Programme syllabus

Degree Programme in Engineering Mathematics
Civilingenjörsutbildning i teknisk matematik
300.0 credits

Valid for students admitted to the education from autumn 20 (HT - Autumn term; VT - Spring term).

This is a translation of the Swedish, legally binding, programme syllabus.

Programme objectives

Knowledge and understanding

Skills and abilities

Ability to make judgements and adopt a standpoint

Extent and content of the programme

Eligibility and selection

Implementation of the education

Courses

The programme is course-based. Lists of courses are included in appendix 1.

Grading system

Courses in the first and the second cycle are graded on a scale from A to F. A-E are passing grades, A is the highest grade. The grades pass (P) and fail (F) are used for courses under certain circumstances.

Appendix 1 - Course list
Appendix 2 - Programme syllabus descriptions
Appendix 1: Course list
Degree Programme in Engineering Mathematics (CTMAT), Programme syllabus for studies starting in autumn 2020

General courses

Year 1

Mandatory courses (64.5 Credits)

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD1320</td>
<td>Applied Computer Science</td>
<td>6.0 hp</td>
<td>First cycle</td>
</tr>
<tr>
<td>DD1331</td>
<td>Fundamentals of Programming</td>
<td>5.0 hp</td>
<td>First cycle</td>
</tr>
<tr>
<td>DD1396</td>
<td>Parallel and Concurrent Programming in Introduction to Computer Science</td>
<td>3.0 hp</td>
<td>First cycle</td>
</tr>
<tr>
<td>SA1006</td>
<td>Engineering Skills in Engineering Mathematics</td>
<td>8.5 hp</td>
<td>First cycle</td>
</tr>
<tr>
<td>SF1550</td>
<td>Numerical Methods, basic course</td>
<td>6.0 hp</td>
<td>First cycle</td>
</tr>
<tr>
<td>SF1672</td>
<td>Linear Algebra</td>
<td>7.5 hp</td>
<td>First cycle</td>
</tr>
<tr>
<td>SF1673</td>
<td>Analysis in one variable</td>
<td>7.5 hp</td>
<td>First cycle</td>
</tr>
<tr>
<td>SF1674</td>
<td>Multivariable Calculus</td>
<td>7.5 hp</td>
<td>First cycle</td>
</tr>
<tr>
<td>SF1918</td>
<td>Probability Theory and Statistics</td>
<td>6.0 hp</td>
<td>First cycle</td>
</tr>
<tr>
<td>SG1115</td>
<td>Particle Dynamics with project</td>
<td>7.5 hp</td>
<td>First cycle</td>
</tr>
</tbody>
</table>

Optional courses

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD1301</td>
<td>Computer Introduction</td>
<td>1.5 hp</td>
<td>First cycle</td>
</tr>
</tbody>
</table>

Year 2

Mandatory courses (29.5 Credits)

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
DD1380  Java Programming for Python Programmers  1.5 hp  First cycle
DD1385  Software Engineering  6.0 hp  First cycle
SA1006  Engineering Skills in Engineering Mathematics  8.5 hp  First cycle
SF1679  Discrete Mathematics  7.5 hp  First cycle
SF1681  Linear Algebra. Advanced Course  6.0 hp  First cycle

Conditionally elective courses

Course code  Course name  Credits Edu. level
SF1677  Foundations of Analysis  7.5 hp  First cycle
SF1678  Groups and Rings  7.5 hp  First cycle
SF1691  Complex Analysis  7.5 hp  First cycle

Year 3

Mandatory courses (20.5 Credits)

Course code  Course name  Credits Edu. level
EL1000  Automatic Control, General Course  6.0 hp  First cycle
SA1006  Engineering Skills in Engineering Mathematics  8.5 hp  First cycle
SF1811  Optimization  6.0 hp  First cycle
Appendix 2: Specialisations

Degree Programme in Engineering Mathematics (CTMAT), Programme syllabus for studies starting in autumn 2020

This programme has no specialisations.