Programme syllabus

Degree Programme in Design and Product Realisation
Civilingenjörsutbildning i design och produktframtagning
300.0 credits

Valid for students admitted to the education from autumn 10 (HT - Autumn term; VT - Spring term).

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

Programme objectives

Beyond those objectives that are specified in the Higher Education Ordinance, a graduate of Master of Science in Design and Product Realization at KTH will…

Knowledge and understanding

• Have noticeably good knowledge in the design and product realization process in order to produce products which are easy to use. This includes choice of materials, manufacturing techniques, and energy sources.

• have a good foundation in natural and technical sciences with a specialisation in the second cycle within one of the application areas within the chain: design, construction, production

Skills and abilities

• have an ability to combine and carry out the traditional natural and technical science foundation in the programme to construction and design as a foundation for realization of attractive products and services

• have individual and professional skills such as language, leadership, project-management and communication for work as an engineer in a leadership position or as a leader in a technically intensive company.

• essentially, have developed one’s own creative ability through significant elements of production, with the creativity as a complement to the analytical perspective.

• have a basic understanding of entrepreneurial activities

Ability to make judgements and adopt a standpoint

• Have especially good understanding that engineering-related problems, considered from a system perspective, are often complex, incompletely defined and sometimes contain contradictions

• Show an understanding of responsibility and ethics relevant for all steps in the product realization process, e.g. design – construction – production/manufacturing and utilitilization.

The local degree ordinance of the Royal Institute of Technology can be found in the KTH Regulations.

Extent and content of the programme

The program consists of 300 credits which correspond to five years of full-time studies.

The program’s level is primarily on the first-cycle for the first three years and the second-cycle in the two last years.
The language of instruction is mainly Swedish, but certain courses and course elements are in English.

**Eligibility and selection**

In order to study at KTH, basic eligibility requirements must be fulfilled. In addition, the following special eligibility requirements must be fulfilled for KTH's Masters of Science in Engineering programmes: Mathematics course E, Physics course B and Chemistry course A or the corresponding equivalents. All of the courses must have been completed with at least a grade of pass (godkänd) or 3. If the applicant refers to other studies or work experiences that may show competences then they will be assessed accordingly.

More information regarding KTH's admission policy can be found in the KTH Regulations

**Implementation of the education**

**Structure of the education**

Academic year, terms, and study periods can be found in the KTH Regulations, [www.kth.se](http://www.kth.se)

**Study years 1-3, studies in the first-cycle**

The study programme consists of the mandatory courses in years 1-3 in the first-cycle (G), and a specialisation in the second-cycle (A) in years 4 and 5, which concludes with 30 credits on a degree project.

The programme is organised around courses in the mathematical, technically scientific and technical application subjects. The education in and usage of professional skills and abilities of significant importance for a Master of Science in Engineering, for example: communication, ethics, entrepreneurship, sustainable development, company- and societal aspects, are integrated into the courses.

In order to make the programme comprehensive, collaboration is emphasized between the different subjects and throughout the entire programme. The courses are scheduled and coordinated in such a way that this is reached through common project work and hand-in assignments, etc.

The students study together throughout year 1 and 2 and parts of year 3. Before the conclusion of the first cycle, the student must choose a specialisation area. Within the chosen specialisation, the student will study a limited area of applied product design and realization.

The programme is structured in a way that a student can choose to get a Degree of Bachelor of Science in Engineering. This makes it possible for students to continue their studies abroad or at other universities in Sweden.

**Mathematically natural science courses**

Most of the courses in basic mathematical and natural science are in the first year. The remainder are in the second year.

**Technical courses**

Throughout years 1-3, the student will study basic technical scientific courses in the technical area of product design and realization.

The first three years conclude with 15 credits of specialization/degree project work for the Degree of Bachelor of Science in Engineering in the chosen technical area. After completing 180 credits, the student can apply for the Degree of Bachelor of Science in Engineering if the degree requirements are fulfilled.

**Study years 4-5, specialisation in the second cycle**

The specialisation area consists mainly of advanced courses and degree project work within one specific technical scientific area. Students in the Product Design and Realization program can choose between a large selection of specialisations with predetermined study plans. The student is guaranteed a place in any specialisation they choose.
Except for the previously mentioned work-related skills and abilities, knowledge about entrepreneurship is integrated into the courses during years 4 and 5.

The Master of Science in Engineering’s knowledge about the environment and sustainable development is deepened and solidified due to the integration of these subjects in the programme’s courses with special aspects: for example, life-cycle analysis, environmental effects and choice of material, which is respective for the chosen technical specialisations.

A reason for the specialization is that the student has the possibility of making many contacts with the department and a research group where the degree project work will be done.

A student that has started a first-cycle study programme in another technical scientific area can conclude with a specialisation in a different technical area. Approval courses for such a specialisation must be taken with the approval of the administrative office of the programme.

Available specialisation areas for Design and Product Realization:

- Aerospace, AER
- Combustion Engines, FMT
- Ground Vehicle Engineering
- Industrial Design, IDE
- Industrial economics and Management, IEO
- Integrated Product Development, IPU
- Machine Design, MKN
- Mechanics, MEK
- Mechatronics, MTK
- Naval Systems, MSY
- Productions Engineering, INP
- Solid Mechanics, HLF
- Sound and vibrations, LJV
- Sustainable Energy Systems, EGI
- Sustainable Technology, THU

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.

Conditions for participation in the programme

Term and Course Enrolment

A condition to be accepted is that the student verifies enrolment for the coming term every spring and fall.

This is done through www.antagning.se between the 1st and 15th of November and the 1st and 15th of May.

Requirements for participation in each year of the program:

For studying in year 2:

A minimum of 45 credits from year 1 must be completed by the end of the exam period in August. Students who don’t fulfill this requirement must devise an individual study plan with a guidance counselor.

For studying in year 3:
A minimum of 90 credits from years 1 and 2 must be completed by the end of the exam period in August. Students who don’t fulfill this requirement must devise an individual study plan with a guidance counselor.

For studying in year 4:

A minimum of 150 credits from years 1-3 must be completed by the end of the exam period in August. Within these 150 credits, a degree project worth 15 credits and a minimum of 110 credits from compulsory courses from years 1 and 2 must be completed. Students who don’t fulfill this requirement must devise an individual study plan with a guidance counselor.

For studying in year 5:

A minimum of 195 credits from years 1, 2, 3 and 4 of which at least 45 credits from year 4 must be completed by the end of the exam period in August. Students who don’t fulfill this requirement must devise an individual study plan with a guidance counselor.

Prior to year 4 (Master’s level), students choose a Masters program within the context of their Master of Science in Engineering program. This is done during May 1-15. Selection of master is directed by the admissions office within the department of student services at KTH. In addition to the general requirements for studies in year 4, specific admission requirements apply for every Master’s program. Judgments of these requirements are reviewed by the department of Student Services at KTH.

**Recognition of previous academic studies**

The student has the possibility to apply to receive credit for results from previous studies at another university within the country or abroad. The form is available on KTH’s website.

KTH’s policy for receiving credits from previous academic studies is available in the KTH Regulations, [www.kth.se](http://www.kth.se)

**Studies abroad**

Students in the Program have the possibility to study abroad through the contracts KTH has with universities within EU and outside. Exchange studies can not be done in the first or second year. It is also possible to do the degree project work abroad.

The application deadline for studies abroad is around December 15th.

**Degree project**

A Degree project on the Bachelor level consisting of 15 credits and a Degree project of 30 credits are a requirement for the program.

In order for a student to begin the degree project on the Bachelor level a mimimum of 120 credits must be met. Plus the general requirements for studies within the 3rd year must be met.

Students are required to have a minimum of 240 credits before beginning the Final Project.

KTH’s rules for the degree project are available in the KTH-Regulations, [www.kth.se](http://www.kth.se)

**Degree**

In order to graduate as a Master of Science in Engineering, Degree Program in Design and Product Realization, the student must be approved in every course that is included in the student’s study plan. The study plan must consist of 300 credits including 30 credits of degree project work.

Reference to the local degree policy is available in the KTH Regulations.
Appendix 1 *Lists of courses and specialisations.*

Appendix 2 *Description of specialisations.*

Appendix 1 - Course list
Appendix 2 - Programme syllabus descriptions
Appendix 1: Course list

Degree Programme in Design and Product Realisation (CDEPR), Programme syllabus for studies starting in autumn 2010

General courses

Year 1

Mandatory courses (60.0 credits)

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DN1212</td>
<td>Numerical Methods and Basic Programming</td>
<td>9.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>MF1037</td>
<td>Design and Product Realization, Modelling and Simulation</td>
<td>9.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>MF1046</td>
<td>Design and Product Realization, Introduction</td>
<td>10.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>SF1624</td>
<td>Algebra and Geometry</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>SF1625</td>
<td>Calculus in One Variable</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>SF1626</td>
<td>Calculus in Several Variable</td>
<td>7.5</td>
<td>First cycle</td>
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<tr>
<td>SG1130</td>
<td>Mechanics I</td>
<td>9.0</td>
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Year 2

Mandatory courses (60.0 credits)

<table>
<thead>
<tr>
<th>Course code</th>
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<tbody>
<tr>
<td>MF1016</td>
<td>Basic Electrical Engineering</td>
<td>9.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>MF1038</td>
<td>Design and Product Realization, Form and Function</td>
<td>6.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>MF1039</td>
<td>Design and Product Realization, Components</td>
<td>6.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>MG1006</td>
<td>Design and Product Realization - Manufacturing</td>
<td>6.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>MJ1112</td>
<td>Applied Thermodynamics</td>
<td>9.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>SE1010</td>
<td>Solid Mechanics, Basic Course with Project</td>
<td>12.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>SF1633</td>
<td>Differential Equations I</td>
<td>6.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>SG1140</td>
<td>Mechanics II</td>
<td>6.0</td>
<td>First cycle</td>
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</table>
### Year 3

### Year 4

### Year 5

**Master, Aerospace Engineering (AEE)**

**Year 1**

**Year 2**

**Year 3**

**Mandatory courses (33.0 credits)**

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<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
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</thead>
<tbody>
<tr>
<td>EL1120</td>
<td>Automatic Control, General Course</td>
<td>6.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>ME1003</td>
<td>Industrial Management, Basic Course</td>
<td>6.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>MF1040</td>
<td>Design and Product Realization Methodology</td>
<td>9.0</td>
<td>First cycle</td>
</tr>
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<td>MH1005</td>
<td>Structural Materials</td>
<td>6.0</td>
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<tr>
<td>SF1901</td>
<td>Probability Theory and Statistics</td>
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**Conditionally elective courses**

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<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
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<tbody>
<tr>
<td>SA108X</td>
<td>Degree Project in Mechanical Engineering, First Cycle</td>
<td>15.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>SD1115</td>
<td>Fundamentals of Noise and Vibration Control</td>
<td>6.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>SG1217</td>
<td>Fluid Mechanics, Basic Course</td>
<td>6.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>SG1220</td>
<td>Fluid Mechanics for Engineers</td>
<td>6.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>SK2371</td>
<td>Physics of Visual Impressions, Larger Course</td>
<td>9.0</td>
<td>Second cycle</td>
</tr>
</tbody>
</table>

**Year 4**

**Supplementary information**

For course list: [http://www.kth.se/student/kurser/program/TAEEM/HT13/arskurs1/?l=en](http://www.kth.se/student/kurser/program/TAEEM/HT13/arskurs1/?l=en)

**Year 5**

**Supplementary information**

For course list: [http://www.kth.se/student/kurser/program/TAEEM/HT14/arskurs2](http://www.kth.se/student/kurser/program/TAEEM/HT14/arskurs2)
Master, Vehicle Engineering (FOR)

Year 1

Year 2

Year 3

Mandatory courses (39.0 credits)

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<th>Course name</th>
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<tbody>
<tr>
<td>EL1120</td>
<td>Automatic Control, General Course</td>
<td>6.0</td>
<td>First cycle</td>
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<tr>
<td>ME1003</td>
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<td>First cycle</td>
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<td>First cycle</td>
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<tr>
<td>MH1005</td>
<td>Structural Materials</td>
<td>6.0</td>
<td>First cycle</td>
</tr>
<tr>
<td>SD1115</td>
<td>Fundamentals of Noise and Vibration Control</td>
<td>6.0</td>
<td>First cycle</td>
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</table>

  *Can be taken during year 4*

<table>
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<tr>
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  *Can be taken during year 4*

Conditionally elective courses

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<tr>
<td>SA108X</td>
<td>Degree Project in Mechanical Engineering, First Cycle</td>
<td>15.0</td>
<td>First cycle</td>
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  *One degree project must be chosen*

Year 4

Supplementary information


Year 5

Supplementary information

For courselist: [http://www.kth.se/student/kurser/program/TFORM/HT14/arskurs2](http://www.kth.se/student/kurser/program/TFORM/HT14/arskurs2)
Master, Industrial Management (INE)

Year 1

Year 2

Year 3

Mandatory courses (33.0 credits)

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<th>Course code</th>
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<tr>
<td>ME1003</td>
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<td>ME2015</td>
<td>Project Management: Leadership and Control</td>
<td>6.0</td>
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<tr>
<td>ME2063</td>
<td>Team Leadership and Human Resource Management</td>
<td>6.0</td>
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<td>MF1040</td>
<td>Design and Product Realization Methodology</td>
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<td>First cycle</td>
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<tr>
<td>MH1005</td>
<td>Structural Materials</td>
<td>6.0</td>
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Conditionally elective courses

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<tr>
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<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
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</table>
| MG103X      | Degree Project in Design and Product Realization, First Cycle  
  *One degree project must be chosen*
|             |                                                          | 15.0    | First cycle |
| SD1115      | Fundamentals of Noise and Vibration Control              | 6.0     | First cycle |
| SK2371      | Physics of Visual Impressions, Larger Course             | 9.0     | Second cycle|

Year 4

Supplementary information

For course list: http://www.kth.se/student/kurser/program/TINEM/HT13/arskurs1

Year 5

Supplementary information

Course list: http://www.kth.se/student/kurser/program/TINEM/HT13/arskurs2
Track, Concurrent Engineering (IPDB)

Year 1

Year 2

Year 3

Mandatory courses (33.0 credits)

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<th>Course name</th>
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<td>HM1025</td>
<td>Ergonomics in Product Development</td>
<td>6.0</td>
<td>First cycle</td>
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<td>ME1003</td>
<td>Industrial Management, Basic Course</td>
<td>6.0</td>
<td>First cycle</td>
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<td></td>
<td>Can even be taken during p.1, p.3 or p.4</td>
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<td></td>
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<tr>
<td>ME2063</td>
<td>Team Leadership and Human Resource Management</td>
<td>6.0</td>
<td>Second cycle</td>
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<tr>
<td>MF1040</td>
<td>Design and Product Realization Methodology</td>
<td>9.0</td>
<td>First cycle</td>
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<tr>
<td>MH1005</td>
<td>Structural Materials</td>
<td>6.0</td>
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Conditionally elective courses

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<tbody>
<tr>
<td>MF112X</td>
<td>Degree Project in Design and Product Realization, First Cycle</td>
<td>15.0</td>
<td>First cycle</td>
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<td></td>
<td>One degree project must be chosen</td>
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<tr>
<td>SD1115</td>
<td>Fundamentals of Noise and Vibration Control</td>
<td>6.0</td>
<td>First cycle</td>
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<td>Student must choose SD1115 or SK2371</td>
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<tr>
<td>SK2371</td>
<td>Physics of Visual Impressions, Larger Course</td>
<td>9.0</td>
<td>Second cycle</td>
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<tr>
<td></td>
<td>Student must choose SD1115 or SK2371</td>
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Year 4

Supplementary information

For course list: http://www.kth.se/student/kurser/program/TIPDM/HT13/arskurs1

Year 5

Supplementary information

Course list: http://www.kth.se/student/kurser/program/TIPDM/HT13/arskurs2
Track, Industrial Design Engineering (IPDC)

Year 1

Year 2

Year 3

Mandatory courses (33.0 credits)

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<th>Edu. level</th>
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<td>HM1025</td>
<td>Ergonomics in Product Development</td>
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<td>First cycle</td>
</tr>
<tr>
<td>ME1003</td>
<td>Industrial Management, Basic Course</td>
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<td>First cycle</td>
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<td>MF1025</td>
<td>Model Based Product Development II</td>
<td>6.0</td>
<td>First cycle</td>
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<td>MF1040</td>
<td>Design and Product Realization Methodology</td>
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<td>First cycle</td>
</tr>
<tr>
<td>MH1005</td>
<td>Structural Materials</td>
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Conditionally elective courses

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<td>Degree Project in Design and Product Realization, First Cycle</td>
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<td>First cycle</td>
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Year 4

Supplementary information

For course list: http://www.kth.se/student/kurser/program/TIPDM/HT13/arskurs1

Year 5

Supplementary information

Course list: http://www.kth.se/student/kurser/program/TIPDM/HT13/arskurs2
Track, Product Innovation (IPDD)

Year 1

Year 2

Year 3

Mandatory courses (21.0 credits)

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<tbody>
<tr>
<td>ME1003</td>
<td>Industrial Management, Basic Course</td>
<td>6.0</td>
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<td>Can even be taken during p.1, p.3 or p.4</td>
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<tr>
<td>MF1040</td>
<td>Design and Product Realization Methodology</td>
<td>9.0</td>
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<td>MH1005</td>
<td>Structural Materials</td>
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Conditionally elective courses

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<td>MF112X</td>
<td>Degree Project in Design and Product Realization, First Cycle</td>
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<td>First cycle</td>
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<td></td>
<td>One degree project must be chosen</td>
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<tr>
<td>SD1115</td>
<td>Fundamentals of Noise and Vibration Control</td>
<td>6.0</td>
<td>First cycle</td>
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<td>Student must choose between SD1115 or SK2371</td>
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<tr>
<td>SK2371</td>
<td>Physics of Visual Impressions, Larger Course</td>
<td>9.0</td>
<td>Second cycle</td>
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</table>

Year 4

Supplementary information

Students who are registered as CDEPR or CMAST must choose at least 18hp technical courses on an advance level during the first and second year.

Students must choose one of the following areas:

- Machine Design
- Production Engineering
- Energy Technology

For course list: http://www.kth.se/student/kurser/program/TIPDM/HT13/arskurs1

Year 5

Supplementary information

Course list: http://www.kth.se/student/kurser/program/TIPDM/HT13/arskurs2
Track, Combustion Engineering (IPUA)

Year 1

Year 2

Year 3

Mandatory courses (27.0 credits)

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Conditionally elective courses

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<td>First cycle</td>
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<td>Fluid Mechanics, Basic Course</td>
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Year 4

Supplementary information
For course list: http://www.kth.se/student/kurser/program/TIPUM/HT13/arskurs1

Year 5

Supplementary information
Course list: http://www.kth.se/student/kurser/program/TIPUM/HT13/arskurs2
Track, Machine Design (IPUB)

Year 1

Year 2

Year 3

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Year 4

Supplementary information

For course list: http://www.kth.se/student/kurser/program/TIPUM/HT13/arskurs1

Year 5

Supplementary information

Course list: http://www.kth.se/student/kurser/program/TIPUM/HT13/arskurs2
Track, Mechatronics (IPUC)

Year 1

Year 2

Year 3

Mandatory courses (36.0 credits)

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Year 4

Supplementary information

For course list: http://www.kth.se/student/kurser/program/TIPUM/HT13/arskurs1

Year 5

Supplementary information

Course list: http://www.kth.se/student/kurser/program/TIPUM/HT13/arskurs2
Master, Naval Architecture (MRS)

Year 1

Year 2

Year 3

Mandatory courses (21.0 credits)

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Conditionally elective courses

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Year 4

Supplementary information
For course list: http://www.kth.se/student/kurser/program/TMRSM/HT13/arskurs1?l=en

Year 5

Supplementary information
Course list: http://www.kth.se/student/kurser/program/TMRSM/HT13/arskurs2
Master, Production Engineering and Management (PRM)

Year 1

Year 2

Year 3

Mandatory courses (27.0 credits)

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Year 4

Supplementary information

For course list: http://www.kth.se/student/kurser/program/TPRMM/HT13/arskurs1

Year 5

Supplementary information

Courselist: http://www.kth.se/student/kurser/program/TPRMM/HT13/arskurs2
Master, Sustainable Energy Engineering (SUE)

Year 1

Year 2

Year 3

Mandatory courses (39.0 credits)

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<td>First cycle</td>
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Conditionally elective courses

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<td>First cycle</td>
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<td>SK2371</td>
<td>Physics of Visual Impressions, Larger Course</td>
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Year 4

Supplementary information

For course list: http://www.kth.se/student/kurser/program/TSUEM/HT13/arskurs1?l=en

Year 5

Supplementary information

Coursetlist: http://www.kth.se/student/kurser/program/TSUEM/HT13/arskurs2
Master, Sustainable Technology (SUT)

Year 1

Year 2

Year 3

Mandatory courses (33.0 credits)

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Year 4

Supplementary information

For course list: http://www.kth.se/student/kurser/program/TSUTM/HT13/arskurs1

Year 5

Supplementary information

Course list: http://www.kth.se/student/kurser/program/TSUTM/HT13/arskurs2
Track, Fluid Mechanics (TEMA)

Year 1

Year 2

Year 3

Mandatory courses (27.0 credits)

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Conditionally elective courses

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Year 4

Supplementary information

For course list: http://www.kth.se/student/kurser/program/TTEMM/HT13/arskurs1

Year 5

Supplementary information

Course list: http://www.kth.se/student/kurser/program/TTEMM/HT13/arskurs2
Track, Solid Mechanics (TEMB)

Year 1

Year 2

Year 3

Mandatory courses (27.0 credits)

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Year 4

Supplementary information
For course list: http://www.kth.se/student/kurser/program/TEMM/HT13/arskurs1

Year 5

Supplementary information
Course list: http://www.kth.se/student/kurser/program/TEMM/HT13/arskurs2
**Track, Sound and Vibrations (TEMC)**

**Year 1**

**Year 2**

**Year 3**

**Mandatory courses (27.0 credits)**

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**Conditionally elective courses**

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**Year 4**

**Supplementary information**

For course list: [http://www.kth.se/student/kurser/program/TTEMM/HT13/arskurs1](http://www.kth.se/student/kurser/program/TTEMM/HT13/arskurs1)

**Year 5**

**Supplementary information**

Course list: [http://www.kth.se/student/kurser/program/TTEMM/HT13/arskurs2](http://www.kth.se/student/kurser/program/TTEMM/HT13/arskurs2)
Appendix 2: Specialisations

Degree Programme in Design and Product Realisation (CDEPR), Programme syllabus for studies starting in autumn 2010

Master, Aerospace Engineering (AEE)
Master, Vehicle Engineering (FOR)
Master, Industrial Management (INE)
Track, Concurrent Engineering (IPDB)
Track, Industrial Design Engineering (IPDC)
Track, Product Innovation (IPDD)
Track, Combustion Engineering (IPUA)
Track, Machine Design (IPUB)
Track, Mechatronics (IPUC)
Master, Naval Architecture (MRS)
Master, Production Engineering and Management (PRM)
Master, Sustainable Energy Engineering (SUE)
Master, Sustainable Technology (SUT)
Track, Fluid Mechanics (TEMA)
Track, Solid Mechanics (TEMB)
Track, Sound and Vibrations (TEMC)