# Course Program ETSF01
# Software Engineering Process – Economy and Quality

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**Aim.** The objective of the course is to give the student deeper knowledge of planning and managing development projects include economical aspects and quality improvement at the organizational level of a company.

*Knowledge and understanding.* For a passing grade the student must
1. be able to explain how a development project is planned, cost estimated, monitored and managed
2. be able to explain techniques for planning, estimating cost, managing risk, monitoring and controlling development projects
3. be able to describe how software process improvement is conducted

*Skills and abilities.* For a passing grade the student must
1. be able to develop a detailed project plan with cost estimates for sub-tasks
2. be able to participate in software process improvement work
3. be able to suggest, conduct and analyse measurements for given objectives
4. be able to write a technical report that adheres to an established academic structure including references, tables and figures.

*Judgment and approach.* For a passing grade the student must
1. have an understanding for quality improvement activities at organizational level
2. have an understanding of how project management and process improvements can use measurements

Course elements
- Seven *lectures* give a theoretical overview and help for personal studies.
- One *project* gives practical skills and training, and relates theory to practice in software project management and measurements by tool evaluation, analysis and presentation.
- Four *exercises* in presenting technical information in writing and orally. The exercises are focused on the project assignment.
- *Written exam* assesses the individual skills.

Assessment
- The project is graded pass (G) / fail (IG) + up to 10 bonus points based on project deliverables. A passing grade (G) for the project is a necessary condition for passing the course.
- The final grade is fail / 3 / 4 / 5, which is based on written exam and bonus points according to the table.

| Exam + bonus points | Grade |
|---|---|
| >=30 of which at least 27 is for exam | 3 |
| >=41 | 4 |
| >=51 | 5 |

Literature
Bob Hughes and Mike Cotterell, Software Project Management, 5th ed, McGraw-Hill, 2009. ISBN 978-0-07-712279-9.
Additional articles announced during lectures and found in the LibHub database (www.lub.lu.se).

Personnel
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