Programme syllabus

Master's Programme, Project Management and Operational Development, 60 credits
Magisterprogram, projektledning och verksamhetsutveckling 60.0 credits

Valid for students admitted to the education from autumn 15 (HT - Autumn term; VT - Spring term).

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

Programme objectives

In addition to the objectives specified by the National Agency for higher education there are specific objectives for this program. Those who graduate from the program should

Knowledge and understanding

- demonstrate knowledge and understanding in the field of industrial engineering and management with a deeper knowledge and understanding in the specific fields of industrial engineering and management: quality and project management and its application in technology-based businesses.
- demonstrate knowledge and understanding of models and theories within the industrial leadership to effectively lead and develop various technology-based organizations.
- demonstrate in-depth knowledge and understanding of the established and current methods, models, theories and standards in project management to plan, manage, track and develop projects and project models in technology-based businesses.
- demonstrate in-depth knowledge and understanding of approaches, tools and standards in quality management to ensure the technology-based business’ ability to ensure good quality and continuous improvement.
- demonstrate in-depth knowledge of advanced statistical analysis methods for quality assurance /control, forecasting and risk analysis as a basis for management and continuous improvement of manufacturing processes and industrial projects.

Skills and abilities

- demonstrate skill and ability to, both independently and in group, be able to translate knowledge and abilities into practice taking into account relevant scientific, societal, ethical and professional assessments.
demonstrate skills and ability to set deadlines, planning work, decide on resource consumption and lead processes for problem solving and implementation to ensure time, cost and quality.

- demonstrate skill and ability to, both individually and in group, both orally and in writing, present, in a clear manner, the mission, implementation, results and conclusions of completed tasks and projects.

**Ability to make judgements and adopt a standpoint**

- demonstrate attitude and ability to assess by having an analytical and reflective approach to the scientific, technical, organizational, economical, ethical and societal aspects that are relevant for both the cross-disciplinary field of industrial engineering and management as a whole but in particular the in-depth disciplines: quality and project management.

KTH's local examination procedure, see regulations, [www.kth.se](http://www.kth.se)

**Extent and content of the programme**

The education comprises 60 ECTS credits, equivalent to 1 year of full-time study.
The education is on advanced level.
The courses are given only in English.

**Eligibility and selection**

To be eligible for the program, applicants must have at least a Bachelor's degree in technical discipline from University or University College. In addition, the student is required to have previous knowledge in industrial engineering and management: at least 15 ECTS credits or equivalent. Topics in industrial engineering and management correspond to for example: quality- engineering/management, environmental- engineering/management, logistics, industrial organization, innovation, entrepreneurship and product development. In order to be considered qualified the student must also have mandatory previous knowledge in mathematical statistics at university level and/or practical experience in statistical work.

Eligibility requirements can be valued and considered not fulfilled if:

- The degree issuing Training Unit does not meet its own requirements for licensing
- The issued degree is not qualifying to a master education in their home country.

Selection is based on the following criteria:

- Evaluation of universities
- Level of education
- Grades in courses in the undergraduate degree
- Courses and/or work experience relevant to the program

The evaluation scale is 1-75.

For more information, see KTH’s admission regulations found in KTH’s regulatory framework, [www.kth.se](http://www.kth.se)
Implementation of the education

Structure of the education

Academic year, semesters and study periods are retrieved from the regulations, www.kth.se
Referring to the academic subdivision regulations, www.kth.se

The program is finalized with a Degree Project (15 ECTS)

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

Semester and course registration

When the autumn semester starts, semester registration is done in connection with the enrollment to the program. Course registration makes the students through the "personal menu" at www.kth.se

When the the spring semester starts, the students do a semester and course registration through the "personal menu" on www.kth.se

The student must accomplish minimum 10 ECTS during the autumn semester to be permitted to attend to the courses in the spring semester.

Recognition of previous academic studies

Student may apply to include credit results from the course/courses at another higher education institution/university within outside the country.
KTH's policy for recognition is available in its entirety in the regulations, www.kth.se

Studies abroad

No parts of the programme can be studied at different universities in Sweden or abroad.

Degree project

The degree project yields 15 ECTS on advanced level.

For the thesis applies:
\begin{itemize}
\item It may commence at the earliest after achieved 30 ECTS and when final grades exist in relevant courses relevant to the contents of the degree project.
\item It may commence after the assignment has been approved by the examiner.
\item It is based on the knowledge obtained during the study period and shall normally be carried out during the spring semester.
\item It shall be attached to a technical topic and primarily made in collaboration with a technology-based business.
\item It shall be the test of an independent project extensive theoretical and/or experimental activities with accompanying written and oral presentation
\item A supervisor appointed by the examiner.
\end{itemize}

KTH’s rules for degree project can be found in KTH’s regulatory framework, www.kth.se

\section*{Degree}

To complete a master's degree in Project Management and Operational Development, MSC degree (eng. Degree of Master of Science (60 credits)) a passing grade is required in all courses included in the student's curriculum. The curriculum consists of compulsory courses which the student followed and the master thesis. The curriculum shall cover at least 60 credits.

Application for graduation is done according to KTH's instructions, www.kth.se

KTH's local examination procedure, see regulations, www.kth.se

\begin{itemize}
\end{itemize}

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

Master's Programme, Project Management and Operational Development, 60 credits (TPLVM), Programme syllabus for studies starting in autumn 2015

General courses

Year 1

Mandatory courses (60.0 Credits)

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>HM2003</td>
<td>Leadership for Operational Development</td>
<td>7.5 hp  Second cycle</td>
</tr>
<tr>
<td>HM200X</td>
<td>Degree Project in Project Management and Operational Development, Second Cycle</td>
<td>15.0 hp  Second cycle</td>
</tr>
<tr>
<td>ML2135</td>
<td>Organisation in Continuous Improvement</td>
<td>7.5 hp  Second cycle</td>
</tr>
<tr>
<td>ML2136</td>
<td>Operational Development by Quality Tools and Statistics</td>
<td>15.0 hp  Second cycle</td>
</tr>
<tr>
<td>ML2137</td>
<td>Industrial Project Management</td>
<td>15.0 hp  Second cycle</td>
</tr>
</tbody>
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Supplementary information

Courses listed below will be given the academic year 2015/2016, but are yet not established: Degree Project in Project Management and Operational Development, Second Cycle

Changes may occur.
Appendix 2: Specialisations

Master's Programme, Project Management and Operational Development, 60 credits (TPLVM), Programme syllabus for studies starting in autumn 2015

This programme has no specialisations.