminars
3E1120 Mechanical Properties of Materials	5	C	30	15	-	12				4	
4A1140 Energy Systems and Models I	4	D	14	32	-	-				4	9 h Seminars Seminars 9 h 9 h Seminars
4A1610 Energy Management	4	D	50	-	-	-		2	3		
4A1611 Renewable Energy Technology	4	D	-	-	52	-	1				Study visit 8h

4A1613 Energy and Environment <i>Examinator: Björn Palm, Tel 790 7453</i>	4	D	50	-	-	-			3	4	Study visit 6h
4B1424 Vehicle systems for a better environment* <i>There are 50 places to be shared among universities engaged in this set of courses.</i>	5	C	26	26	-	8	1				
4B1428 Environmental friendly vehicle - Project course*	5	D	10	-	-	-		2	3	4	
4F1131 Microcomputers in Embedded Systems*	5	D	-	36	-	36		2			
4F1430 Combustion Engines, general course*	4	C	42	6	-	12	1				
4F1431 Combustion Engines, Advanced Course*	6	D	48	-	-	28		2	3		
4F1530 Function Analysis and Optimization in Mechanical Engineering	5	C	-	60	-	-			3	4	One day field trip.
5B1301 Mathematics, Advanced Course, Partial Differential Equations	4	C	-	-	42	-			3		
5B1304 Mathematics, Extended Course	5	C	-	-	54	-			3	4	

*The course has limited participation

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Chemical Engineering, fr o m K-00 K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Conditionally Elective Courses												
2D1320 Applied Computer Science	4	B	28	14	-	20			3	4		
5B1301 Mathematics, Advanced Course, Partial Differential Equations	4	C	-	-	42	-			3			
5B1304 Mathematics, Extended Course	5	C	-	-	54	-			3	4		

Chemical Engineering, fr o m K-00 K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
3C1422 Industrial Energy Processes	5	D	20	20	-	-	1	2			
3C1621 Process Chemistry	5	D	36	72	-	-			3		
3C1626 Chemical Engineering, Laboratory Course	4	D	2	-	80	-			3		
3C1633 Chemical Reaction Engineering	6	D	16	24	-	34	1	2			
3C1651 Environmental Catalysis	4	D	32	-	-	-			3		6 h Study visit6 h Study visit
3C1723 Transport Phenomena, Advanced Course	5	D	18	12	-	-			3		6 h Seminars, 12 h Computer6 h Seminars, 12 h Computer
3C1781 Chemical Engineering in Fine and Specialty Chemicals	5	D	20	12	42	27	1				8h industry visit
3C1823 Applied Electrochemistry	5	D	32	16	-	15			3		
3C1941 Chemical Engineering, Design Course	10	D	40	120	-	-				4	

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Pharmaceuticals and Fine Chemicals Technology K4

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

For information about the courses of 2025 and 2026, please contact the department 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	42	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	34	-	-	-				4	
3A1116 Biochemistry, Laboration Course	4	D	-	-	-	70	1				
3B1102 Analytical Chemistry	4	C	20	-	-	16			3		
3B1531 Organic Chemistry, Advanced Course	4	D	-	-	-	54	1				
4K1105 Manufacturing Systems and Automation	4	C	14	24	-	12		2			

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Pharmaceutical technology K3

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	34	-	-	-				4	
3A1305 <u>Microbiology, General Course</u>	6	D	36	16	-	54			3	4	
3A1504 <u>Structure Biology</u>	4	D	32	-	-	20				4	
3B1102 <u>Analytical Chemistry</u>	4	C	20	-	-	16			3		
3B1121 <u>Organic and Biochemical Analytical Separations</u>	5	D	28	20	-	36				4	
3C1626 <u>Chemical Engineering, Laboratory Course</u>	4	D	2	-	80	-			3		

Pharmaceutical technology K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3C1781 <u>Chemical Engineering in Fine and Specialty Chemicals</u>	5	D	20	12	42	27	1				8h industry visit
3C1784 <u>Pharmaceutical Technology</u> <i>Lectures are given in Stockholm (KTH) and laboratory work in Uppsala (Biomedical centre).</i>	5	D	32	10	-	25			3		
Recommended Courses											
2D1396 <u>Bioinformatics</u>	4	D	30	-	-	16			3		
3A1110 <u>Molecular Enzymology</u>	5	D	20	-	-	24		2			6 h Seminars6 h Seminars
3A1111 <u>Enzymatic Synthesis</u>	5	D	20	12	-	20				4	
3A1116 <u>Biochemistry, Laboration Course</u>	4	D	-	-	-	70	1				
3A1305 <u>Microbiology, General Course</u>	6	D	36	16	-	54			3	4	
3A1503 <u>Molecular Biotechnology</u>	5	D	36	-	-	15		2	3		

3A1506 Drug Development	4	D	36	-	-	-		3	8 h Study visit8 h Study visit
3B1211 Quantum Chemistry and Spectroscopy	6	D	48	-	-	8	1		
3B1482 Structural Chemistry	5	D	16	6	-	16	1		
3B1531 Organic Chemistry, Advanced Course	4	D	-	-	-	54	1		
3B1542 Organic Chemistry, Intermediate Course II	5	D	24	-	-	40		3	
3C1626 Chemical Engineering, Laboratory Course	4	D	2	-	80	-		3	
3C1633 Chemical Reaction Engineering	6	D	16	24	-	34	1	2	
3C1723 Transport Phenomena, Advanced Course	5	D	18	12	-	-		3	6 h Seminars, 12 h Computer6 h Seminars, 12 h Computer
3E1141 Polymer Chemistry	5	D	18	18	-	45	1		
4K1105 Manufacturing Systems and Automation	4	C	14	24	-	12		2	
7E1101 Medical Engineering, Basic Course	4	C	24	-	-	-	1		
7E1110 Quality and Regulatory Aspects on Medical Devices*	2	D	20	-	-	-		3	4

*The course has limited participation

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Material Chemistry 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	
Conditionally Elective Courses											
3B1456 Inorganic Materials Chemistry	5	D	20	6	-	15				4	
3D1058 Wood Chemistry and Wood Biotechnology	4	D	26	-	-	15			3		
3D1112 Fiber Technology	4	D	26	-	-	15				4	
3E1142 Polymer Physics	5	D	18	18	-	45			3		
Recommended Courses											
3B1102 Analytical Chemistry	4	C	20	-	-	16			3		
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12			3		
3B1321 Radical Chemistry	5	D	30	-	-	-			3		
3B1511 Organic Chemistry, Advanced Course 1	9	D	12	6	54	-	1			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	D	18	12	-	-			3		6 h Seminars, 12 h Computer 6 h Seminars, 12 h Computer
3C1823 Applied Electrochemistry	5	D	32	16	-	15			3		
3E1143 Surface Coatings Chemistry	5	D	30	-	-	28				4	
3E1146 Biopolymers	5	D	20	6	-	25			3		
4H1504 Processing of Ceramic Materials	4	C	12	-	-	18			3		
4H1610 Advanced Materials	4	C	18	-	-	6			3		Study visit 8h Seminars 18h
4H1703 Materials Chemistry	4	D	20	4	-	8				4	

Material Chemistry K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
3E1141 Polymer Chemistry	5	D	18	18	-	45	1				

Recommended Courses

2B1263 Surface Physics, Basic Course	4	D	36	-	-	-	2			
2B1700 Advanced Semiconductor Materials	5	D	34	-	-	16		3		
2B1760 Experimental Methods in Material Physics	5	C	26	22	-	30	2	3		
2D1520 Graphic Arts Technology, Minor Course	4	C	26	8	-	16	2			
3B1102 Analytical Chemistry	4	C	20	-	-	16		3		
3B1242 Technical Surface Colloid Chemistry	4	D	32	6	-	12		3		
3B1321 Radical Chemistry	5	D	30	-	-	-		3		
3B1482 Structural Chemistry	5	D	16	6	-	16	1			
3B1483 Nano-structured Materials	5	D	16	6	-	16	2			
3B1521 Organic Chemistry, Theory, Advanced Course 1	5	D	12	6	-	-			4	
3B1781 Inorganic Chemistry	4	D	20	6	-	16			4	
3C1422 Industrial Energy Processes	5	D	20	20	-	-	1	2		
3C1723 Transport Phenomena, Advanced Course	5	D	18	12	-	-		3		6 h Seminars, 12 h Computer 6 h Seminars, 12 h Computer
3C1823 Applied Electrochemistry	5	D	32	16	-	15		3		
3D1059 The Chemistry of Pulping and Bleaching	5	D	26	-	-	-	2			24 h Seminars 24 h Seminars
3D1113 Paper Physics	4	D	20	-	-	20	2			
3D1114 Paper Processes Technology	4	D	20	-	-	20		3		
3D1115 Pulp and Paper Processes	6	D	40	-	-	48	1	2		
3D1164 Pulp Technology	4	D	24	-	-	-			4	24 h Seminars 24 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		
3E1147 Polymeric Materials: Structure and Properties	5	D	18	18	-	45	2			
3E1362 Polymer Physics, Intermediate Course	5	C	36	9	-	20		3		
3E1370 Polymers in Engineering Design	4	D	18	24	-	8			4	
4H1504 Processing of Ceramic Materials	4	C	12	-	-	18		3		
4H1609 Functional Materials	4	D	18	-	-	6	2			Study visit 8h
4H1610 Advanced Materials	4	C	18	-	-	6		3		Study visit 8h Seminars 18h
4H1703 Materials Chemistry	4	D	20	4	-	8			4	

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Chemical Engineering

Environmental Management 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	C	10	-	-	-			3		12 h Seminars12 h Seminars
3C1387 Environmental Systems Analysis	4	C	16	8	-	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	18	-	-	-				4	Project work 20h
3C1351 International Intensive Course in Solid Waste Management	4	D	-	-	-	-			3		
3C1365 Environmental Consequences, Advanced Course II	4	D	15	15	-	40	1	2			Field exercises
3C1383 Risk Management	4	C	16	30	-	-	1				

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Chemical Engineering

Molecular Design K3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
3A1115 Biochemistry	4	D	34	-	-	-				4	
3B1102 Analytical Chemistry	4	C	20	-	-	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	28	14	-	20			3	4	
3A1111 Enzymatic Synthesis	5	D	20	12	-	20				4	
3A1504 Structure Biology	4	D	32	-	-	20				4	
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	
3B1456 Inorganic Materials Chemistry	5	D	20	6	-	15				4	
3B1511 Organic Chemistry, Advanced Course 1	9	D	12	6	54	-	1			4	
3B1650 Molecular Simulations Using a Computer	5	D	14	10	-	40			3		
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	-			3		8 h Projektuppgift8 h Projektuppgift
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		
3E1142 Polymer Physics	5	D	18	18	-	45			3		
5A1351 Non-equilibrium Statistical Mechanics	4	D	24	-	-	-				4	

5A1365 Molecular Biophysics, Basic Course <i>5A1365 + 5A1366 replace 5A1355. The course is given by the Department of Biochemistry and Biophysics, Stockholm University. The instruction takes place at the Arrhenius laboratories, Frescati.</i>	6	D	90	-	-	-				4	5 h Study visit5 h Study visit
5B1301 Mathematics, Advanced Course, Partial Differential Equations	4	C	-	-	42	-				3	
5B1550 Applied Mathematical Statistics	5	D	-	-	60	-				3	
Elective Courses											
3B1482 Structural Chemistry	5	D	16	6	-	16	1				
3B1483 Nano-structured Materials	5	D	16	6	-	16		2			
5A1366 Molecular Biophysics, Complementary Course <i>5A1365 + 5A1366 replace 5A1355. The course is given by the Department of Biochemistry and Biophysics, Stockholm University. The instruction takes place at the Arrhenius laboratories, Frescati.</i>	2	D	-	-	-	20				4	Literature seminars

Molecular Design K4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
3A1115 Biochemistry	4	D	34	-	-	-				4	
3B1102 Analytical Chemistry	4	C	20	-	-	16			3		
3B1211 Quantum Chemistry and Spectroscopy	6	D	48	-	-	8	1				
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											
2B1263 Surface Physics, Basic Course	4	D	36	-	-	-		2			
2D1225 Numerical Solutions of Differential Equations	4	C	24	4	-	16	1	2			
2D1320 Applied Computer Science	4	B	28	14	-	20	1	2			
3A1110 Molecular Enzymology	5	D	20	-	-	24		2			6 h Seminars 6 h Seminars
3A1111 Enzymatic Synthesis	5	D	20	12	-	20				4	
3A1116 Biochemistry, Laboration Course	4	D	-	-	-	70	1				
3A1305 Microbiology, General Course	6	D	36	16	-	54			3	4	
3A1503 Molecular Biotechnology	5	D	36	-	-	15		2	3		
3A1504 Structure Biology	4	D	32	-	-	20				4	
3B1121 Organic and Biochemical Analytical Separations	5	D	28	20	-	36				4	
3B1231 NMR-spectroscopy	4	D	30	-	-	12		2			
3B1301 Nuclear Chemistry	5	D	30	-	-	20		2			
3B1312 Nuclear Fuel Cycle	4	D	16	-	-	6			3		Project

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	
3B1456 Inorganic Materials Chemistry	5	D	20	6	-	15			4	
3B1482 Structural Chemistry	5	D	16	6	-	16	1			
3B1483 Nano-structured Materials	5	D	16	6	-	16		2		
3B1531 Organic Chemistry, Advanced Course	4	D	-	-	-	54	1			
3B1542 Organic Chemistry, Intermediate Course II	5	D	24	-	-	40			3	
3B1544 Applied Organic Molecular Spectroscopy	4	D	-	-	-	-	1			
3B1580 Ecological Chemistry	4	C	20	-	-	48			3	4
3B1581 Ecological Chemistry with project 6p	6	C	20	-	-	-			3	4
3B1650 Molecular Simulations Using a Computer	5	D	14	10	-	40			3	
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	-			3	8 h Projektuppgift8 h Projektuppgift
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	
3E1141 Polymer Chemistry	5	D	18	18	-	45	1			
3E1142 Polymer Physics	5	D	18	18	-	45			3	
5A1201 Physics, Basic Course I	7	B	53	17	-	30	1	2		Project work
5A1351 Non-equilibrium Statistical Mechanics	4	D	24	-	-	-				4
5A1354 Computational Physics	6	D	30	-	-	20	1			
5A1365 Molecular Biophysics, Basic Course <i>5A1365 + 5A1366 replace 5A1355. The course is given by the Department of Biochemistry and Biophysics, Stockholm University. The instruction takes place at the Arrhenius laboratories, Frescati.</i>	6	D	90	-	-	-			4	5 h Study visit5 h Study visit
5A1490 Laser Chemistry	4	D	24	-	-	12		2		
5A1491 Femtochemistry	5	D	36	-	-	-			3	
5B1301 Mathematics, Advanced Course, Partial Differential Equations	4	C	-	-	42	-			3	
5B1550 Applied Mathematical Statistics	5	D	-	-	60	-			3	
Elective Courses										
5A1366 Molecular Biophysics, Complementary Course <i>5A1365 + 5A1366 replace 5A1355. The course is given by the Department of Biochemistry and Biophysics, Stockholm University. The instruction takes place at the Arrhenius laboratories, Frescati.</i>	2	D	-	-	-	20			4	Literature seminars

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Chemical Engineering

Process and Environmental Biotechnology 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	
Recommended Courses											
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	-	-	-	70	1				
3A1503 Molecular Biotechnology	5	D	36	-	-	15		2	3		
3B1102 Analytical Chemistry	4	C	20	-	-	16			3		
3B1531 Organic Chemistry, Advanced Course	4	D	-	-	-	54	1				
3C1345 Environmental Technology and Environmental Impact Studies	4	D	32	4	-	-			3		8 h Projektuppgift8 h Projektuppgift
3C1723 Transport Phenomena, Advanced Course	5	D	18	12	-	-			3		6 h Seminars, 12 h Computer6 h Seminars, 12 h Computer
Elective Courses											
3C1781 Chemical Engineering in Fine and Specialty Chemicals	5	D	20	12	42	27	1				8h industry visit

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Surveying

Surveying L3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Elective Courses												
1N1217 Logistics and Transportation	5	C	21	-	-	-				4	Case-study	
2D1320 Applied Computer Science	4	B	28	14	-	20			3	4		

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Surveying

Surveying L4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1N1305 Financial Analysis	5	C	30	30	-	-			3		
Elective Courses											
1A14TW Third World Housing <i>The course is given after agreement</i>	10	D	-	-	-	-					
1B1820 Risk in Technical Systems	5	D	-	-	-	-	1	2	3	4	Project-course
1B1990 Developing Countries, Society and Technology	4	C	30	-	-	-	1	2			
1B1991 Management of Development Cooperation Projects	4	C	30	-	-	-			3	4	
1B1992 East- and Central Europe - Our Future Market	4	C	30	-	-	-	1	2			
1H1204 Logistics	5	C	6	-	-	-	1	2			15 h SeminarsProject-course, 15 h Seminars
1H1212 Logistics, Advanced Course	5	D	4	-	-	-			3		Project-course, 12h Seminars
1H1601 Mathematics and Reality	5	C	20	10	-	-				4	
1H1602 Good and Bad Science	5	C	32	-	-	-			3	4	
1H1603 Technology and Ethics	5	C	20	-	-	-	1				Seminars 8h
1H1603 Technology and Ethics	5	C	20	-	-	-			3		Seminars 8h
1H1604 Philosophy of Risk	5	C	18	-	-	-		2			12 h Seminars
1K14LV Architecture, Basic Course	5	D	-	36	-	-				4	Lectures, Study-visits, Seminar: 20h
1N1218 Logistics, Advanced Project Course	10	D	4	-	-	-			3	4	Project-course, Seminars
1N1401 Applied Contract Law	5	B	-	-	-	-			3		Seminars.Web-based study-support, tuition by correspondence-course
1N1402 Civil and Public Law, Intermediate Course	5	B	25	35	-	-				4	Mostly evening-taught course. Web-based study-support
2D1220 Applied Numerical Methods I	4	C	36	-	-	18			3	4	
2D1225 Numerical Solutions of Differential Equations	4	C	24	4	-	16	1	2			
2D1320 Applied Computer Science	4	B	28	14	-	20	1	2			
2D1334 Database Technology	4	C	24	20	-	12			3		
2D1378 Text and Image Processing	4	B	28	18	-	-		2			



5B1306 <u>Financial Mathematics, Basic Course</u>	5	C	-	-	54	-				4	
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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	32	12	-	-					4	21 h Workshop, 15 h Study visit21 h Workshop, 15 h Study visit
1D1841 Buildings and Building Services Engineering	10	C	67	54	-	16		2	3			8 h Study visit
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	35	-	-	1					Web-based study-support
1N1303 Business Cycles in Construction and Real Estate Market	5	C	30	30	-	-	1					
Recommended Courses												
1F1337 Environmental Economics	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	
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			

<u>1F1565 Facilities Management</u> <i>The course will not be given the academic year 04/05</i>	5	D	-	-	-	-					
<u>1N1305 Financial Analysis</u>	5	C	30	30	-	-			3		

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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 <i>Under bearbetning</i>	5	C	-	-	77	-			3		
1B1291 Environmental Dynamics/Chemical Processes	5	D	24	-	-	-		2			Exercises/lab.work 30h
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> <i>Under bearbetning</i>	5	C	30	26	-	-	1				8 h Exkursion8 h Exkursion
1B1635 Quantitative Hydrogeology <i>Under bearbetning</i>	5	D	20	14	-	6				4	20 h Field excursions, 15 h Computer20 h Field excursions, 15 h Computer
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	25	-	-	-				4	21 h Seminars21 h Seminars
1H1141 Urban Infrastructure	5	D	-	-	54	-				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 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

*The course has limited participation

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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	35	-	-	1				Web-based study-support
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 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	32	-	-			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			
1F1444 <u>Law of Leaseholds</u>	5	D	30	30	-	-		2	3		
1F1452 <u>Law of Real Estate Formation</u>	5	D	30	30	-	-	1				

1N1405 Financing Law	5	D	30	30	-	-			3		
1N1406 Law of Planning, Construction and Infrastructure	10	D	50	70	-	-			3	4	
1N1407 Land Management	5	D	-	-	-	-				4	Lectures/seminars 20h

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Environmental Resources Engineering L3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1M1055 <u>Resources Recycling and Management</u> <i>Under bearbetning</i>	5	C	20	16	-	-	1				21 h Projektuppgift, 12 h Study visit
1M1060 <u>Energy Supply</u>	5	C	22	30	-	-		2			4h Seminar, 4h Study-visit, Individual project work
Recommended Courses											
1B1639 <u>Applied Geology and Hydrology</u>	10	C	29	36	-	15			3	4	3 h Seminars, 32 h Field excursions, 2 h Computer
1D1801 <u>Building Materials and Building Physics</u>	10	C	84	78	-	10	1	2			10 h Computer, 18 h Workshop
1D1804 <u>Buildings and Indoor Climate</u>	10	C	54	84	-	-			3	4	60 h Workshop, 12 h Study visit
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 excursions

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Kungl Tekniska Högskolan

Studentwebben

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Surveying

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	-	-	30	-			3		36 h Seminars
1H1151 Theory of Planning and Organization	5	D	-	-	33	-				4	
Recommended Courses											
1F1451 Building and Environmental Law	5	C	30	30	-	-	1				
1F1460 Land Use and Land Use Policy	5	C	40	28	-	-		2			
1H1141 Urban Infrastructure	5	D	-	-	54	-				4	
1H1163 Social Planning	5	C	-	-	30	-				4	Seminars and study-visits 36h
1H1211 Road, Traffic and Urban Design	6	B	30	93	-	-	1				
1H1243 Traffic and Land-use Planning	5	C	21	55	-	-			3		5 h Exkursion5 h Exkursion
1H1501 Human Settlements and Housing	5	D	24	20	-	-		2			

Urban Planning L4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Recommended Courses											
1H1004 Master's Project in Regional Planning	20	D	-	-	-	-					
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
1H1170 Sustainable Cities	10	D	-	-	120	-	1				
1H1171 Urban Governance	5	D	30	-	-	-			3		6 h Seminars 6 h Seminars
1H1172 Futures Studies and Forecasts	5	D	-	-	36	-		2			10 h Computer 10 h Computer
1H1174 Planning for Regional Development	10	D	27	26	-	-				4	Large Project task
1H1401 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3		6 h Seminars
1N1150 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3		6 h Seminars 6 h Seminars

1N1663 Spatial Planning with GIS	5	D	30	-	-	36		3	
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Surveying

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 excursions	
1E1410 Analytical Photogrammetry	10	D	44	36	-	36			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											
1E1160 Satellite Geodesy	5	D	22	-	-	30		2			
1E1440 Digital Photogrammetry	5	D	24	-	-	32	1				
1E1450 Integrated Project	5	D	-	-	-	-				4	Introductory Lectures, Laborations, Project
1E1630 Remote Sensing Technology	5	C	18	-	-	36		2			4 h Study visit
1N1250 Reference Systems	5	C	30	-	-	40	1				
1N1253 Physical Geodesy	5	D	28	-	-	36			3		
1N1256 Integrated Navigation	5	D	30	-	-	30				4	
1N1653 GIS Architecture	5	C	24	-	-	48	1				
1N1656 Visualisation Techniques	5	C	24	-	-	48		2			
1N1660 Spatial Analysis	5	D	24	-	-	48			3		
Elective Courses											
1N1260 Satellite Gravimetry	5	D	20	-	-	-				4	Literature studies
1N1266 Advanced Theory of Errors	5	D	20	-	-	40			3		
1N1666 Web-GIS	5	D	24	-	-	48			3		
1N1669 Spatial Reasoning	5	D	24	-	-	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											
2D1212 Numerical Methods and Fundamentals of Programming	6	AB	34	34	-	28			3	4	
4A1101 Mechanical Engineering	6	A	38	60	-	-	1	2			
5A1226 Physics I	6	AB	38	-	-	30	1	2			
5B1132 Analytical Methods and Linear Algebra I	8	AB	80	40	-	-	1	2			
5B1133 Analytical Methods and Linear Algebra II	8	AB	80	40	-	-			3	4	
5C1130 Mechanics I	6	AB	48	-	27	-			3	4	
Recommended Courses											
5B1120 Introductory Course in Mathematics I	1	AB	-	-	-	-					

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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											
4A1112 Applied Thermodynamics	6	AB	48	48	-	-			3	4	
4C1010 Solid Mechanics, basic course	8	B	52	30	-	2	1	2			60 h Projektuppgift60 h Projektuppgift
4F1816	6	B	22	24	-	22			3	4	
4G1162	8	B	30	90	-	12			3	4	
4H1063 Materials Science for Mechanical Engineering	4	B	36	-	-	15		2			
5B1206 Differential Equations	4	C	40	20	-	-	1	2			
5C1140 Mechanics II	4	B	30	15	-	-	1				

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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	AB	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	28	14	-	20			3	4	
2D1335 Basic Internet Programming* <i>The number of participants is limited.</i>	5	B	22	-	-	24			3		
2D1522 Computer Technology and Communication*	4	C	30	-	-	20				4	
2E1212 Automatic Control, General Course	4	C	24	26	-	12			3		
3C1330 Technology and Ecosystems	4	B	24	3	-	-			3		
3C1340 Environmental Technology, Advanced Course	4	D	36	6	-	-			3		
3C1395 Technology and Sustainable Development	4	C	2	6	-	-		2			
3D1112 Fiber 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	-	24	-	22				4	
4B1168 Energy Methods	4	D	-	-	28	-			3	4	
4B1170 Numerical Methods for Acoustics and Vibration	4	D	-	-	24	-			3	4	
4B1172 Non-Linear Acoustics	4	D	-	-	24	-			3	4	
4B1174 Ultrasonics	4	D	-	-	24	-			3	4	
4B1176 Vehicle Acoustics and Vibration	4	D	-	-	24	-			3	4	
4C1025 FEM for Engineering Applications	4	C	36	14	-	4			3		
4D1051 Commercial Law	4	B	14	18	-	-			3		

4D1073 Industrial Project Management	4	B	40	8	-	-		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	
4E1401 Introduction to Naval Architecture	5	C	54	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	30	10	-	-		3	4	Project work
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 <i>English on request. English on request.</i>	4	B	12	-	-	-			4	12 h Seminars 12 h Seminars
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	C	-	-	54	-		3	4	
5B1538 Reliability Theory	6	D	-	-	72	-		3	4	
5B1722 Applied Optimization	4	C	28	14	-	9		3		
5C1121 Analytical Mechanics	4	C	48	-	-	-		3		
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4			4	4 h Seminars 4 h Seminars
5C1214 Fluid Mechanics	5	C	-	30	30	3	1			
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6		3	4	
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			4	Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-	1			Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-		3		Three laborations in all together 9 hours. The course is given regularly throughout the year. See

9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-	2		Three laborations on all together 9 hours. The course is given regularly throughout the year. See
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	
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	-	15	-		3 4	E-learning exercises make up appr. 75 % of the course. 15 classroom hours in the evening.
9E1330 French, Elementary Level*_	4	B	-	-	56	-		3 4	
9E1334 Technical French, Intermediate Level*_	6	B	-	-	56	-		3 4	
9E1342 Spanish, Elementary 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	

*The course has limited participation

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Mechanical Engineering M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
4A1341 Introductory Airbreathing Propulsion	4	C	21	24	-	8		2			
4E1125 Fibre Composites II, Analysis and Design	4	D	2	-	-	6		2			
5B1816 Applied Mathematical Programming - Nonlinear Problems	4	D	18	12	-	-		2			18 h Projektuppgift18 h Projektuppgift
Elective Courses											
2A1140 Accelerator and Radiation Technology	4	D	36	-	-	-			3		8 h Study visit8 h Study visit
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
2A1160 Space Physics	3	D	14	-	4	-	1				
2C1111 System Planning	4	D	60	-	-	-			3		
2C1243 Hybrid Vehicle Drives*₋	5	D	-	-	-	-		2			3 course meetings, 2-3 days each
2D1225 Numerical Solutions of Differential Equations	4	C	24	4	-	16	1	2			
2D1320 Applied Computer Science	4	B	28	14	-	20	1	2			
2D1320 Applied Computer Science	4	B	28	14	-	20			3	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	
2D1421 No translation <i>Replaces 2D1420.</i>	5	D	36	4	-	8			3		
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	16			3		
2D1520 Graphic Arts Technology, Minor Course	4	C	26	8	-	16		2			
2D1521 Communication and Information*₋	5	C	16	12	-	-			3		
2D1522 Computer Technology and Communication*₋	4	C	30	-	-	20				4	
2D1524 Image Processing and Reprographic Methods*₋ <i>Limited number of participants</i>	6	C	26	16	-	12	1				
2E1212 Automatic Control, General Course	4	C	24	26	-	12			3		
2E1242 Automatic Control, Project Course*₋	8	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				
3C1330 Technology and Ecosystems	4	B	24	3	-	-		3			
3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	18	-	-	-			4	Project work 20h	
3C1355 Ecology, Advanced Course	4	C	21	4	-	-		3	4		
3C1360 Environmental Consequences, Advanced Course	4	C	15	-	-	-	1				
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	C	10	-	-	-		3		12 h Seminars 12 h Seminars	
3C1383 Risk Management	4	C	16	30	-	-	1				
3C1385 Biology	4	C	30	6	-	6	1			Field exercise 8h	
3C1387 Environmental Systems Analysis	4	C	16	8	-	6		2			
3C1395 Technology and Sustainable Development	4	C	2	6	-	-		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 I	4	D	14	32	-	-			4	9 h Seminars 9 H 9 h Seminars	
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 <i>The course will not be given 2004/05</i>	4	D	27	10	-	6			4		
4A1605 Sustainable Power Generation	6	D	30	48	-	18	1	2			
4A1607 Sustainable Energy Utilisation	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	-	-	-		2	3		
4A1611 Renewable Energy Technology	4	D	-	-	52	-	1			Study visit 8h	
4A1612 Renewable Energy Technology, Advanced Course	4	D	26	-	-	-		3		Study visit 4 h	
4A1613 Energy and Environment <i>Examinator: Björn Palm, Tel 790 7453</i>	4	D	50	-	-	-		3	4	Study visit 6h	
4A1620 Combustion Theory	4	C	18	18	-	15	1	2			
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	54	-	-	-		3	4	Study visits 6h	
4A1623 Applied Refrigeration and Heat Pump Technology	4	D	24	24	-	16		3	4		

4A1625 Cooling of Electronics	4	D	-	-	48	-			3		
4A1626 Applied Heat and Power Technology	4	D	36	12	-	8			3	4	Project assignment 8h
4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3	4	Study visits 12h
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, Project Course	5	D	-	48	-	12			3	4	Study tour to industry 40h
4B1162 Vibro-Acoustics	7	D	-	-	64	8	1	2			
4B1164 Signal Analysis	5	D	-	-	26	22	1	2			
4B1166 Acoustical Measurements	5	D	-	-	18	18	1	2	3		
4B1168 Energy Methods	4	D	-	-	28	-			3	4	
4B1170 Numerical Methods for Acoustics and Vibration	4	D	-	-	24	-			3	4	
4B1172 Non-Linear Acoustics	4	D	-	-	24	-			3	4	
4B1174 Ultrasonics	4	D	-	-	24	-			3	4	
4B1176 Vehicle Acoustics and Vibration	4	D	-	-	24	-			3	4	
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	60	9	1	2			Project assignment 9h
4B1313 Rail Vehicle Dynamics	5	D	-	-	36	24			3		
4B1420 Ground Vehicle Engineering, Basic Course*	6	C	36	36	-	-	1	2			
4B1424 Vehicle systems for a better environment* <i>There are 50 places to be shared among universities engaged in this set of courses.</i>	5	C	26	26	-	8	1				
4B1428 Environmental friendly vehicle - Project course*	5	D	10	-	-	-		2	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		
4C1120 Experimental methods in mechanics	4	D	20	-	-	20			3		Seminars 4h
4D1026 Industrial Economy and Management, Basic Course	4	A	20	16	-	-		2			4 h Seminars4 h Seminars
4D1027 Industrial Economics and Management, Basic Course	4	A	20	16	-	-		2			4 h SeminarsSeminars 4h 4 h Seminars
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	B	36	12	-	10				4	
4D1051 Commercial Law	4	B	14	18	-	-			3		
4D1057 Advanced Patent Law	4	C	4	14	-	-	1				14 h SeminarsSeminars 14h 14 h Seminars

4D1060 Industrial Development	4	B	40	8	-	-		3		
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-		3		
4D1075 Work Organization and Leadership	4	B	24	24	-	-		3		
4D1092 Man - Machine System	4	B	24	6	-	3		3		
4D1093 Psychology for Engineers <i>Replaces 4D1088 Technical Work Psychology</i>	4	B	24	3	-	4	2			
4E1124 Fibre Composites I: materials and processes	4	D	40	-	-	8	1			
4E1125 Fibre Composites II, Analysis and Design	4	D	2	-	-	6	2			
4E1126 Structural Design and Optimisation	4	D	40	-	-	18		3		
4E1150 Biomechanics and Neurronics	4	D	34	-	-	8			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
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	2			
4F1343 Fluid Systems and Machines	4	C	24	24	-	12	1			
4F1430 Combustion Engines, general course*	4	C	42	6	-	12	1			
4F1431 Combustion Engines, Advanced Course*	6	D	48	-	-	28	2	3		
4F1460 Combustion Engines, Project Course <i>The course is open only to students specializing in combustion engines. Open only for students with individual specialization of Combustion engines.</i>	6	D	-	-	18	-		3	4	
4F1540 Tribology	4	C	18	9	-	5			4	
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*	4	C	24	36	-	-	2			
4F1641 Environmentally Adapted Product Design <i>80% participation.</i>	4	C	-	-	42	-	2			
4F1643 Eco Design Project*	4	C	-	-	-	-	1	2	3	4
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		

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		
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			
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-		3		
4H1505 Structure and Properties of Ceramic Materials	4	B	12	-	-	18	2			
4H1609 Functional Materials	4	D	18	-	-	6	2			Study visit 8h
4H1610 Advanced Materials	4	C	18	-	-	6		3		Study visit 8h Seminars 18h
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			
4H1803 Physics of Nanostructured Materials	4	D	20	4	-	6			4	
4K1102 Manufacturing Automation I	4	C	18	26	-	12	1			
4K1103 Manufacturing Automation II	6	C	26	34	-	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/CAM² <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 <i>Not given 2004/05. Not given 2004/05.</i>	4	B	-	-	-	-				12 h Seminars12 h Seminars
4K1409 History of Industry	4	B	12	-	-	10	1	2		12 h Seminars, 10 h Study visit12 h Seminars, 10 h Study visit
4K1601 Wood Material's Science, Basic Course	5	C	36	24	-	32			3	4
4K1602 Industrial Wood Processing, Basic Course	4	C	26	16	-	16	1			
4M1051 Project Assignment	4	D	-	160	-	-	1	2		
4M1341 Foundry Processing	4	D	12	-	-	-			3	Seminarier 24h Other 28h
4M1342 Space Systems and Technology	4	D	36	-	-	-		2		
4M1343 Materials Processing, Project Support	4	D	72	48	-	40	1	2		
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	-	-	1	2		

4M1370 Solidification Processing	4	D	36	24	-	-	1	2			
5A1260 Modern Physics	5	C	24	12	-	10	1	2			
5A1370 Solid State Theory	4	D	36	-	-	-	1				
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	C	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	-	-	1				18 h Projektuppgift18 h Projektuppgift
5B1816 Applied Mathematical Programming - Nonlinear Problems	4	D	18	12	-	-		2			18 h Projektuppgift18 h Projektuppgift
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		
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4				4	4 h Seminars4 h Seminars
5C1214 Fluid Mechanics	5	C	-	30	30	3	1				
5C1219 Advanced Compressible Flows <i>Under bearbetning</i>	5	D	-	-	48	-			3	4	
5C1400 Nonlinear Dynamics in Mechanics	5	C	24	-	-	-			3		
5C1860 FEM Modelling	5	D	33	-	-	-		2			33 h Workshop33 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* <i>Limited number of participants: 25</i>	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	67	-	-	18			3	4	3 h Seminars3 h Seminars
7E1202 Systems Biology*	5	C	32	-	-	25		2			24 h Seminars24 h Seminars
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-	1				Three laborations in all together 9 hours. The course is given regularly throughout the year. See

9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			3		Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			2		Three laborations on all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-				4	Three laborations in all together 9 hours. The course is given regularly throughout the year. See
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	-	1	2			
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	-	15	-	1	2			E-learning exercises appr. 75 % of the course. 15 classroom hours in the evening.
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			
9E1334 Technical French, Intermediate Level*_	6	B	-	-	56	-	1	2			
9E1342 Spanish, Elementary Level*_	4	B	-	-	56	-	1	2			
9E1350 Italian, Elementary Level*_	4	B	-	-	56	-	1	2			
9E1360 Communicative Swedish*_	4	B	-	-	56	-	1	2			

*The course has limited participation

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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 8h Seminars 18h	
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 <u>Functional Materials</u>	4	D	18	-	-	6		2			Study visit 8h
4H1612 <u>High Temperature Materials</u>	7	D	18	12	-	6	1				Study visit 8h Seminars 10h Project assignment 100h
Elective Courses											
4H1404 <u>Corrosion and Surface Protection, General Course</u>	4	C	16	12	-	12	1				
4H1405 <u>Corrosion Science, Advanced Course</u>	4	D	16	-	-	-			3		
4H1505 <u>Structure and Properties of Ceramic Materials</u>	4	B	12	-	-	18		2			

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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	67	-	-	18			3	4	3 h Seminars3 h Seminars
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 04/05.</i>	6	D	26	-	-	20					

*The course has limited participation

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Mechanical Engineering

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 Utilisation	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 I	4	D	14	32	-	-				4	9 h SeminarsSeminars 9 H 9 h Seminars
4A1610 Energy Management	4	D	50	-	-	-		2	3		
4A1611 Renewable Energy Technology	4	D	-	-	52	-	1				Study visit 8h
4A1613 Energy and Environment <i>Examinator: Björn Palm, Tel 790 7453</i>	4	D	50	-	-	-			3	4	Study visit 6h
4A1620 Combustion Theory	4	C	18	18	-	15	1	2			
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	54	-	-	-			3	4	Study visits 6h
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	1	2			
4A1625 Cooling of Electronics	4	D	-	-	48	-			3		
4A1626 Applied Heat and Power Technology	4	D	36	12	-	8			3	4	Project assignment 8h
4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3	4	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		
5C1215 Compressible Flow	5	D	-	-	52	9		2			

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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		
4E1103 Lightweight Structures and FEM II	6,5	C	76	-	-	22			3	4	
4E1230 Elements of Aeronautics	8	C	116	-	-	4			3	4	
5B1304 Mathematics, Extended Course	5	C	-	-	54	-			3	4	
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4	

M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1140 Flight Dynamics and Aeroelasticity	4	D	38	21	-	4			3		
4E1212 Aerodynamics	6	D	56	10	-	14	1	2			
4E1231 Flight Mechanics	4	D	28	18	-	4	1				
Conditionally Elective Courses											
2E1252 Control Theory and Practice, Advanced Course	5	D	28	26	-	8			3		
4A1341 Introductory Airbreathing Propulsion	4	C	21	24	-	8		2			
4B1131 Experimental Structure Dynamics	5	D	-	58	-	12		2	3		
4E1125 Fibre Composites II, Analysis and Design	4	D	2	-	-	6		2			
4E1126 Structural Design and Optimisation	4	D	40	-	-	18			3		
4E1233 Project in Aeronautics*	6	D	28	-	-	48			3	4	
4M1342 Space Systems and Technology	4	D	36	-	-	-		2			
5B1816 Applied Mathematical Programming - Nonlinear Problems	4	D	18	12	-	-		2			18 h Projektuppgift18 h Projektuppgift
5C1215 Compressible Flow	5	D	-	-	52	9		2			

*The course has limited participation

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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	-	24	-	22				4		
4F1242 Introduction to Microcomputer Systems	4	C	12	22	-	14				4		
5B1304 Mathematics, Extended Course	5	C	-	-	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	
Conditionally Elective Courses											
1C1206 <u>Railway Track Engineering</u>	5	D	33	-	-	-			3		44 h Workshop
1H1206 <u>Planning of Railroad Traffic</u>	5	C	-	-	72	-	1				
2C1149 <u>Electric Traction</u>	4	C	36	-	-	-				4	
4B1304 <u>Railway Systems and Rail Vehicles</u>	6	C	-	-	60	9	1	2			Project assignment 9h
4B1313 <u>Rail Vehicle Dynamics</u>	5	D	-	-	36	24			3		
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	42	6	-	12	1				
Recommended Courses											
4B1131 <u>Experimental Structure Dynamics</u>	5	D	-	58	-	12		2	3		
4E1102 <u>Lightweight Structures and FEM I</u>	5	C	64	-	-	22			3	4	
4F1131 <u>Microcomputers in Embedded Systems*</u>	5	D	-	36	-	36		2			
4F1630 <u>Introduction to Machine Design</u>	5	C	24	36	-	-	1	2			
4F1640 <u>Industrial Design*</u> <i>Limited number of participants.</i>	4	C	24	36	-	-			3		

5C1121 Analytical Mechanics	4	C	48	-	-	-			3		
5C1211 Vehicle Aerodynamics	4	C	16	-	-	4			4	4 h Seminars	4 h Seminars
Elective Courses											
4C1025 FEM for Engineering Applications	4	C	36	14	-	4			3		
4E1103 Lightweight Structures and FEM II	6,5	C	76	-	-	22			3	4	

*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												
4C1025 FEM for Engineering Applications	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	C	-	-	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 <u>Finite Element Method</u>	4	D	-	49	-	8		2			
Conditionally 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		
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		
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				
4B1420 <u>Ground Vehicle Engineering, Basic Course*</u>	6	C	36	36	-	-	1	2			
4E1125 <u>Fibre Composites II, Analysis and Design</u>	4	D	2	-	-	6		2			
4F1540 <u>Tribology</u>	4	C	18	9	-	5				4	
4G1230 <u>Introductory Welding Technology</u>	4	C	24	18	-	12	1				
4H1202 <u>Mechanical Metallurgy I</u>	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	B	12	-	-	18		2			
5A1301 Mathematical Methods in Physics, Course I <i>Not given 04/05.</i>	4	C	26	28	-	-					
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		
5C1214 Fluid Mechanics	5	C	-	30	30	3	1				
5C1902 Advanced Dynamics of Complex Systems	4	D	24	-	-	-	1				

*The course has limited participation

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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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	B	26	20	-	-				4	8 h SeminarsSeminars 4 H 8 h Seminars	
Conditionally Elective Courses												
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	B	36	12	-	10				4		
4D1043 Business Negotiations*	4	C	24	8	-	-			3			
4D1075 Work Organization and Leadership	4	B	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	B	36	12	-	10				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	C	68	72	-	16		2	3	4	Roll-play 16h
Conditionally Elective Courses											
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3		
4D1071 Industrial Project Management, Basic Course	4	B	40	8	-	-	1				
4F1630 Introduction to Machine Design	5	C	24	36	-	-	1	2			
4K1102 Manufacturing Automation I	4	C	18	26	-	12	1				
Elective Courses											
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3		
4D1152 Industrial Marketing, Advanced Course	4	C	36	-	-	-	1				12 h Seminars 12 h Seminars

4D1170 Advanced Production and Product Development	4	C	36	12	-	-		2			
4D1174 Management and Analysis of Innovations and Technology	4	C	38	-	-	-		2			10 h Seminars10 h Seminars
4K1103 Manufacturing Automation II	6	C	26	34	-	17	1	2			

*The course has limited participation

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Mechanical Engineering

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	B	36	12	-	10				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		
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 Advanced Industrial Engineering*_	12	D	67	22	-	-	1	2			120 h Projektuppgift120 h Projektuppgift
Elective Courses											
3C1360 Environmental Consequences, Advanced Course	4	C	15	-	-	-	1				
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3		
4D1093 Psychology for Engineers <i>Replaces 4D1088 Technical Work Psychology</i>	4	B	24	3	-	4		2			
4G1053 Materials Processing, Project Support	4	D	72	48	-	40			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			
4G1540 Laser Metrology Methods and Non Destructive Testing	4	C	28	22	-	4		2			
4K1102 Manufacturing Automation I	4	C	18	26	-	12	1				

*The course has limited participation

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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	B	24	24	-	-			3		
Conditionally Elective Courses											
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											
4F1760 <u>Integrated Product Development, Advanced Course*</u>	20	D	-	180	-	-	1	2	3	4	
Conditionally Elective Courses											
4F1541 <u>CAD 3D-modelling and Visualization for Personal Computers*</u>	4	C	8	36	-	-		2			
Elective Courses											
4F1131 <u>Microcomputers in Embedded Systems*</u>	5	D	-	36	-	36		2			
4F1641 <u>Environmentally Adapted Product Design</u> <i>80% participation.</i>	4	C	-	-	42	-		2			
4F1642 <u>Modelling and Computer Support in Mechanical Design</u>	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	-	24	-	22				4	
5B1304 Mathematics, Extended Course	5	C	-	-	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 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, Project Course	5	D	-	48	-	12			3	4	Study tour to industry 40h

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Lightweight Structures 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		
Elective Courses												
4E1230 <u>Elements of Aeronautics</u>	8	C	116	-	-	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	-	-	8	1				
4E1125 Fibre Composites II, Analysis and Design	4	D	2	-	-	6		2			
4E1126 Structural Design and Optimisation	4	D	40	-	-	18			3		
4E1132 Lightweight Design* <i>Open only to students on the specialisation LKR.</i>	10	D	-	-	336	-	1	2	3	4	
4E1150 Biomechanics and Neuronics	4	D	34	-	-	8				4	
Elective Courses											
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	60	9	1	2			Project assignment 9h
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	28	14	-	9			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	-	-	15	-	1	2			E-learning exercises appr. 75 % of the course. 15 classroom hours in the evening.

9E1326 <u>Technical German, Advanced Level*</u>	6	C	-	-	56	-	1	2			
9E1334 <u>Technical French, Intermediate Level*</u>	6	B	-	-	56	-	1	2			
9E1348 <u>Technical Spanish, Intermediate Level*</u>	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	54	10	-	10			3	4	
5C1921 <u>Fluid Mechanics for Engineers</u>	4,5	C	28	30	-	6			3	4	

Marina system M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4E1402 Naval design*_ Only open to MSY students.	10	D	-	336	-	-	1	2	3	4	
Conditionally Elective Courses											
2C1224 Management of Technology	5	D	32	20	-	-	1				
4E1124 Fibre Composites I: materials and processes	4	D	40	-	-	8	1				
4E1125 Fibre Composites II, Analysis and Design	4	D	2	-	-	6		2			
4E1126 Structural Design and Optimisation	4	D	40	-	-	18			3		
5C1212 Computational Fluid Dynamics	5	D	-	-	50	10			3		
5C1213 Applied Computational Fluid Dynamics	2	D	-	-	10	14				4	
5C1214 Fluid Mechanics	5	C	-	30	30	3	1				
Elective Courses											
4B1120 Signal Analysis with Applications	5	D	-	24	-	22				4	
4B1131 Experimental Structure Dynamics	5	D	-	58	-	12		2	3		
4E1140 Flight Dynamics and Aeroelasticity	4	D	38	21	-	4			3		
4E1150 Biomechanics and Neuronics	4	D	34	-	-	8				4	
4F1430 Combustion Engines, general course*_	4	C	42	6	-	12	1				
5B1722 Applied Optimization	4	C	28	14	-	9			3		
9E1300 Technical English, Lower Intermediate Level*_	4	B	-	-	56	-	1	2			

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Machine Elements M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1025 FEM for Engineering Applications	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		
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				

*The course has limited participation

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Machine Design M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1025 FEM for Engineering Applications	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	1				
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 Introduction to Machine Design_	5	C	24	36	-	-	1	2			
4F1644 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*_ Limited attendance: 25	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*_ <i>Limited attendance due to limited number of available projects</i>	4	C	8	36	-	-				4	
4F1641 Environmentally Adapted Product Design <i>80% participation.</i>	4	C	-	-	42	-		2			
4K1102 Manufacturing Automation I	4	C	18	26	-	12	1				

*The course has limited participation

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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	B	10	15	-	15			3		
4H1202 Mechanical Metallurgy I	6	D	24	12	-	48			3	4	Home assignments
4H1204 Experimental Methods in Materials Science	5	C	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				
Conditionally Elective Courses											
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-			3		
4H1505 Structure and Properties of Ceramic Materials	4	B	12	-	-	18		2			
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1610 Advanced Materials	4	C	18	-	-	6			3		Study visit 8h Seminars 18h
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				
5A1370 Solid State Theory	4	D	36	-	-	-	1				

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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	C	-	-	54	-			3	4	
5C1121 Analytical Mechanics	4	C	48	-	-	-			3		
5C1921 Fluid Mechanics for Engineers	4,5	C	28	30	-	6			3	4	
Conditionally Elective Courses											
5C1218 Turbulence <i>Replaces 5C1992.</i>	5	D	-	-	36	3			3	4	
5C1400 Nonlinear Dynamics in Mechanics	5	C	24	-	-	-			3		
5C1840 Structural Dynamics	5	D	33	-	-	-				4	44 h Workshop44 h Workshop
Elective Courses											
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	
Conditionally Elective Courses											
2D1225 Numerical Solutions of Differential Equations	4	C	24	4	-	16	1	2			
2D1255 Numerical Solutions of Differential Equations	5	D	30	-	-	4			3	4	
4C1120 Experimental methods in mechanics	4	D	20	-	-	20			3		Seminars 4h
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		
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	
5C1214 Fluid Mechanics	5	C	-	30	30	3	1				
5C1215 Compressible Flow	5	D	-	-	52	9		2			

5C1850 Finite Element Methods	5	D	33	-	-	-	1				33 h Workshop	33 h Workshop
5C1860 FEM Modelling	5	D	33	-	-	-		2			33 h Workshop	33 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		
Elective Courses												
5C1400 Nonlinear Dynamics in Mechanics	5	C	24	-	-	-			3			

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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	28	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 Microcomputers in Embedded Systems	5	D	-	36	-	36	1				
4F1142 Motion control and Real-time implementation*_	5	D	22	10	-	30		2			
4F1162 Mechatronics, Advanced Course II*_	15	D	-	116	-	80		2	3	4	

*The course has limited participation

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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			
Elective Courses												
4D1060 Industrial Development	4	B	40	8	-	-			3			

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	15	-	-	-	1				
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2			
3C1387 Environmental Systems Analysis	4	C	16	8	-	6		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	18	-	-	-				4	Project work 20h
3C1365 Environmental Consequences, Advanced Course II	4	D	15	15	-	40	1	2			Field exercises

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Paper Technology M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3D1112 Fiber Technology	4	D	26	-	-	15				4	
Elective Courses											
3D1107 Paper Technology	6	D	42	-	-	56			3	4	2 days studytrip
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	26	8	-	16		2			
3D1113 <u>Paper Physics</u>	4	D	20	-	-	20		2			
3D1114 <u>Paper Processes Technology</u>	4	D	20	-	-	20			3		
3D1115 <u>Pulp and Paper Processes</u>	6	D	40	-	-	48	1	2			
3D1117 <u>Paper Technology, project</u>	4	D	-	-	-	-			3	4	Project work
3D1163 <u>Pulp Technology</u>	4	D	20	-	-	24	1				

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Mechanical Engineering

Publishing Technology M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1521 Communication and Information*_	5	C	16	12	-	-			3		
2D1522 Computer Technology and Communication*_	4	C	30	-	-	20				4	
2D1526 Publishing Technology, General Course	6	C	40	-	-	20			3		30h; A one week study tour is made in period 4.

*The course has limited participation

Publishing Technology 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	36	8	-	8		2			
2D1517 XML for Publishing*_	5	D	30	-	-	40	1	2			
2D1518 Audio, Video and Multimedia Production*_	5	C	30	8	-	4		2	3		36 h Study visit36 h Study visit
2D1524 Image Processing and Reprographic Methods*_ <i>Limited number of participants</i>	6	C	26	16	-	12	1				
2D1527 Publishing Technology, Advanced Course <i>Open only to students of the specialization Publishing Technology.</i>	10	D	60	8	-	32			3	4	
Elective Courses											
2D1334 Database Technology	4	C	24	20	-	12			3		

*The course has limited participation

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Mechanical Engineering

Systems Engineering M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1320 <u>Applied Computer Science</u>	4	B	28	14	-	20			3	4	
2E1212 <u>Automatic Control, General Course</u>	4	C	24	26	-	12			3		
5B1538 <u>Reliability Theory</u>	6	D	-	-	72	-			3	4	
5B1722 <u>Applied Optimization</u>	4	C	28	14	-	9			3		
Conditionally Elective Courses											
2D1220 <u>Applied Numerical Methods I</u>	4	C	36	-	-	18			3	4	
Elective Courses											
2D1250 <u>Applied Numerical Methods II</u>	6	C	60	-	-	36			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			Project-course, 12h Seminars
1H1401 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3			6 h Seminars
1N1150 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	-	-	1					18 h Projektuppgift18 h Projektuppgift
5B1816 Applied Mathematical Programming - Nonlinear Problems	4	D	18	12	-	-		2				18 h Projektuppgift18 h Projektuppgift
5B1852 Mathematical Economics	4	D	32	16	-	-		2				

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Mechanical Engineering

Materials Processing M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1134 Effective Production	6	D	30	10	-	-			3	4	Project work
4G1160 Manufacturing Engineering, Intermediate Course I	5	C	42	42	-	-				4	
4G1161 Quality	6	C	40	16	-	-			3		
Conditionally Elective Courses											
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	B	36	12	-	10				4	
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 M4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4G1051 Project Assignment, Materials Processing	4	D	-	160	-	-			3	4	160 h Projektuppgift160 h Projektuppgift
4G1053 Materials Processing, Project Support	4	D	72	48	-	40			3	4	Home assignments 48h
Conditionally Elective Courses											
4D1071 Industrial Project Management, Basic Course	4	B	40	8	-	-	1				
4G1170 Intelligent Machining, Advanced Course	4	D	36	20	-	-		2	3	4	
4G1541 Measurement Technology & Statistics f Manufact. Processes	4	D	30	-	-	8			3		
4G1570 Metrology & Quality for the Manufuacturing 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	-	-	1	2			
4M1370 Solidification Processing	4	D	36	24	-	-	1	2			
Elective Courses											
4C1110 Material Mechanics	4	D	52	-	-	3	1				
4C1114 Finite Element Method	4	D	-	49	-	8		2			
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			
4M1341 Foundry Processing	4	D	12	-	-	-			3		Seminarier 24h Other 28h

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Mechanical Engineering

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	18	26	-	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				

*The course has limited participation

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Mechanical Engineering

Wood Technology M3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4K1601 Wood Material´s 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	B	36	12	-	-			3		
4K1102 Manufacturing Automation I	4	C	18	26	-	12	1				

*The course has limited participation

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Materials Design and Engineering

Materials Design and Engineering BD1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3E1501 Perspectives on Materials Design	6	A	34	40	-	28	1	2			16 h Study visitSeminar 4h Written test 2h 16 h Study visit
4H1705 Materials chemistry for materials design	8	A	40	60	-	27	1	2	3		
5A1227 Physics II	4	A	38	-	-	15				4	
5B1132 Analytical Methods and Linear Algebra I	8	AB	80	40	-	-	1	2			
5B1133 Analytical Methods and Linear Algebra II	8	AB	80	40	-	-			3	4	
5C1130 Mechanics I	6	AB	48	-	27	-			3	4	
Recommended Courses											
4H1706 Introduction to chemistry	1	A	-	-	-	-					Lecture 1 h Exercises 12 h
5B1120 Introductory Course in Mathematics I	1	AB	-	-	-	-					

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Materials Design and Engineering

Materials Design and Engineering BD2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1212 Numerical Methods and Fundamentals of Programming	6	AB	42	30	-	28	1	2			
4C1020 Solid Mechanics, basic course, BD	6	B	52	30	-	2	1	2			
4H1064	6	B	28	-	-	20			3	4	
4H1065 Fundamentals of Materials Science and Engineering	8	B	64	-	-	30			3	4	
4H1806 No translation	4	B	40	20	-	15				4	
4H1951	6	AB	48	48	-	12		2	3		
5B1206 Differential Equations	4	C	40	20	-	-	1	2			

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Materials Technology

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	A	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	-	-	22	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			
5B1501 <u>Probability Theory and Statistics</u>	4	C	24	36	-	-			3		
Elective Courses											
2D1335 <u>Basic Internet Programming*</u> <i>The number of participants is limited.</i>	5	B	22	-	-	24			3		
2D1522 <u>Computer Technology and Communication*</u>	4	C	30	-	-	20				4	
2D1526 <u>Publishing Technology, General Course</u>	6	C	40	-	-	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		
3C1395 <u>Technology and Sustainable Development</u>	4	C	2	6	-	-		2			
3D1112 <u>Fiber 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	-	24	-	22				4	
4C1025 <u>FEM for Engineering Applications</u>	4	C	36	14	-	4			3		
4D1051 <u>Commercial Law</u>	4	B	14	18	-	-			3		
4D1073 <u>Industrial Project Management</u>	4	B	40	8	-	-			3		
4E1103 <u>Lightweight Structures and FEM II</u>	6,5	C	76	-	-	22			3	4	
4F1242 <u>Introduction to Microcomputer Systems</u>	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	30	10	-	-			3	4 Project work
4H1202 Mechanical Metallurgy I	6	D	24	12	-	48			3	4 Home assignments
4H1204 Experimental Methods in Materials Science	5	C	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 8h Seminars 18h
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 <i>English on request. English on request.</i>	4	B	12	-	-	-			4	12 h Seminars12 h Seminars
4M1334 Casting Processing	4	D	12	24	-	18			4	
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
4M1341 Foundry Processing	4	D	12	-	-	-			3	Seminarier 24h Other 28h
4M1345 Powder Processing and Materials Forming	4	D	30	-	-	-			4	Home assignments 80h
4M1347 Metal Forming	4	D	8	28	-	-	1	2		
5A1324 Quantum Physics	8	C	60	52	-	-	1	2	3	
5B1304 Mathematics, Extended Course	5	C	-	-	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 <i>Also BD and P</i>	1	B	-	-	-	-			4	Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-	1			Three laborations in all together 9 hours. The course is given regularly throughout the year. See

9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			3		Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			2		Three laborations on all together 9 hours. The course is given regularly throughout the year. See
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	
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	-	15	-			3	4	E-learning exercises make up appr. 75 % of the course. 15 classroom hours in the evening.
9E1330 French, Elementary Level*_	4	B	-	-	56	-			3	4	
9E1334 Technical French, Intermediate Level*_	6	B	-	-	56	-			3	4	
9E1342 Spanish, Elementary 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	

*The course has limited participation

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Materials Technology

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	-	-	-			3		8 h Study visit8 h Study visit	
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4		
2A1160 Space Physics	3	D	14	-	4	-	1					
2B1260 Semiconductor Theory and Device Physics, General Course	5	D	30	-	-	10	1				Individual assignments 20h	
2B1261 Semiconductor Theory and Device Physics, Advanced Course <i>Not offered 2004/05</i>	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					
2B1700 Advanced Semiconductor Materials	5	D	34	-	-	16			3			
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			
2B1771 Superconductivity and Applications	4	D	28	-	-	-		2				
2C1111 System Planning	4	D	60	-	-	-			3			
2C1117 Wind Power Systems <i>Replaces 2C1114.</i>	5	C	58	-	-	-			3	4		
2D1225 Numerical Solutions of Differential Equations	4	C	24	4	-	16	1	2				
2D1320 Applied Computer Science	4	B	28	14	-	20	1	2				
2D1320 Applied Computer Science	4	B	28	14	-	20			3	4		
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	-	-	16			3			
2D1520 Graphic Arts Technology, Minor Course	4	C	26	8	-	16		2				
2D1521 Communication and Information*_ 	5	C	16	12	-	-			3			

2D1522 Computer Technology and Communication*	4	C	30	-	-	20			4	
2D1524 Image Processing and Reprographic Methods* <i>Limited number of participants</i>	6	C	26	16	-	12	1			
2E1212 Automatic Control, General Course	4	C	24	26	-	12			3	
2E1242 Automatic Control, Project Course*	8	D	4	-	-	50			4	
2F1400 Electroacoustics	4	D	34	12	-	8	1			
3C1350 Waste Management, Advanced Course <i>Study visit</i>	4	D	18	-	-	-			4	Project work 20h
3C1355 Ecology, Advanced Course	4	C	21	4	-	-			3	4
3C1360 Environmental Consequences, Advanced Course	4	C	15	-	-	-	1			
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	C	10	-	-	-			3	12 h Seminars12 h Seminars
3C1385 Biology	4	C	30	6	-	6	1			Field exercise 8h
3C1387 Environmental Systems Analysis	4	C	16	8	-	6		2		
3C1395 Technology and Sustainable Development	4	C	2	6	-	-		2		
3E1354 Biopolymers	5	D	24	10	-	25			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 I	4	D	14	32	-	-			4	9 h SeminarsSeminars 9 H 9 h Seminars
4A1605 Sustainable Power Generation	6	D	30	48	-	18	1	2		
4A1607 Sustainable Energy Utilisation	6	D	-	-	72	16	1	2		
4A1609 Applied Energy Technology - Project Course	6	D	12	-	-	-			3	4
4A1610 Energy Management	4	D	50	-	-	-		2	3	
4A1611 Renewable Energy Technology	4	D	-	-	52	-	1			Study visit 8h
4A1612 Renewable Energy Technology, Advanced Course	4	D	26	-	-	-			3	Study visit 4 h
4A1613 Energy and Environment <i>Examinator: Björn Palm, Tel 790 7453</i>	4	D	50	-	-	-			3	4
4A1621 Modelling of Thermodynamic Systems	4	D	16	-	-	32	1	2	3	4
4A1623 Applied Refrigeration and Heat Pump Technology	4	D	24	24	-	16			3	4
4A1625 Cooling of Electronics	4	D	-	-	48	-			3	
4A1626 Applied Heat and Power Technology	4	D	36	12	-	8			3	4
4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3	4
4A1629 Fluid Machinery	4	C	30	18	-	12	1	2		
4A1630 Thermal Fluid Machinery	4	D	36	12	-	12			3	
4B1131 Experimental Structure Dynamics	5	D	-	58	-	12		2	3	
4B1162 Vibro-Acoustics	7	D	-	-	64	8	1	2		

4B1164 Signal Analysis	5	D	-	-	26	22	1	2			
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	60	9	1	2			Project assignment 9h
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			
4C1118 Non-linear Theory of Elasticity	2	D	12	12	-	-				4	
4C1120 Experimental methods in mechanics	4	D	20	-	-	20			3		Seminars 4h
4D1026 Industrial Economy and Management, Basic Course	4	A	20	16	-	-		2			4 h Seminars4 h Seminars
4D1027 Industrial Economics and Management, Basic Course	4	A	20	16	-	-		2			4 h SeminarsSeminars 4h 4 h Seminars
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	B	36	12	-	10				4	
4D1051 Commercial Law	4	B	14	18	-	-			3		
4D1057 Advanced Patent Law	4	C	4	14	-	-	1				14 h SeminarsSeminars 14h 14 h Seminars
4D1060 Industrial Development	4	B	40	8	-	-			3		
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3		
4D1075 Work Organization and Leadership	4	B	24	24	-	-			3		
4D1092 Man - Machine System	4	B	24	6	-	3			3		
4D1093 Psychology for Engineers <i>Replaces 4D1088 Technical Work Psychology</i>	4	B	24	3	-	4		2			
4E1124 Fibre Composites I: materials and processes	4	D	40	-	-	8	1				
4E1125 Fibre Composites II, Analysis and Design	4	D	2	-	-	6		2			
4E1126 Structural Design and Optimisation	4	D	40	-	-	18			3		
4E1150 Biomechanics and Neurronics	4	D	34	-	-	8				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	
4F1460 Combustion Engines, Project Course <i>The course is open only to students specializing in combustion engines. Open only for students with individual specialization of Combustion engines.</i>	6	D	-	-	18	-			3	4	
4F1531 Machine Elements, basic course for I and T	4	B	24	40	-	-	1				
4F1540 Tribology	4	C	18	9	-	5				4	
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*_ Limited number of participants.	4	C	24	36	-	-			3		
4F1640 Industrial Design*_ 80% participation.	4	C	24	36	-	-		2			
4F1641 Environmentally Adapted Product Design	4	C	-	-	42	-		2			
4F1643 Eco Design Project*_ Course is given upon agreement	4	C	-	-	-	-	1	2	3	4	
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	4	D	25	25	-	10	1	2			
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			
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
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	B	12	-	-	18		2			
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1610 Advanced Materials	4	C	18	-	-	6			3		Study visit 8h Seminars 18h
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
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				
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	-	-	-			3	4	160 h Projektuppgift160 h Projektuppgift
4H1945 Economical Process Analysis and Strategy	4	B	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 <i>Not given 2004/05. Not given 2004/05.</i>	4	B	-	-	-	-					12 h Seminars12 h Seminars
4K1409 History of Industry	4	B	12	-	-	10	1	2			12 h Seminars, 10 h Study visit12 h Seminars, 10 h Study visit
4K1601 Wood Material's Science, Basic Course	5	C	36	24	-	32			3	4	
4K1602 Industrial Wood Processing, Basic Course	4	C	26	16	-	16	1				
4M1051 Project Assignment	4	D	-	160	-	-	1	2			
4M1341 Foundry Processing	4	D	12	-	-	-			3		Seminarier 24h Other 28h
4M1342 Space Systems and Technology	4	D	36	-	-	-		2			
4M1343 Materials Processing, Project Support	4	D	72	48	-	40	1	2			
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	-	-	1	2			
4M1347 Metal Forming	4	D	8	28	-	-	1	2			
4M1370 Solidification Processing	4	D	36	24	-	-	1	2			
5A1332 Advanced Quantum Mechanics, Course I	5	D	36	-	-	-	1	2			
5A1354 Computational Physics	6	D	30	-	-	20	1				
5A1370 Solid State Theory	4	D	36	-	-	-	1				
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
5A1502 Quantum Electronics with Electro Optics	8	D	48	-	-	-		2			
5A1590 Technical Photography	5	D	20	-	-	36			3	4	
5A1775 Nuclear Reactor Physics, Major Course	6	D	36	-	-	24		2			
5A1777 Reactor Physics, Minor Course	4	D	30	-	-	16		2			
5B1310 Applied and Industrial Mathematics	5	C	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* <i>Limited number of participants: 25</i>	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	67	-	-	18			3	4	3 h Seminars3 h Seminars
7E1202 Systems Biology*	5	C	32	-	-	25		2			24 h Seminars24 h Seminars
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-	1				Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-			3		Three laborations in all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-		2			Three laborations on all together 9 hours. The course is given regularly throughout the year. See
9E1131 Information Searching for B, I, M, T <i>Also BD and P</i>	1	B	-	-	-	-				4	Three laborations in all together 9 hours. The course is given regularly throughout the year. See
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	-	1	2			
9E1325 Technical German, Intermediate Level, E-learning	6	B	-	-	15	-	1	2			E-learning exercises appr. 75 % of the course. 15 classroom hours in the evening.
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			
9E1334 Technical French, Intermediate Level*	6	B	-	-	56	-	1	2			
9E1342 Spanish, Elementary Level*	4	B	-	-	56	-	1	2			
9E1350 Italian, Elementary Level*	4	B	-	-	56	-	1	2			
9E1360 Communicative Swedish*	4	B	-	-	56	-	1	2			

*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 8h Seminars 18h	
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	B	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	67	-	-	18			3	4	3 h Seminars3 h Seminars
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 04/05.</i>	6	D	26	-	-	20					

*The course has limited participation

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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	18	26	-	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	26	34	-	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 Utilisation	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 I	4	D	14	32	-	-				4	9 h SeminarsSeminars 9 H 9 h Seminars
4A1610 Energy Management	4	D	50	-	-	-		2	3		
4A1611 Renewable Energy Technology	4	D	-	-	52	-	1				Study visit 8h
4A1613 Energy and Environment <i>Examinator: Björn Palm, Tel 790 7453</i>	4	D	50	-	-	-			3	4	Study visit 6h
4A1620 Combustion Theory	4	C	18	18	-	15	1	2			
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	54	-	-	-			3	4	Study visits 6h
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	1	2			
4A1625 Cooling of Electronics	4	D	-	-	48	-			3		
4A1626 Applied Heat and Power Technology	4	D	36	12	-	8			3	4	Project assignment 8h

4A1627 Applied Reactor Technology and Nuclear Power Safety	4	D	48	-	-	-			3	4	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		
5C1215 Compressible Flow	5	D	-	-	52	9		2			

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Materials Technology

Solid Mechanics B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
4C1025 FEM for Engineering Applications	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	C	-	-	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			
Conditionally 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		
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		
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			

4E1125 Fibre Composites II, Analysis and Design	4	D	2	-	-	6	2			
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
4H1505 Structure and Properties of Ceramic Materials	4	B	12	-	-	18	2			
5A1301 Mathematical Methods in Physics, Course I <i>Not given 04/05.</i>	4	C	26	28	-	-				
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		
5C1214 Fluid Mechanics	5	C	-	30	30	3	1			
5C1902 Advanced Dynamics of Complex Systems	4	D	24	-	-	-	1			

*The course has limited participation

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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	B	26	20	-	-					4	8 h SeminarsSeminars 4 H 8 h Seminars
Conditionally Elective Courses												
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	B	36	12	-	10					4	
4D1043 Business Negotiations*	4	C	24	8	-	-				3		
4D1075 Work Organization and Leadership	4	B	24	24	-	-				3		
Elective Courses												
4D1032 Production <i>Replaces 4D1030 Industrial Production and 4D1136 Production</i>	4	B	36	12	-	10					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	C	68	72	-	16		2	3	4	Roll-play 16h
Conditionally Elective Courses											
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3		
4D1071 Industrial Project Management, Basic Course	4	B	40	8	-	-	1				
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	18	26	-	12	1				
Elective Courses											
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3		
4D1152 Industrial Marketing, Advanced Course	4	C	36	-	-	-	1				12 h Seminars 12 h Seminars

4D1170 Advanced Production and Product Development	4	C	36	12	-	-		2			
4D1174 Management and Analysis of Innovations and Technology	4	C	38	-	-	-		2			10 h Seminars10 h Seminars
4K1103 Manufacturing Automation II	6	C	26	34	-	17	1	2			

*The course has limited participation

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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	B	36	12	-	10				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		
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			120 h Projektuppgift120 h Projektuppgift
Elective Courses											
3C1360 <u>Environmental Consequences, Advanced Course</u>	4	C	15	-	-	-	1				
4D1062 <u>Industrial Marketing</u> <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-			3		
4D1093 <u>Psychology for Engineers</u> <i>Replaces 4D1088 Technical Work Psychology</i>	4	B	24	3	-	4		2			
4G1053 <u>Materials Processing, Project Support</u>	4	D	72	48	-	40			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			
4G1540 Laser Metrology Methods and Non Destructive Testing	4	C	28	22	-	4		2			
4K1102 Manufacturing Automation I	4	C	18	26	-	12	1				

*The course has limited participation

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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	B	24	24	-	-			3			
Conditionally Elective Courses												
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											
4F1760 Integrated Product Development, Advanced Course* _	20	D	-	180	-	-	1	2	3	4	
Conditionally Elective Courses											
4F1541 CAD 3D-modelling and Visualization for Personal Computers* _	4	C	8	36	-	-		2			
Elective Courses											
4F1131 Microcomputers in Embedded Systems* _	5	D	-	36	-	36		2			
4F1641 Environmentally Adapted Product Design 80% participation.	4	C	-	-	42	-		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 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, Project Course	5	D	-	48	-	12			3	4	Study tour to industry 40h

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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	

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	-	-	8	1				
4E1125 Fibre Composites II, Analysis and Design	4	D	2	-	-	6		2			
4E1126 Structural Design and Optimisation	4	D	40	-	-	18			3		
4E1132 Lightweight Design* <i>Open only to students on the specialisation LKR.</i>	10	D	-	-	336	-	1	2	3	4	
4E1150 Biomechanics and Neuronics	4	D	34	-	-	8				4	
Elective Courses											
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	60	9	1	2			Project assignment 9h
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	28	14	-	9			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	-	-	15	-	1	2			E-learning exercises appr. 75 % of the course. 15 classroom hours in the evening.
9E1326 Technical German, Advanced Level*	6	C	-	-	56	-	1	2			
9E1334 Technical French, Intermediate Level*	6	B	-	-	56	-	1	2			



9E1348 <u>Technical Spanish, Intermediate</u> Level!*_	6	B	-	-	56	-			3	4	
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*The course has limited participation

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Machine Design B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
4C1025 FEM for Engineering Applications	4	C	36	14	-	4			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			
4F1644 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 <i>80% participation.</i>	4	C	-	-	42	-		2			
4K1102 Manufacturing Automation I	4	C	18	26	-	12	1				

*The course has limited participation

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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	C	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				
Conditionally Elective Courses											
4H1405 Corrosion Science, Advanced Course	4	D	16	-	-	-			3		
4H1505 Structure and Properties of Ceramic Materials	4	B	12	-	-	18		2			
4H1609 Functional Materials	4	D	18	-	-	6		2			Study visit 8h
4H1610 Advanced Materials	4	C	18	-	-	6			3		Study visit 8h Seminars 18h
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				
5A1370 Solid State Theory	4	D	36	-	-	-	1				

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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	28	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 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			
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	-	-	-	1	2			120 h Projektuppgift120 h Projektuppgift
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	B	12	12	-	-				4	Projektuppgift 60h
4M1341 Foundry Processing	4	D	12	-	-	-			3		Seminarier 24h Other 28h
4M1370 Solidification Processing	4	D	36	24	-	-	1	2			

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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			
Elective Courses												
4D1060 Industrial Development	4	B	40	8	-	-			3			

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	15	-	-	-	1				
3C1370 Applied Environmental Legislation	3	C	24	3	-	-		2			
3C1387 Environmental Systems Analysis	4	C	16	8	-	6		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	18	-	-	-				4	Project work 20h
3C1365 Environmental Consequences, Advanced Course II	4	D	15	15	-	40	1	2			Field exercises

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Paper Technology B3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
3D1112 <u>Fiber Technology</u>	4	D	26	-	-	15				4	
Elective Courses											
3D1107 <u>Paper Technology</u>	6	D	42	-	-	56			3	4	2 days studytrip
5C1921 <u>Fluid Mechanics for Engineers</u>	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	26	8	-	16		2			
3D1113 <u>Paper Physics</u>	4	D	20	-	-	20		2			
3D1114 <u>Paper Processes Technology</u>	4	D	20	-	-	20			3		
3D1115 <u>Pulp and Paper Processes</u>	6	D	40	-	-	48	1	2			
3D1117 <u>Paper Technology, project</u>	4	D	-	-	-	-			3	4	Project work
3D1163 <u>Pulp Technology</u>	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	-	-	8	1				
Conditionally Elective Courses											
3E1354 Biopolymers	5	D	24	10	-	25			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	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 B4

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	36	8	-	8		2			
2D1517 XML for Publishing*_	5	D	30	-	-	40	1	2			
2D1518 Audio, Video and Multimedia Production*_	5	C	30	8	-	4		2	3		36 h Study visit36 h Study visit
2D1524 Image Processing and Reprographic Methods*_ <i>Limited number of participants</i>	6	C	26	16	-	12	1				
2D1527 Publishing Technology, Advanced Course <i>Open only to students of the specialization Publishing Technology.</i>	10	D	60	8	-	32			3	4	
Elective Courses											
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	30	10	-	-			3	4	Project work
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 <u>Project Assignment, Materials Processing</u>	4	D	-	160	-	-			3	4	160 h Projektuppgift160 h Projektuppgift
4G1053 <u>Materials Processing, Project Support</u>	4	D	72	48	-	40			3	4	Home assignments 48h
Conditionally Elective Courses											
4G1170 <u>Intelligent Machining, Advanced Course</u>	4	D	36	20	-	-		2	3	4	
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		
4G1670 <u>Materials Forming</u>	4	D	18	12	-	18		2	3		
4M1346 <u>Simulation and Modelling</u>	4	D	10	80	-	-	1	2			
4M1370 <u>Solidification Processing</u>	4	D	36	24	-	-	1	2			
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			
4G1243 <u>Advanced Welding Technology, Modulus 1</u>	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			
4G1541 Measurement Technology & Statistics f Manufact. Processes	4	D	30	-	-	8			3		
4M1341 Foundry Processing	4	D	12	-	-	-			3		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											
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 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	18	26	-	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				

*The course has limited participation

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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´s 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	B	36	12	-	-			3		
4K1102 Manufacturing Automation I	4	C	18	26	-	12	1				

*The course has limited participation

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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	20	12	-	24		2	3		
2D1348 <u>Communication and Information</u>	5	B	30	20	-	-		2	3		
2D1571 <u>Introduction to Media Technology</u>	4	B	42	12	10	-	1				
2D1572 <u>Creation and Design</u>	4	C	30	18	-	-			3	4	
2D1575 <u>Media Technology Programme Summary Course</u> <i>The course is given with 1 credit point for each year in the years 1 – 4.</i>	4	B	10	-	-	-		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 I</u>	6	AB	-	-	-	-	1				
5B1116 <u>Mathematics II</u>	6	AB	-	-	-	-		2			
5B1118 <u>Discrete Mathematics</u>	5	AB	-	-	-	-				4	
Elective Courses											
5B1120 <u>Introductory Course in Mathematics I</u>	1	AB	-	-	-	-					

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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>	4	C	-	-	-	-		2			160 h Workshop
2D1320 <u>Applied Computer Science</u>	4	B	28	14	-	20	1	2			
2D1334 <u>Database Technology</u>	4	C	24	20	-	12			3		
2D1574 <u>Media Technology, Basic Course</u>	12	AB	64	6	-	38	1	2			Field trips 12h
2D1575 <u>Media Technology Programme Summary Course</u> <i>The course is given with 1 credit point for each year in the years 1 – 4.</i>	4	B	10	-	-	-	1	2	3	4	
2G1316 <u>Datacommunication and Computer Networks</u> <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12			3		
4D1200 <u>Industrial Economics for Media Technology, Basic Course</u>	4	A	26	16	-	-				4	4 h SeminarsSeminars 4h 4 h Seminars
5B1501 <u>Probability Theory and Statistics</u>	4	C	24	36	-	-				4	

*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											
2D1575 Media Technology Programme Summary Course <i>The course is given with 1 credit point for each year in the years 1 – 4.</i>	4	B	10	-	-	-	1	2	3	4	
2D1620 Human-Computer Interaction, Introductory Course	4	C	20	10	-	2	1				
4D1215 Media from Technology to Culture	4	B	30	-	-	-	1				15 h Seminars15 h Seminars
Conditionally Elective Courses											
2F1111 Speech Technology	4	D	36	14	-	6			3		
3C1320 Environment and Technology	4	C	24	3	-	-			3		
3C1330 Technology and Ecosystems	4	B	24	3	-	-		2			
Elective Courses											
2D1385 Software Engineering	4	C	24	12	-	18			3		
2D1413 Advanced Graphics and Interaction	6	D	50	-	-	12	1	2			
2D1418 Language Engineering	4	D	42	-	-	12	1				
2D1573 Telepresence Production	4	C	20	-	10	-			3	4	
2D1590 Media Perception	4	C	20	-	-	24			3		
2D1591 Production Techniques for Moving Images	6	C	40	16	-	16				4	
2E1215 Introductory Matlab Course	1	A	4	-	-	-			3		8 h Computer8 h Computer
2E1313 Signals and Systems, part II	5	C	30	24	-	4				4	10 h Computer10 h Computer
5B1209 Signals and Systems, part I	5	AB	-	-	-	-		2			

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Media Technology MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1575 <u>Media Technology Programme Summary Course</u> <i>The course is given with 1 credit point for each year in the years 1 – 4.</i>	4	B	10	-	-	-	1	2	3	4	1 h Other
2D1576 <u>Media Management</u>	6	C	60	30	-	-			3	4	
2D1577 <u>Content and Expression in Media</u>	6	D	40	25	-	-			3	4	
Conditionally Elective Courses											
2F1111 <u>Speech Technology</u>	4	D	36	14	-	6			3		
2F1212 <u>Music Acoustics</u>	4	D	-	-	48	8				4	
3C1320 <u>Environment and Technology</u>	4	C	24	3	-	-			3		
3C1330 <u>Technology and Ecosystems</u>	4	B	24	3	-	-		2			
Elective Courses											
2D1410 <u>User Centered Program Development</u>	6	D	26	-	-	22			3	4	8 h Seminars8 h Seminars
2D1413 <u>Advanced Graphics and Interaction</u>	6	D	50	-	-	12	1	2			
2D1418 <u>Language Engineering</u>	4	D	42	-	-	12	1				
2D1592 <u>Processing of Moving Pictures</u>	6	D	40	-	-	20	1				
2D1593 <u>Display and Projection Technology</u>	4	C	20	-	-	10		2			
2E1215 <u>Introductory Matlab Course</u>	1	A	4	-	-	-			3		8 h Computer8 h Computer
2E1313 <u>Signals and Systems, part II</u>	5	C	-	-	-	-	1				
5B1209 <u>Signals and Systems, part I</u>	5	AB	-	-	-	-		2			

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Interactive Media Technology MEDIA3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Conditionally Elective Courses												
2D1323 Computer Graphics and Interaction <i>Allowed for all programmes except D.</i>	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 Technology MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2D1390 Internet Programming	4	C	28	-	-	26		2			
2D1651 Computer Game Design with Advanced Graphics* <i>Limited number of participants.</i>	6	D	48	12	-	18	1	2			

*The course has limited participation

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Information System Management MEDIA3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2I1190 Organisations, IT-Systems and Management	7	C	36	-	14	9			3	4	Seminars 6h
2I1191 IT-Platform: Strategy, Architecture and Design	5	C	30	-	-	-				4	Seminars 6h
2I1197 Systems Theory	3	C	21	-	3	3			3		
2I1198 IT-Management	5	C	27	-	7	-				4	Seminars 8 hours

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Journalism MEDIA3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
7G1101 Specialisation Course in Journalism, Part 1	6	C	-	-	-	-			3		
7G1102 Specialisation Course in Journalism, Part 2	4	C	-	-	-	-				4	

Journalism MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
7G1103 Specialisation Course in Journalism, Part 3	5	D	-	-	-	-	1				
7G1104 Specialisation Course in Journalism, Part 4	5	D	-	-	-	-		2			

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MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2G1305 Internetworking <i>Given at Campus Valhallavägen</i>	4		20	14	-	8	1				
2G1318 Queuing Theory and Teletraffic Systems	4	D	24	24	-	-		2			
2G1322 Communication System Design	16	D	-	-	-	-			3	4	Project plan P3 Project report P3 and P4
2G1520 Operating Systems <i>Replaces 2G1113 and 2G1504 from 04/05 Given in Kista</i>	5	C	28	10	-	12			3		
2G1524 Distributed Artificial Intelligence and Intelligent Agents <i>The course is not elective if the student has already taken 2I1235</i>	5	D	28	10	-	-		2			

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Audio Technology MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2F1112 <u>Speech Technology, Extended Course</u>	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>Perception of Sound</u>	5	D	24	12	-	12	1				
2F1410 <u>Audio Technology</u>	5	D	30	12	-	12		2			20 h Projektuppgift20 h Projektuppgift

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Man-Machine Interaction MEDIA3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2D1385 Software Engineering	4	C	24	12	-	18			3		
2D1410 User Centered Program Development	6	D	26	-	-	22			3	4	8 h Seminars 8 h Seminars
2D1622 Human-Computer Interaction, Advanced Course	4	C	18	5	-	8		2			
2D1640 Graphics and Interaction Programming	6	C	42	8	-	42			3	4	

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Video and Film Production MEDIA3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2D1590 Media Perception	4	C	20	-	-	24			3		
2D1591 Production Techniques for Moving Images	6	C	40	16	-	16				4	

Video and Film Production MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2D1592 Processing of Moving Pictures	6	D	40	-	-	20	1				
2D1593 Display and Projection Technology	4	C	20	-	-	10		2			

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Media Technology

Printed communication MEDIA4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2D1515 Machinery and Materials in Graphic Arts Technology	6	C	36	8	-	8		2			
2D1517 XML for Publishing*_	5	D	30	-	-	40	1	2			
2D1524 Image Processing and Reprographic Methods*_ <i>Limited number of participants</i>	6	C	26	16	-	12	1				
4D1071 Industrial Project Management, Basic Course	4	B	40	8	-	-	1				

*The course has limited participation

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Microelectronics

Microelectronics ME1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1111 <u>Applied Physics, Thermodynamics and Waves</u>	6	B	42	28	-	16			3	4	
2B1112 <u>Project Course in Microelectronics</u> <i>Under bearbetning</i>	5	B	12	-	-	50				4	
2B1115 <u>Engineering Fundamentals</u>	4	A	32	30	-	12	1				
2I1035 <u>Computer Science, Basic Course</u>	4	B	24	24	-	24	1	2			
5B1116 <u>Mathematics II</u>	6	AB	60	-	-	-		2	3		
5B1117 <u>Mathematics III</u>	6	AB	60	-	-	-			3	4	
5B1135 <u>Mathematics I for I</u>	6	AB	30	16	30	-	1	2			
5C1106 <u>Applied Physics, Mechanics</u>	4	B	30	15	-	-		2	3		
Recommended Courses											
9E1362 <u>Spoken and Written Swedish*</u>	4	B	-	-	42	-		2	3		
Elective Courses											
5B1120 <u>Introductory Course in Mathematics I</u>	1	AB	-	-	-	-					

*The course has limited participation

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Microelectronics

Microelectronics ME2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2A1850 Electromagnetic Theory ME	6	C	44	44	-	-	1	2			
2B1121 Quantum Mechanics I	5	C	30	24	-	-			3		
2B1252 Semiconductor Devices <i>Under bearbetning</i>	6	C	32	10	-	12				4	
2B1553 Analog Electronics	5	B	32	32	-	8	1				
2D1213 Numerical Methods for the Microelectronics Program	4	B	22	22	-	24		2	3	4	
3B1810 The Concepts of Chemistry	4	B	-	-	-	-				4	
5B1215 Mathematical Methods	12	C	120	-	-	-	1	2	3		

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Microelectronics

Microelectronics ME3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1380 Optics, General Course	4	D	26	14	-	25	1				
2B1545 Digital Electronics <i>Given in Kista</i> <i>Under bearbetning</i>	5	B	26	18	-	16			3	4	
2B1710 Condensed Matter Physics	6	D	38	22	-	24			3	4	
2E1313 Signals and Systems, part II	5	C	-	-	-	-	1				
5B1506 Mathematical Statistics, Basic Course	6	C	-	-	-	-		2			
Elective Courses											
2B1140 Frontiers of Microelectronics and Information Technology <i>Not offered fall 2004, only spring 2005</i> <i>Offered twice a year, either fall or spring.</i>	4	D	20	-	-	-	1	2	3	4	

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Microelectronics

ME3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Compulsory Courses												
7E1200 Cellular and Molecular Biology*_	10	C	67	-	-	18			3	4	3 h Seminars3 h Seminars	
Conditionally Elective Courses												
2B1248 Simulation of Semiconductor Devices	5	D	24	-	-	32		2				
2B1310 Microwave Engineering	5	C	36	18	-	10		2				

*The course has limited participation

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ME3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
2B1248 <u>Simulation of Semiconductor Devices</u>	5	D	24	-	-	32		2			
2B1270 <u>Statistical Physics</u>	5	D	30	18	-	-				4	
2B1310 <u>Microwave Engineering</u>	5	C	36	18	-	10		2			
2B1515 <u>Analog Electronics, Advanced Course</u> <i>Under bearbetning</i>	5	C	30	14	-	20			3		Project work
2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3		
2G1518 <u>Computer Hardware Engineering</u>	5	B	20	20	-	12				4	

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Microelectronics

ME3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Conditionally Elective Courses											
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> <i>Under bearbetning</i>	5	D	38	-	-	8				4	
2B1822 <u>Quantum Electronics</u> <i>Under bearbetning</i>	5	D	30	18	-	-		2			

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ME3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2B1270 Statistical Physics	5	D	30	18	-	-				4	
Conditionally Elective Courses											
2B1822 Quantum Electronics <i>Under bearbetning</i>	5	D	30	18	-	-		2			
2D1220 Applied Numerical Methods I	4	C	36	-	-	18			3	4	
5A1326 Relativity	4	C	28	20	-	-			3		

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Civil Engineering and Urban Management

Civil Engineering and Urban Management S1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1U1015 Introduction to the Planning and Building Process	8	AB	60	50	-	-	1	2			25 h Study visitSeminars, 25 h Study visit
2D1311 Programming Technique with PBL	4	AB	26	-	-	20			3	4	
5A1216 Physical principles and processes	8	AB	48	40	-	-			3	4	40 h Project-tutorials
5B1130 Mathematical Methods I	8	AB	24	-	96	-	1	2	3		
5B1131 Mathematical Methods II	8	AB	24	-	96	-			3	4	
5B1134 Mathematics and Models	4	AB	12	-	48	-	1				
Recommended Courses											
1U1012 Introduction to Civil Engineering and Urban Management <i>Under bearbetning</i>	1	AB	9	-	15	-					8 h Project, 1 day study-visit

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Civil Engineering and Urban Management

Civil Engineering and Urban Management S2

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1L1026 Buildings and Civil Engineering Structures	5	AB	33	18	-	-				4	
1M1201 Natural Resources Theory	4	AB	22	15	-	-	1				
1M1202 Geology and Geotechnical Engineering	4	AB	23	24	-	3	1				
1N1306 Economics	5	AB	30	25	-	-			3		
1N1409 Planning, Building and Environment Law	4	AB	24	24	-	-		2			
1N1502 No translation Under bearbetning	5	AB	24	-	-	-				4	
1N1651 Graphic Information Systems	5	AB	24	-	-	44			3		Project task 10h
2D1214 Numerical methods	4	AB	20	18	-	18	1	2			
5B1508 Mathematical Statistics	4	AB	24	32	-	4		2			
5C1107 Mechanics	5	AB	28	14	-	-				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 Physics, Basic Course I	7	B	53	17	-	30	1	2			Project work
5A1202 Physics, Basic Course Part II	8	B	42	32	-	25			3	4	
5B1106 Calculus II, part 1	6	AB	-	-	-	-	1	2			
5B1107 Calculus II, part 2	6	AB	-	-	-	-			3	4	
5B1109 Linear Algebra II	5	AB	-	-	-	-	1	2			
5C1103 Mechanics, Basic Course	6	B	48	27	-	-			3	4	
Elective Courses											
5B1120 Introductory Course in Mathematics I	1	AB	-	-	-	-					

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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 <u>Electromagnetic Theory F</u>	6	C	52	52	-	-	1	2			
2D1240 <u>Numerical Methods, Basic Course II</u>	4	B	24	14	-	18			3	4	
4C1055 <u>Strength of Materials and Solid Mechanics, Basic Course</u> <i>Under bearbetning</i>	6	B	42	40	-	2			3	4	
5A1246 <u>Modern Physics</u>	6	B	30	14	-	20		2	3	4	
5B1201 <u>Complex Analysis</u>	4	C	40	20	-	-	1				
5B1202 <u>Differential Equations and Transforms II</u>	6	C	60	30	-	-		2		4	
5B1506 <u>Mathematical Statistics, Basic Course</u>	6	C	36	48	-	-			3	4	
5C1113 <u>Mechanics, Continuation Course</u>	4	C	30	15	-	-	1				
Elective Courses											
5U1201 <u>Advanced Problems A</u> <i>Under bearbetning</i>	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											
2B1711 Solid State Physics <i>Under bearbetning</i>	4	D	30	18	-	12			3	4	
2D1344 Fundamentals of Computer Science	4	B	24	24	-	24		2	3		
2E1200 Automatic Control, General Course	4	C	24	26	-	12	1				
5A1305 Mathematical Methods in Physics	5	C	30	36	-	-	1	2			
5A1324 Quantum Physics	8	C	60	52	-	-	1	2	3		
Conditionally Elective Courses											
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 <i>Under bearbetning</i>	4	C	-	48	-	-	1	2	3	4	
5U1202 Advanced Problems B <i>Under bearbetning</i>	4	D	-	36	-	-	1	2	3		

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Engineering Physics

Atomic and subatomic physics F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5A1326 Relativity	4	C	28	20	-	-			3		
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	

Atomic and subatomic 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			
2A1137 Plasma Physics, Supplementary Course	2	D	12	-	-	-			3		
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
2A1160 Space Physics	3	D	14	-	4	-	1				
5A1310 Elementary Particle Physics	4	D	36	-	-	-				4	
5A1312 Astroparticle Physics	4	D	28	-	-	-			3		
5A1329 Quantum Mechanics, Intermediate Course	5	D	34	28	-	-	1	2			
5A1335 Symmetries in Physics	4	D	30	-	-	-	1	2			
5A1405 Experimental Particle Physics	4	D	26	-	-	4		2			
5A1410 Nuclear Physics	4	D	24	-	-	25	1	2			
5A1412 Atomic Nuclei - Radiation - Energy <i>Given if there are enough interest. Please contact course administrator.</i>	5	B	24	-	-	15			3		
5A1414 Radiation Detectors and Medical Imaging Systems	5	D	24	6	-	20			3	4	
5A1425 Physics at Accelerators <i>Given if there are enough interest. Please contact course administrator.</i>	4	D	35	-	-	16			3		
5A1456 Atomic and Molecular Physics	4	D	24	-	-	-	1				

5A1457 Atomic and Molecular Physics, Extended Course <i>The course can only be followed as an extension of 5A1456 Atomic and Molecular Physics.</i>	2	D	4	-	-	20	2			
5A1460 Synchrotron Radiation Based Atomic and Molecular Physics <i>Given if there are enough interest. Please contact course administrator.</i>	4	D	24	-	-	-			4	
5A1490 Laser Chemistry	4	D	24	-	-	12	2			
5A1491 Femtochemistry	5	D	36	-	-	-		3		
5A1495 Molecular Physics	5	D	34	10	-	-		3		
5A1510 Optical Measurement Techniques	4	D	36	-	-	-		3	4	One individual task. Study visits.
5A1775 Nuclear Reactor Physics, Major Course	6	D	36	-	-	24	2			
5A1802 Laser Physics II <i>Not given 04/05. Given if there are enough interest. Please contact course administrator.</i>	4	D	36	-	-	-				

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Biological Physics and Medical Technology F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5A1350 Statistical Mechanics	4	C	24	24	-	-				4	

Biological Physics and Medical Technology F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1432 <u>Artificial Neural Networks and Other Learning Systems</u>	4	D	26	-	-	16			3		
2D1435 <u>Mathematical Modelling of Biological Systems</u> <i>The course is given every second year and will not be given 04/05.</i>	6	D	26	-	-	20					
5A1329 <u>Quantum Mechanics, Intermediate Course</u>	5	D	34	28	-	-	1	2			
5A1351 <u>Non-equilibrium Statistical Mechanics</u>	4	D	24	-	-	-				4	
5A1352 <u>Complex Systems</u>	4	D	24	-	-	-	1				
5A1353 <u>Macromolecular Conformations</u> <i>Not given 04/05.</i>	4	D	24	-	-	-					
5A1354 <u>Computational Physics</u>	6	D	30	-	-	20	1				
5A1356 <u>Computational Physics, Additional Course</u>	3	D	-	-	-	-			3		
5A1357 <u>Physics of Molecular Biology</u>	4	D	24	-	-	-	1				
5A1365 <u>Molecular Biophysics, Basic Course</u> <i>5A1365 + 5A1366 replace 5A1355. The course is given by the Department of Biochemistry and Biophysics, Stockholm University. The instruction takes place at the Arrhenius laboratories, Frescati.</i>	6	D	90	-	-	-				4	5 h Study visit 5 h Study visit
5A1366 <u>Molecular Biophysics, Complementary Course</u> <i>5A1365 + 5A1366 replace 5A1355. The course is given by the Department of Biochemistry and Biophysics, Stockholm University. The instruction takes place at the Arrhenius laboratories, Frescati.</i>	2	D	-	-	-	20				4	Literature seminars

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		
5A1511 Optical Physics <i>Under bearbetning</i>	4	D	26	14	-	25	1			
5A1512 Optical Physics, Extended Course <i>Can only be studied together with 5A1511. Under bearbetning</i>	2	D	12	6	-	10	1			
5A1582 Physics of Biomedical Microscopy	4	D	28	-	-	20	2			
5A1584 Cellular Biophysics	5	D	20	-	-	24		3		
5A1586 Experimental Biomolecular Physics	4	D	34	-	-	15			4	5 h Study visit5 h Study visit
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* <i>Limited number of participants: 25</i>	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	67	-	-	18		3	4	3 h Seminars3 h Seminars
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

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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Engineering Physics

Physics F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2B1712 Solid State Physics, Extended Course <i>Under bearbetning</i>	2	D	6	6	-	12				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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Engineering Physics

Condensed matter physics F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5A1326 Relativity	4	C	28	20	-	-			3		
5A1350 Statistical Mechanics	4	C	24	24	-	-				4	
5B1303 Analysis, Basic Course	6	C	-	-	66	-			3	4	

Condensed matter physics F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2B1771 Superconductivity and Applications	4	D	28	-	-	-		2			
5A1329 Quantum Mechanics, Intermediate Course	5	D	34	28	-	-	1	2			
5A1351 Non-equilibrium Statistical Mechanics	4	D	24	-	-	-				4	
5A1354 Computational Physics	6	D	30	-	-	20	1				
5A1370 Solid State Theory	4	D	36	-	-	-	1				
5A1374 Many Particle Physics	4	D	24	-	-	-		2			
5A1376 Strongly Correlated Systems	4	D	24	-	-	-			3		
5A1378 Mesoscopic Physics <i>Under bearbetning</i>	4	D	36	-	-	10		2			
5A1379 Spin Electronics	4	D	24	-	-	4				4	

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Laser Physics and Quantum Optics F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5A1800 Laser Physics I	4	D	24	12	-	-				4	

Laser Physics and Quantum Optics F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2B1325 Photonics <i>Under bearbetning</i>	5	D	38	-	-	8				4	
2B1750 Smart Electronic Materials	4	C	18	10	-	8	1				
2B1751 Physics of Electronic Devices	4	D	12	6	-	-				4	
5A1329 Quantum Mechanics, Intermediate Course	5	D	34	28	-	-	1	2			
5A1336 Quantum Dynamical Systems <i>Given if there are enough interest. Please contact course administrator.</i>	4	D	30	-	-	-			3		
5A1378 Mesoscopic Physics <i>Under bearbetning</i>	4	D	36	-	-	10		2			
5A1379 Spin Electronics	4	D	24	-	-	4				4	
5A1502 Quantum Electronics with Electro Optics	8	D	48	-	-	-		2			
5A1503 Electro Optics	4	D	24	-	-	-		2			
5A1510 Optical Measurement Techniques	4	D	36	-	-	-			3	4	One individual task. Study visits.
5A1511 Optical Physics <i>Under bearbetning</i>	4	D	26	14	-	25	1				
5A1512 Optical Physics, Extended Course <i>Can only be studied together with 5A1511. Under bearbetning</i>	2	D	12	6	-	10	1				
5A1520 Problem Solving in Optics	4	D	-	-	-	-	1	2	3	4	
5A1521 Problem Solving in Optics, Continuation Course 1	2	D	-	-	-	-			3	4	
5A1523 Optical Systems Design	4	D	12	-	-	5				4	10 h Projektuppgift10 h Projektuppgift
5A1582 Physics of Biomedical Microscopy	4	D	28	-	-	20		2			



5A1802 Laser Physics II <i>Not given 04/05. Given if there are enough interest. Please contact course administrator.</i>	4	D	36	-	-	-					
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Mathematical Physics F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5A1326 Relativity	4	C	28	20	-	-			3		
5A1350 Statistical Mechanics	4	C	24	24	-	-				4	
5B1303 Analysis, Basic Course	6	C	-	-	66	-			3	4	

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	
5A1332 Advanced Quantum Mechanics, Course I	5	D	36	-	-	-	1	2			
5A1333 Advanced Quantum Mechanics, Course II <i>Given if there are enough interest. Please contact course administrator.</i>	4	D	32	-	-	-			3		
5A1334 Differential Geometry in Physics <i>Given if there are enough interest. Please contact course administrator.</i>	4	D	34	-	-	-					
5A1335 Symmetries in Physics	4	D	30	-	-	-	1	2			
5A1336 Quantum Dynamical Systems <i>Given if there are enough interest. Please contact course administrator.</i>	4	D	30	-	-	-			3		
5A1337 Integrable Nonlinear Systems and Solitons <i>Given if there are enough interest. Please contact course administrator.</i>	4	D	20	-	-	-			3		
5A1351 Non-equilibrium Statistical Mechanics	4	D	24	-	-	-				4	
5A1352 Complex Systems	4	D	24	-	-	-	1				
5A1354 Computational Physics	6	D	30	-	-	20	1				
5A1356 Computational Physics, Additional Course	3	D	-	-	-	-			3		
5A1802 Laser Physics II <i>Not given 04/05. Given if there are enough interest. Please contact course administrator.</i>	4	D	36	-	-	-					

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Engineering Physics

Material Physics F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5A1350 Statistical Mechanics	4	C	24	24	-	-				4	

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 <i>Not offered 2004/05</i>	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 taken as a supplement to 2B1760.</i> <i>Under bearbetning</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			
5A1332 Advanced Quantum Mechanics, Course I	5	D	36	-	-	-	1	2			

5A1354 Computational Physics	6	D	30	-	-	20	1				
5A1356 Computational Physics, Additional Course	3	D	-	-	-	-			3		
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			
5A1511 Optical Physics <i>Under bearbetning</i>	4	D	26	14	-	25	1				
5A1512 Optical Physics, Extended Course <i>Can only be studied together with 5A1511.</i> <i>Under bearbetning</i>	2	D	12	6	-	10	1				
5A1523 Optical Systems Design	4	D	12	-	-	5				4	10 h Projektuppgift10 h Projektuppgift
5A1552 Optonics <i>Not given 04/05.</i>	4	D	20	-	-	10					
5A1775 Nuclear Reactor Physics, Major Course	6	D	36	-	-	24		2			

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Engineering Physics

Micro Electronics 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	-	-	36			3	4	

Micro Electronics F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2B1221 Methods and Instruments of Analysis <i>Not offered 2004/05</i>	5	D	32	-	-	16		2			
2B1230 Power Semiconductor Devices <i>Under bearbetning</i>	5	D	40	-	-	-			3		Project 40h
2B1240 VLSI-technology II	5	D	24	-	-	16			3		
2B1242 Design and Characterisation of Nano- and Microdevices	5	D	24	-	-	16			3		
2B1245 Advanced VLSI-Devices	5	D	20	-	-	32				4	
2B1248 Simulation of Semiconductor Devices	5	D	24	-	-	32		2			
2B1252 Semiconductor Devices <i>Under bearbetning</i>	6	C	32	10	-	12				4	
2B1260 Semiconductor Theory and Device Physics, General Course	5	D	30	-	-	10	1				Individual assignments 20h
2B1310 Microwave Engineering	5	C	36	18	-	10		2			
2B1322 Fibre Optical Communication	5	D	28	14	-	8			3		
2B1325 Photonics <i>Under bearbetning</i>	5	D	38	-	-	8				4	
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				
2B1515 Analog Electronics, Advanced Course <i>Under bearbetning</i>	5	C	30	14	-	20			3		Project work
2B1600 Radio Electronics	5	D	26	12	-	16				4	
2B1700 Advanced Semiconductor Materials	5	D	34	-	-	16			3		

2E1423 <u>Signal Theory</u>	5	C	24	24	-	10			3		
5A1502 <u>Quantum Electronics with Electro Optics</u>	8	D	48	-	-	-		2			

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Discrete Mathematics and Computer Science F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other	
							1	2	3	4		
Elective Courses												
2D1385 Software Engineering	4	C	24	12	-	18				4		
5B1203 Discrete Mathematics	6	C	-	-	-	-			3	4		
5B1309 Algebra, Basic Course	4	C	42	-	-	-			3			

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	36	-	-	18			3	4	
2D1257 Visualization	4	C	16	-	-	14			3		
2D1334 Database Technology	4	C	24	20	-	12			3		
2D1354 Algorithms and Complexity	4	C	30	18	-	-	1	2			
2D1363 Software Engineering <i>The course is given for the first time 04/05.</i>	8	D	40	-	-	-		2	3	4	
2D1373 Artificial Languages and Syntax Analysis	4	C	24	-	-	16			3		
2D1375 Implementation of Programming Languages	4	D	2	-	-	-	1	2			
2D1381 Industrial Applications of Artificial Intelligence	4	C	36	-	-	-			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			
2D1408 Evaluation Methods in Human-Computer Interaction*	4	D	10	14	-	-			3	4	2 h Seminars 2 h Seminars
2D1410 User Centered Program Development	6	D	26	-	-	22			3	4	8 h Seminars 8 h Seminars
2D1413 Advanced Graphics and Interaction	6	D	50	-	-	12	1	2			
2D1416 Computer Supported Cooperative Work <i>Given every second year. Not given 05/06.</i>	6	D	30	-	-	15			3	4	

2D1418 Language Engineering	4	D	42	-	-	12	1				
2D1421 No translation <i>Replaces 2D1420.</i>	5	D	36	4	-	8			3		
2D1425 Computer Vision, Advanced Course <i>Replaces 2D1424.</i>	5	D	46	6	-	12				4	
2D1426 Robotics and Autonomous Systems*	5	D	16	-	-	60				4	
2D1431 Machine Learning	4	C	26	-	-	20		2			
2D1432 Artificial Neural Networks and Other Learning Systems	4	D	26	-	-	16			3		
2D1440 Advanced Algorithms	4	D	30	-	-	-		2			
2D1441 Seminars on Theoretical Computer Science <i>The course is given every second year and will be given in 04/05.</i>	4	D	30	-	-	-				4	
2D1446 Complexity Theory <i>The course is given every second year and will not be given in 04/05.</i>	4	D	30	-	-	-					
2D1449 Foundations of Cryptography	4	D	30	-	-	-			3		
2D1450 Algorithmic Bioinformatics	4	D	36	-	-	-				4	
2D1458 Problem Solving and Programming under Pressure	6	C	26	-	-	52	1	2			
2D1465 Advanced, Individual Course in Computer Science <i>The course can be studied any time during the semesters.</i>	4	D	-	-	-	-					
2D1469 Database Theory	4	D	31	17	-	-	1				
2D1482 Programming of Web Server Applications*	4	D	16	-	-	30				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	24	8	-	32				4	
2D1620 Human-Computer Interaction, Introductory Course	4	C	20	10	-	2	1				
2D1622 Human-Computer Interaction, Advanced Course	4	C	18	5	-	8		2			
2E1423 Signal Theory	5	C	24	24	-	10			3		
2G1316 Datacommunication and Computer Networks <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12			3		
2G1518 Computer Hardware Engineering	5	B	20	20	-	12			3	4	
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 3, the course is given at Campus Valhallavägen.</i>	5	C	36	-	-	24			3		
2G1915 Concurrent Programming <i>Replaces 2G1506, Programming with Processes In period 1, the course is given in Kista.</i>	5	C	36	-	-	24	1				
2I1130 Cognitive Psychology	4	B	30	12	-	-	1				
5B1309 Algebra, Basic Course	4	C	42	-	-	-			3		
5B1456 Seminar Course in Mathematics I <i>Given 04/05.</i>	5	D	36	-	-	-	1	2			
5B1457 Seminar Course in Mathematics II <i>Given 04/05.</i>	5	D	36	-	-	-			3	4	

5B1458 Seminar Course in Mathematics III <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1459 Seminar Course in Mathematics IV <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1466 Fourier Analysis <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1467 Algebra, Advanced Course <i>Under bearbetning</i>	5	D	36	-	-	-					
5B1475 Combinatorics, Advanced Course <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1492 Linear Algebra, Advanced Course <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1814 Applied Mathematical Programming - Linear Problems	4	D	18	12	-	-	1				18 h Projektuppgift18 h Projektuppgift
5B1928 Logic	4	AB	-	-	-	-				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	-	-	36			3	4	
2D1385 Software Engineering	4	C	24	12	-	18				4	
5B1203 Discrete Mathematics	6	C	-	-	-	-			3	4	
5B1303 Analysis, Basic Course	6	C	-	-	66	-			3	4	
5B1306 Financial Mathematics, Basic Course	5	C	-	-	54	-				4	
5B1309 Algebra, Basic Course	4	C	42	-	-	-			3		
5B1538 Reliability Theory	6	D	-	-	72	-			3	4	
5B1540 Probability Theory	5	D	24	24	-	-				4	
5B1742 Mathematical Systems Theory	4	D	32	16	-	-				4	

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Engineering Physics

Mathematics F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5B1203 Discrete Mathematics	6	C	-	-	-	-			3	4	
5B1303 Analysis, Basic Course	6	C	-	-	66	-			3	4	

Mathematics F4

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
5B1309 <u>Algebra, Basic Course</u>	4	C	42	-	-	-			3		
5B1455 <u>Ordinary Differential Equations</u> <i>Not given 04/05.</i>	4	D	36	-	-	-					
5B1456 <u>Seminar Course in Mathematics I</u> <i>Given 04/05.</i>	5	D	36	-	-	-	1	2			
5B1457 <u>Seminar Course in Mathematics II</u> <i>Given 04/05.</i>	5	D	36	-	-	-			3	4	
5B1458 <u>Seminar Course in Mathematics III</u> <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1459 <u>Seminar Course in Mathematics IV</u> <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1464 <u>Topology</u> <i>Given 04/05.</i>	5	D	36	-	-	-			3	4	
5B1466 <u>Fourier Analysis</u> <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1467 <u>Algebra, Advanced Course</u> <i>Under bearbetning</i>	5	D	36	-	-	-					
5B1470 <u>Analytic Functions</u> <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1472 <u>Functional Analysis</u> <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1473 <u>Elementary Differential Geometry</u> <i>Given 04/05.</i> <i>Under bearbetning</i>	5	D	36	-	-	-			3	4	
5B1475 <u>Combinatorics, Advanced Course</u> <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1479 <u>Integration Theory</u> <i>Given 04/05.</i>	5	D	36	-	-	-	1	2			
5B1490 <u>Chaotic Dynamical Systems</u> <i>Given 04/05.</i>	5	D	36	-	-	-	1	2			

5B1491 Analytical and Numerical Methods for Partial Differential Equations <i>Given 04/05.</i> <i>Under bearbetning</i>	5	D	36	-	-	-			3	4	
5B1492 Linear Algebra, Advanced Course <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1712 Optimization	4	C	28	14	-	6			3		

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Optimization and Systems Theory 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	-	-	36			3	4	
5B1742 Mathematical Systems Theory	4	D	32	16	-	-				4	

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 Seminars
1N1150 <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	
5B1814 <u>Applied Mathematical Programming - Linear Problems</u>	4	D	18	12	-	-	1				18 h Projektuppgift18 h Projektuppgift
5B1816 <u>Applied Mathematical Programming - Nonlinear Problems</u>	4	D	18	12	-	-		2			18 h Projektuppgift18 h Projektuppgift
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 Mathematical Economics	4	D	32	16	-	-	2			
5B1872 Optimal Control Theory	4	D	32	16	-	-		3		

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Applied Mathematics F3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Elective Courses											
2D1250 <u>Applied Numerical Methods II</u>	6	C	60	-	-	36			3	4	
5B1540 <u>Probability Theory</u>	5	D	24	24	-	-				4	

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	30	-	-	4			3	4	
2D1257 Visualization	4	C	16	-	-	14			3		
2D1258 Introduction to High Performance Computing* <i>Please note that the course starts in August. Will not be on the central schedule.</i>	5	C	40	-	-	40	1				
2D1260 The Finite Element Method	4	C	18	14	-	12		2			
2D1263 Program Construction for Scientific Computing	4	C	24	-	-	12			3	4	
2D1269 Mathematical Models, Analysis and Simulation, part II <i>Not given 04/05.</i>	5	D	42	-	-	12					
2D1274 Computational Electromagnetics <i>Not on the central schedule.</i>	5	D	24	-	-	12	1	2			
2D1285 Numerical Algorithms for Parallel Computers <i>The course will not be on the central schedule.</i>	4	D	16	-	-	-				4	
2D1290 Advanced Numerical Analysis <i>The course will not be on the central schedule. Not given 04/05.</i>	4	D	28	-	-	14					
2D1297 Advanced Individual Course in Scientific Computing <i>Course may start any time during the semester.</i>	4	D	-	-	-	-					
5B1306 Financial Mathematics, Basic Course	5	C	-	-	54	-				4	
5B1455 Ordinary Differential Equations <i>Not given 04/05.</i>	4	D	36	-	-	-					

5B1466 Fourier Analysis <i>Not given 04/05.</i>	5	D	36	-	-	-					
5B1491 Analytical and Numerical Methods for Partial Differential Equations <i>Given 04/05.</i> <i>Under bearbetning</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	
5B1576 Portfolio Theory, Advanced Course	5	D	36	18	-	-		2	3		
5B1580 Risk Management	5	D	24	24	-	-		2			
5B1595 Microeconomics <i>Not given 04/05.</i>	5	C	38	10	-	-					
5B1596 Macroeconomics <i>Not given 04/05.</i>	5	C	32	10	-	-					
5B1814 Applied Mathematical Programming - Linear Problems	4	D	18	12	-	-	1				18 h Projektuppgift18 h Projektuppgift
5B1852 Mathematical Economics	4	D	32	16	-	-		2			
5C1212 Computational Fluid Dynamics	5	D	-	-	50	10			3		

*The course has limited participation

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Engineering Physics

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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Engineering Physics

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, Project 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	-	-	36			3	4	
2D1255 Numerical Solutions of Differential Equations	5	D	30	-	-	4			3	4	
4B1111 Fundamentals of Noise and Vibration Control T	4	C	31	32	-	4		2			
4B1117	6	C	38	44	-	4			3	4	
4B1120 Signal Analysis with Applications	5	D	-	24	-	22				4	
4C1112 Theory of Elasticity	4	D	26	26	-	-			3		
4C1118 Non-linear Theory of Elasticity	2	D	12	12	-	-				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		
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	
5C1214 Fluid Mechanics	5	C	-	30	30	3	1				
5C1215 Compressible Flow	5	D	-	-	52	9		2			
5C1218 Turbulence <i>Replaces 5C1992.</i>	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

Engineering Physics 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	-	-	-			3		8 h Study visit8 h Study visit
2A1142 Accelerator and Radiation Technology, Supplementary Course	2	D	12	-	-	-				4	
2A1145 Electromagnetic Processes in Dispersive Media	4	D	24	6	-	-			3		
2A1151 Energy and Fusion Research	4	D	24	12	-	-				4	
2A1160 Space Physics	3	D	14	-	4	-	1				
2A1170 Chaos and Self-organization	4	D	32	17	-	-	1				
2B1545 Digital Electronics <i>Given in Kista</i> <i>Under bearbetning</i>	5	B	26	18	-	16			3	4	
2D1020 Master Project in Numerical Analysis	20	D	-	-	-	-					
2D1021 Master's Project in Computer Science	20	D	-	-	-	-					
2D1024 Master's Project in Human - Computer Interaction	20	D	-	-	-	-					
2D1025 Master's Project in Biomedical Engineering	20	D	-	-	-	-					
2D1257 Visualization	4	C	16	-	-	14			3		
2D1258 Introduction to High Performance Computing* <i>Please note that the course starts in August. Will not be on the central schedule.</i>	5	C	40	-	-	40	1				
2D1297 Advanced Individual Course in Scientific Computing <i>Course may start any time during the semester.</i>	4	D	-	-	-	-					
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			
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 <i>The course is given every second year and will be given in 04/05.</i>	4	D	30	-	-	-				4	
2D1464 Bigger Advanced, Individual Course in Computer Science <i>The course can be studied any time during the semesters.</i>	6	D	-	-	-	-					
2D1465 Advanced, Individual Course in Computer Science <i>The course can be studied any time during the semesters.</i>	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	24	8	-	32				4	
2E1242 Automatic Control, Project Course*	8	D	4	-	-	50				4	
2E1245 Hybrid and Embedded Control Systems	5	D	28	28	-	-				3	
2E1252 Control Theory and Practice, Advanced Course	5	D	28	26	-	8				3	
2E1262 Nonlinear Control	5	D	28	28	-	8			2		
2E1282 Modeling of Dynamical Systems	4	C	24	24	-	12				4	
2F1111 Speech Technology	4	D	36	14	-	6				3	
2F1212 Music Acoustics	4	D	-	-	48	8				4	
2F1213 Musical Communication and Music Technology	5	D	28	8	-	12				4	Project assignment 30h
2F1300 Perception of Sound	5	D	24	12	-	12	1				
2F1400 Electroacoustics	4	D	34	12	-	8	1				
2F1410 Audio Technology	5	D	30	12	-	12			2		20 h Projektuppgift20 h Projektuppgift
2G1316 Datacommunication and Computer Networks <i>Given at Campus Valhallavägen</i>	4	A	24	18	-	12				3	
2G1510 Computer Architecture Fundamentals, Intermediate Course <i>replaces 2G1303</i>	5	C	14	12	-	4			2		Seminar 4h
2H1255 Electromagnetic Wave Propagation	5	D	-	-	56	-				3	4
2H1260 Antenna Theory	5	D	26	24	-	18				3	
2I1150 Theory of Knowledge and Philosophy of Science <i>Not given 04/05.</i> <i>Under bearbetning</i>	4	B	30	12	-	80					
2I1263 Internet Application Protocols and Standards	4	A	24	-	-	20				3	120h
4B1304 Railway Systems and Rail Vehicles	6	C	-	-	60	9	1	2			Project assignment 9h
4B1313 Rail Vehicle Dynamics	5	D	-	-	36	24				3	
4D1026 Industrial Economy and Management, Basic Course	4	A	20	16	-	-			2		4 h Seminars4 h Seminars
4D1062 Industrial Marketing <i>Replaces 4D1065 Industrial Marketing and 4D1151 Marketing</i>	4	B	36	12	-	-				3	
4K1401 History of Technology, a General Survey <i>English on request. English on request.</i>	4	B	12	-	-	-					4
											12 h Seminars12 h Seminars

4K1408 History of Science <i>Not given 2004/05. Not given 2004/05.</i>	4	B	-	-	-	-					12 h Seminars12 h Seminars
5A1331 Classical Dynamical Systems <i>Given if there are enough interest. Please contact course administrator.</i>	4	D	28	-	-	-			3		
5A1418 Physics Simulation	5	B	-	-	-	-			3		
5A1419 Physics Simulation II <i>Under bearbetning</i>	5	B	32	64	-	-			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	-	-			3	4	
5A1491 Femtochemistry	5	D	36	-	-	-			3		
5A1492 Femtophysics <i>Not given 04/05.</i>	4	D	24	-	-	-					
5A1584 Cellular Biophysics	5	D	20	-	-	24			3		
5A1586 Experimental Biomolecular Physics	4	D	34	-	-	15				4	5 h Study visit5 h Study visit
5A1590 Technical Photography	5	D	20	-	-	36			3	4	
5B1306 Financial Mathematics, Basic Course	5	C	-	-	54	-				4	
5B1308 Wavelets <i>Not given 04/05.</i>	4	C	24	-	-	-					
5B1310 Applied and Industrial Mathematics	5	C	26	-	-	-	1	2			
5U1201 Advanced Problems A <i>Under bearbetning</i>	4	C	-	48	-	-	1	2	3	4	
5U1202 Advanced Problems B <i>Under bearbetning</i>	4	D	-	36	-	-	1	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* <i>Limited number of participants: 25</i>	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 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	42	-	-	4		2			42 h Workshop42 h Workshop
1D1801 <u>Building Materials and Building Physics</u>	10	C	84	78	-	10	1	2			10 h Computer, 18 h Workshop
1H1211 <u>Road, Traffic and Urban Design</u>	6	B	30	93	-	-	1				
Elective Courses											
1N1217 <u>Logistics and Transportation</u>	5	C	21	-	-	-				4	Case-study
2D1320 <u>Applied Computer Science</u>	4	B	28	14	-	20			3	4	

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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	-	-	-	-						
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	25	35	-	-		2	3		Mostly evening-course, web-based study-support	
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		Project-course, 12h Seminars	
1H1601 <u>Mathematics and Reality</u>	5	C	20	10	-	-				4		
1H1602 <u>Good and Bad Science</u>	5	C	32	-	-	-			3	4		
1H1603 <u>Technology and Ethics</u>	5	C	20	-	-	-			3		Seminars 8h	
1H1603 <u>Technology and Ethics</u>	5	C	20	-	-	-	1				Seminars 8h	
1H1604 <u>Philosophy of Risk</u>	5	C	18	-	-	-		2			12 h Seminars	
1K14LV <u>Architecture, Basic Course</u>	5	D	-	36	-	-				4	Lectures, Study-visits, Seminar: 20h	
1N1218 <u>Logistics, Advanced Project Course</u>	10	D	4	-	-	-			3	4	Project-course, Seminars	
1N1401 <u>Applied Contract Law</u>	5	B	-	-	-	-			3		Seminars.Web-based study-support, tuition by correspondence-course	
1N1402 <u>Civil and Public Law, Intermediate Course</u>	5	B	25	35	-	-				4	Mostly evening-taught course. Web-based study-support	
2D1220 <u>Applied Numerical Methods I</u>	4	C	36	-	-	18			3	4		
2D1225 <u>Numerical Solutions of Differential Equations</u>	4	C	24	4	-	16	1	2				
2D1320 <u>Applied Computer Science</u>	4	B	28	14	-	20	1	2				
2D1378 <u>Text and Image Processing</u>	4	B	28	18	-	-		2				

4B1304 Railway Systems and Rail Vehicles	6	C	-	-	60	9	1	2		Project assignment 9h
4B1313 Rail Vehicle Dynamics	5	D	-	-	36	24			3	
5B1306 Financial Mathematics, Basic Course	5	C	-	-	54	-				4

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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		34 h Workshop34 h Workshop	
Recommended Courses												
1B1432 Rock Mechanics and Rock Engineering	5	C	33	22	-	-			4		22 h Workshop22 h Workshop	
1C1103 Structural Mechanics III	5	D	33	-	-	-			3		40 h Workshop40 h Workshop	
1C1305 Design of Building Structures	5	C	33	-	-	-			4		44 h Workshop	
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	33	44	-	-			4			
1H1243 Traffic and Land-use Planning	5	C	21	55	-	-			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 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			33 h Workshop
1B1133 Applied Hydrology <i>Only one of the courses 1B1133/1B1134 should be chosen</i>	5	D	29	29	-	-			3		
1B1134 Water Resources Development <i>Only one of the courses 1B1133/1B1134 should be chosen</i>	5	D	33	-	-	-			3		33 h Workshop
1B1234 Water Supply and Waste Water Handling	5	C	33	-	-	-				4	33 h Workshop
1B1334 Engineering Geology	5	D	27	-	-	-	1				27 h WorkshopField-trips 3d 27 h Workshop
1B1335 Advanced Engineering Geology	5	D	33	-	-	-			3		33 h Workshop
1B1434 Soil - Structure Interaction	5	C	33	-	-	-				4	33 h Workshop
1B1435 Soil and Rock Dynamics	5	D	33	-	-	-		2			33 h Workshop

<u>1E1621 Geographic Information Technology for Civil Engineers</u> <i>Under bearbetning</i>	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		34 h Workshop34 h Workshop
1B1432 Rock Mechanics and Rock Engineering	5	C	33	22	-	-				4	22 h Workshop22 h Workshop
1C1103 Structural Mechanics III	5	D	33	-	-	-			3		40 h Workshop40 h Workshop
1C1305 Design of Building Structures	5	C	33	-	-	-				4	44 h Workshop
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	33	44	-	-				4	
1H1243 Traffic and Land-use Planning	5	C	21	55	-	-			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 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 The course will not be given the academic year 04/05	5	D	-	-	-	-					
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		34 h Workshop34 h Workshop	
1B1432 Rock Mechanics and Rock Engineering	5	C	33	22	-	-				4	22 h Workshop22 h Workshop	
1C1103 Structural Mechanics III	5	D	33	-	-	-			3		40 h Workshop40 h Workshop	
1C1305 Design of Building Structures	5	C	33	-	-	-				4	44 h Workshop	

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				21 h Seminars, 8 h Workshop, 20 h Study visit	
1D1112 Fire in Buildings <i>Will not be given 04/05</i>	5	C	21	-	-	1			3		9 h Seminars, 8 h Computer, 15 h Workshop, 2 h Study visit	
1D1113 Life Cycle Analysis and Environmental Impact in Building <i>The course will not be given the academic year 04/05</i>	5	C	54	-	-	-				4	12 h Seminars, 4 h Workshop	
1D1211 Building Technology, Advanced Course	5	D	33	44	-	-		2				
1D1243 Building Acoustics	5	C	29	-	-	4	1				31 h Workshop31 h Workshop	
1D1311 Building Services Engineering, Advanced Course	5	D	33	31	-	9		2			4 h Study visit	
1D1313 Indoor Climate	5	C	20	-	-	8			3		24 h Workshop, 20 h Study visit	
1D1314 Simulation	5	D	22	-	-	-				4	55 h Computer	
1D1316 Industrial Ventilation <i>Will not be given the academic year 04/05</i>	5	C	36	24	-	-	1	2			12 h Study visit	

1D1806 Building Operation and Maintenance <i>Will not be given 04/05</i>	5	D	40	12	-	-				4	8 h Seminars, 8 h Study visit
1D1808 Building Damages	5	C	32	-	-	-				4	18 h Seminars, 6 h Workshop, 8 h Study visit

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 <i>Will not be given the academic year 04/05</i>	5	C	36	24	-	-	1	2			12 h Study visit

Sidansvarig: Studiehandboksredaktionen, studiehandbok@kth.se

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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 Structural Mechanics III	5	D	33	-	-	-			3		40 h Workshop40 h Workshop	
1C1305 Design of Building Structures	5	C	33	-	-	-				4	44 h Workshop	
Recommended Courses												
1B1431 Soil Mechanics and Foundation Engineering	5	C	43	-	-	4			3		34 h Workshop34 h Workshop	
1B1432 Rock Mechanics and Rock Engineering	5	C	33	22	-	-				4	22 h Workshop22 h Workshop	
1D1804 Buildings and Indoor Climate	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											
1C1204 <u>Structural Design of Bridges</u>	5	D	33	-	-	-				4	44 h Workshop
1C1205 <u>Bridge Structures</u>	5	D	33	-	-	-			3		44 h Workshop
1C1206 <u>Railway Track Engineering</u>	5	D	33	-	-	-			3		44 h Workshop
1C1302 <u>Light-weight Structures</u>	5	D	33	-	-	-				4	44 h Workshop
1C1304 <u>Steel Structures</u>	5	D	33	-	-	-			3		44 h Workshop
1C1401 <u>Concrete Structures</u>	5	D	33	-	-	-	1				44 h Workshop
1C1402 <u>Concrete Infrastructures</u>	5	D	33	-	-	-		2			44 h Workshop
5C1840 <u>Structural Dynamics</u>	5	D	33	-	-	-				4	44 h Workshop44 h Workshop
5C1850 <u>Finite Element Methods</u>	5	D	33	-	-	-	1				33 h Workshop33 h Workshop
5C1860 <u>FEM Modelling</u>	5	D	33	-	-	-		2			33 h Workshop33 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		34 h Workshop34 h Workshop	
1B1432 Rock Mechanics and Rock Engineering	5	C	33	22	-	-				4	22 h Workshop22 h Workshop	
1C1103 Structural Mechanics III	5	D	33	-	-	-			3		40 h Workshop40 h Workshop	
1C1305 Design of Building Structures	5	C	33	-	-	-				4	44 h Workshop	
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	-	-	30	-			3		36 h Seminars	
1H1151 Theory of Planning and Organization	5	D	-	-	33	-				4		
1H1163 Social Planning	5	C	-	-	30	-				4	Seminars and study-visits 36h	
1H1213 Analysis and Design of Traffic Facilities	5	C	33	44	-	-				4		
1H1243 Traffic and Land-use Planning	5	C	21	55	-	-			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 Computer	

Environmental Engineering and Sustainable Infrastructure V4

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

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											
<u>1B1133 Applied Hydrology</u>	5	D	29	29	-	-			3		
<u>1B1233 Water and Waste Handling</u> <i>Under bearbetning</i>	5	C	-	-	77	-			3		
<u>1B1291 Environmental Dynamics/Chemical Processes</u>	5	D	24	-	-	-		2			Exercises/lab.work 30h
<u>1B1292 Environmental Dynamics/Physical Processes</u> <i>Under bearbetning</i>	5	C	26	24	-	-		2			
<u>1B1333 Environmental Geology and Geophysics</u>	5	D	27	27	-	-				4	

<u>1B1634 Environmental Impact Assessment*</u> <i>First prio: Students within TESIM-, L- and V-programs. Second prio: Incoming exchange-students LV.</i> <i>Under bearbetning</i>	5	C	30	26	-	-	1			8 h Exkursion8 h Exkursion
<u>1B1635 Quantitative Hydrogeology</u> <i>Under bearbetning</i>	5	D	20	14	-	6			4	20 h Field excursions, 15 h Computer20 h Field excursions, 15 h Computer
<u>1B1640 Natural Resources Management</u>	5	D	19	-	-	36			4	
<u>1E1610 Environmental Data*</u> <i>First prio: Students within TESIM-, L- and V-programs. Second prio: Incoming exchange-students LV.</i>	5	D	18	2	-	38		3		
<u>1F1462 Management of Land and Water</u>	5	D	25	-	-	-			4	21 h Seminars21 h Seminars
<u>1H1141 Urban Infrastructure</u>	5	D	-	-	54	-			4	
<u>1H1142 Political Economy for Environmental Planners*</u> <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
<u>1H1143 Sustainable Rural and Urban Development*</u> <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
<u>1H1146 Sustainable Project Management</u>	5	C	35	-	-	30			3	15 h Field excursions
<u>1H1501 Human Settlements and Housing</u>	5	D	24	20	-	-		2		
<u>1U1030 Theory of Science, Research Methodology and Excursions</u>	5	D	29	-	-	-	1	2	4	Exkursion 40hSeminars Exkursion 40h

*The course has limited participation

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Civil Engineering

Environmental Resources Engineering V3

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
1M1055 <u>Resources Recycling and Management</u> <i>Under bearbetning</i>	5	C	20	16	-	-	1				21 h Projektuppgift, 12 h Study visit
1M1060 <u>Energy Supply</u>	5	C	22	30	-	-		2			4h Seminar, 4h Study-visit, Individual project work
Recommended Courses											
1B1639 <u>Applied Geology and Hydrology</u>	10	C	29	36	-	15			3	4	3 h Seminars, 32 h Field excursions, 2 h Computer
1D1801 <u>Building Materials and Building Physics</u>	10	C	84	78	-	10	1	2			10 h Computer, 18 h Workshop
1D1804 <u>Buildings and Indoor Climate</u>	10	C	54	84	-	-			3	4	60 h Workshop, 12 h Study visit

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Civil Engineering

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	-	-	30	-			3		36 h Seminars
1H1151 Theory of Planning and Organization	5	D	-	-	33	-				4	
Recommended Courses											
1H1141 Urban Infrastructure	5	D	-	-	54	-				4	
1H1163 Social Planning	5	C	-	-	30	-				4	Seminars and study-visits 36h
1H1243 Traffic and Land-use Planning	5	C	21	55	-	-			3		5 h Exkursion5 h Exkursion
Elective Courses											
1H1213 Analysis and Design of Traffic Facilities	5	C	33	44	-	-				4	
1H1402 Travel Demand Forecasting	5	C	28	-	-	-			3		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											
1H1004 Master's Project in Regional Planning	20	D	-	-	-	-					
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
1H1170 Sustainable Cities	10	D	-	-	120	-	1				
1H1171 Urban Governance	5	D	30	-	-	-			3		6 h Seminars 6 h Seminars
1H1172 Futures Studies and Forecasts	5	D	-	-	36	-		2			10 h Computer 10 h Computer
1H1174 Planning for Regional Development	10	D	27	26	-	-				4	Large Project task
1H1401 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3		6 h Seminars
1N1150 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3		6 h Seminars 6 h Seminars



1N1663 Spatial Planning with GIS	5	D	30	-	-	36			3		
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Civil Engineering

Students with B Sc in Building / Structural Engineering V3

Choice of Study-profile in November before spring-term 2005

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1214 Numerical methods	4	AB	20	18	-	18	1	2			
5B1212 Differential Equations and Transforms III	4	C	-	-	-	-				4	
5B1508 Mathematical Statistics	4	AB	24	32	-	4		2			
5C1103 Mechanics, Basic Course	6	B	-	-	54	-	1				
5C1114 Mechanics, Continuation Course	4	C	-	-	36	-		2			
5C1899 Structural Mechanics, second course	6	C	42	-	-	-		2			Workshop 42h
Recommended Courses											
5B1114 Complementary Course in Mathematics	6	AB	-	-	72	-	1				

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Civil Engineering

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 Analysis and Design of Traffic Facilities	5	C	33	44	-	-				4	
1H1308 Road and Street Engineering	5	C	33	44	-	-				4	
Recommended Courses											
1B1431 Soil Mechanics and Foundation Engineering	5	C	43	-	-	4			3		34 h Workshop34 h Workshop
1B1432 Rock Mechanics and Rock Engineering	5	C	33	22	-	-				4	22 h Workshop22 h Workshop
1H1106 Planning for Housing, Workplaces and Services	5	C	-	-	30	-			3		36 h Seminars
1H1141 Urban Infrastructure	5	D	-	-	54	-				4	
1H1151 Theory of Planning and Organization	5	D	-	-	33	-				4	
1H1163 Social Planning	5	C	-	-	30	-				4	Seminars and study-visits 36h
1H1243 Traffic and Land-use Planning	5	C	21	55	-	-			3		5 h Exkursion5 h Exkursion
1H1402 Travel Demand Forecasting	5	C	28	-	-	-			3		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 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		21 h Computer	

1H1401 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3	6 h Seminars
1L1912 Maintenance Management of Traffic Tunnels <i>The course will probably be cancelled 04/05, contact Dep. for further information</i>	5	D	-	-	80	-		2		Taught full-time weeks 45, 48
1N1150 Optimisation Models in Transport and Location Analysis	5	D	27	12	-	6			3	6 h Seminars6 h Seminars
Elective Courses										
1H1005 Master's Project in Traffic and Transport Planning	20	D	-	-	-	-	1	2	3	4

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Öppen ingång

Öppen ingång OPEN1

Code Name	Credits	Level	Lec	Tut	Le	Lab	Periods				Other
							1	2	3	4	
Compulsory Courses											
2D1310 <u>Programming Technique</u>	4	B	20	12	-	24	1	2	3		
5A1363 <u>Environmental Physics and Chemistry</u>	6	B	54	-	-	35	1	2			
5B1121 <u>Mathematic, Basic Course</u>	4	AB	16	-	32	-	1				
5B1135 <u>Mathematics I for I</u>	6	AB	30	16	30	-		2			
5B1136 <u>Mathematics II for I</u>	6	B	36	18	36	-		2	3		
5C1102 <u>Mechanics, Smaller Course</u>	4	B	30	15	-	-			3		
Elective Courses											
5B1120 <u>Introductory Course in Mathematics I</u>	1	AB	-	-	-	-					

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