

# Industrial information and control systems

# Projektstyrning/Management of projects EH2010/EH2720 (7.5 ECTS)

Course plan for the academic year 09/10

#### Examiner

Professor Torsten Cegrell

#### Course leaders

Course leaders are Pia Gustafsson (main responsible for EH2010), Ulrik Franke (main responsible for EH2720), David Höök and Johan König. To contact us, please send an e-mail to the common e-mail address pstyr@ics.kth.se.

## The objectives and goals of the courses

The development and delivery of complex industrial systems require effective routines and methods of project management. Project management includes planning, implementation, management, tracking and documentation during the various phases of a project. After the course, the participants should understand the role of a project manager and be familiar with:

- Planning and implementing a risk analysis
- Performing an analysis of an industrial project
- The various phases of a project, i.e. planning, tracking and completion of a project.
- Project activities such as planning, project meetings, documentation and oral presentations
- Methods and tools for planning and tracking a project with regard to time, costs and resources
- Using a project model to manage and document a project
- Project communication, oral and in writing

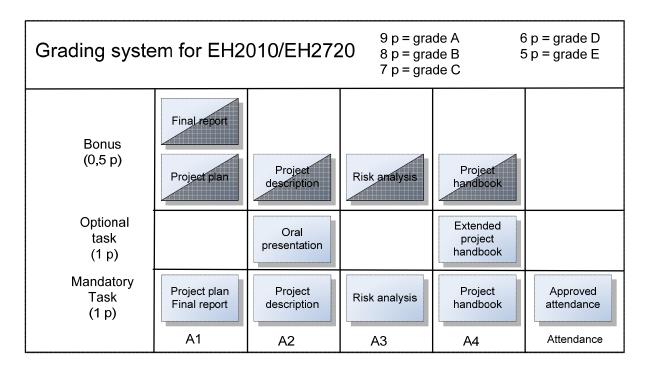
# Entrance qualifications

Prerequisites for 4th year studies.

## Course examination

The course consists of four assignments, each of which gives a certain number of points (not to be confused with university credits). The total number of such points obtained determines the grade (see the grading system below). It is also required that you have a least one point for every mandatory course assignment. Furthermore, you can receive additional points by doing optional assignments or if your reports are very well done, as described below.

To reflect the fact that real life industrial projects require participation in meetings and careful planning of the time available, complete lecture attendance at 12 out of 16 lectures is required. This means that you will have to be *on time* and *stay for both lecture hours*. If you know that you will be unable to fulfill the attendance requirement then it is possible, *under special circumstances and after a special agreement with the course leaders*, to pass the course by doing a literature study instead. A typical literature study requires far more time than the equivalent lecture attendance.



#### **Grading system**

As illustrated in the figure above, all mandatory and optional assignments are graded and rewarded with points. Some assignments are only graded by *pass/fail*, and are rewarded with a single point when passed. Other assignments are graded by *pass with a bonus/pass/fail*, and are rewarded with 1½ point for pass with a bonus and 1 point for pass.

To get a bonus, the assignment must be *very well done* when submitted for *the first time*. This means that it should be clear that the authors have fully understood and mastered the important concepts and skills tested in that particular assignment. Both contents and form are important in this respect; i.e. no important contents or analysis should be missing, the structure and formatting should adhere to the relevant templates, and the text should be carefully proof-read.

Note that the ½ bonus point can be rewarded for an assignment that is very well done, even if a re-submission is required due to some minor details. Whenever an assignment requires a resubmission to pass, the comments from the teacher will make it clear whether the final grade after re-submission is likely to be a pass or a pass with a bonus. Assignments graded with a pass cannot be re-submitted to get a pass with a bonus.

When the course is complete, the points from all the assignments are added. As illustrated in the figure above, the sum total determines the final grade. Note that there is no rounding; i.e. 7½ points are not the same as 8 points.

#### Course administration

- The department is located at Osquldas väg 12 (Q), floor 7. There is a doorbell for visitors.
- Most course administration is handled on the Bilda platform, reached via <a href="www.bilda.kth.se">www.bilda.kth.se</a> where you log in with your kth.se account. Bilda is used, for example, for:
  - Communicating with the course leaders and other participants
  - Reading and accessing instructions and other material needed for the assignments
  - Submission and re-submission of assignments

- Obtaining corrected assignments and comments, and lists of results
- Attendance will be registered on one or more lists that are passed around during the lectures. Approved attendance of a minimum of 12 lectures yields 0.8 ECTS credits, which means that the attendance requirement is a grading factor. Therefore, cheating with the attendance list is equivalent to cheating on an exam. You are required to inform course leaders if you have to leave a lecture. Show respect to our guest lecturers by being on time to the lectures!

#### Assignments

The teachers correct hundreds of assignments every week. In order to give you quick and relevant feedback on your work, the following rules apply:

- Assignments are done in groups of two, with the exception of some parts of assignment 3. These groups must be formed and reported on lists available at the lectures before Assignment 1 is submitted! Note that the members of a group must aspire to the same grade.
- The assignments are submitted in the pdf format via the Bilda system. Pdf files can be created with the Adobe Acrobat software, which is not free-of-charge. There are, however, several services on the Internet which can be used free-of-charge to create pdf files.
- Build a *single* pdf for each assignment. *Do not hand in any appendices separately!* Either build the pdf from a single document containing everything, or merge separate pdf files into a single one using Adobe Acrobat or free software services available on the internet.
- You must name your assignment so that it complies to the following criteria: GXX\_2008\_assignment\_Y.pdf, where "XX" is your group number (two digits, 01, 02, 03, etc), "Y" is a number between 1 and 3 indicating whether it is the first, second or third submission of the assignment, and "assignment" is one of the following: projectplan/statusreport/finalreport/projectdescription/riskanalysis/projecthandbook.
  - Example: G06\_2008\_projectplan\_2.pdf is group 6's project plan, which after correction had to be submitted a second time.
- A prerequisite for obtaining a higher grade than an E is that all assignments and resubmissions are submitted on time! Assignments that still, after the first re-submission, do not fulfill requirements to pass will only be corrected in order to obtain mandatory points. Thus your possibility to obtain points for optional assignments and bonus points is lost.
- Assignments submitted after the deadline will be corrected after the vacation in January 2010.
- Any complaints about the corrections are to be submitted in writing to the course leaders.
- Any reports suggesting mass duplication will be unconditionally failed, and no opportunity to complete the course will be offered.

#### Course literature

Course literature consists of "Handbok för mindre projekt" by Mikael Eriksson and Joakim Lilliesköld (Liber). It is sold at the Kårbokhandeln (student bookstore). An English version, "Handbook for small projects", will arrive from the printing press during the first or second week of the course. Assignment instructions and supplementary material needed for the course is available via Bilda.

There are many other interesting (but fully optional) books about project management. Two Swedish examples are "Handbok i projektekonomi" by Agneta Östlund (Liber), and "Projekt och Helhet – Att leda projekt i praktiken" by Mikael Klasson *et al.* A good English book is "Project Management Toolbox" by Dragan Z. Milosovic (John Wiley & Sons).

#### Lecture schedule

| Week | Nr        | Time and place |        |        |          | Swedish course EH2010                               | English course EH2720                               |  |
|------|-----------|----------------|--------|--------|----------|---|---|--|
|      |           |                |        |        | <u> </u> | Lectures  | Lectures Intro to project management                |  |
| 35   | L1E       | Fri            | Aug 28 | 10-12  | D3       | Intro to project management (Pia                    | (Ulrik Franke)                                      |  |
|      | L1S       | Fri            | Aug 28 | 13-15  | E1       | Gustafsson)   |   |  |
| 36   | L2S       | Wed            | Sep 02 | 10-12  | F2       | Project planning in theory (Pia<br>Gustafsson)      |   |  |
|      | L2E       | Wed            | Sep 02 | 13-15  | D3       |   | Project planning in theory (Pia<br>Gustafsson)      |  |
|      | 121       | Thu            | Sep 03 | 13-15  | D3       | Back-up   | · ·   |  |
|      | L3SE      | Thu            | Sep 03 | 15-17  | E1       | PROPS (Martin Ba                                    |   |  |
|      |           |                |        |        |          |   | ,   |  |
|      | L4S       | Fri            | Sep 04 | 10-12  | E1       | Procurement of complex systems (Joakim Lilliesköld) |   |  |
|      | L4E       | Fri            | Sep 04 | 13-15  | E2       |   | Procurement of complex systems (Joakim Lilliesköld) |  |
|      | 1111      | 111            | оср от | 13 13  |          |   | Goulin Zinconota)                                   |  |
| 37   | L5SE      | Thur           | Sep 10 | 13-15  | F1       | Project budget (Agne                                | ta Östlund, Ceterum)                                |  |
|      | L6E       | Fri            | Sep 11 | 10-12  | V3       |   | Risk management (David Höök)                        |  |
|      | L6S       | Fri            | Sep 11 | 13-15  | F1       | Risk management (David Höök)                        |   |  |
| 20   | 1700      | XV7 1          | 0 17   | 12.15  | T24      | DDC (M'1 1 I  | *1 C 7T' . \  |  |
| 38   | L7SE      | Wed            | Sep 16 | 13-15  | F1       | PPS (Mikael J. Working with complex industrial      |   |  |
|      | L8SE      | Thu            | Sep 17 | 13-15  | F2       | Lövehage  |   |  |
|      |           |                |        |        |          |   |   |  |
| 39   | L9E       | Mon            | Sep 21 | 13-15  | E3       |   | Leadership (Ulrik Franke) Group dynamics (Joakim    |  |
|      | L10E      | Wed            | Sep 23 | 10-12  | E3       |   | Lilliesköld)  |  |
|      |           | Thur           | Sep 24 | 13-15  | Q1       | Back-up   | lecture   |  |
|      |           |                |        |        |          |   |   |  |
|      | L9S       | Fri            | Sep 25 | 13-15  | D1       | Leadership (Ulrik Franke)                           |   |  |
|      |           |                |        |        |          |   |   |  |
| 40   | L11E/L10S | Tues           | Sep 29 | 10-12  | Q1       | Quality (Mic  | hel Koivisto)  Global project management            |  |
|      | L12E      | Wed            | Sep 30 | 10-12  | F1       |   | (Joakim Lilliesköld)                                |  |
|      |           |                |        |        |          | Project management in practic                       |   |  |
| 41   | L13E/L11S | Mon            | Oct 05 | 15-17  | F1       | Gammelgård  | I, Connecta)  |  |
|      | L14E/L12S | Wed            | Oct 07 | 15-17  | F1       | Project managemen from the in                       | nside (Terrence Acton, Ericsson)                    |  |
|      |           |                |        |        |          | Project Communication (Oscar                        | Hull Swedish Defence Material                       |  |
| 42   | L15E/L13S | Mon            | Oct 12 | 13-15  | F1       | Adminis   |   |  |
|      |           |                |        |        |          | Group dynamics (Lena                                |   |  |
|      | L14S      | Tues           | Oct 13 | 13-15  | F2       | Schagerström, Lindström & Schagerström)             |   |  |
|      |           |                |        |        |          | Leading IT-project – do's and                       |   |  |
|      | L15S      | Wed            | Oct 14 | 13-15  | E3       | dont's (Micael Erneborg, SL)                        | Summary and future (Ulrik                           |  |
|      | L16E      | Fri            | Oct 16 | 13-14  | E3       |   | Franke)   |  |
| 1    | L16S      | Fri            | Oct 16 | 14 -15 | E3       | Summary and future (Ulrik Franke)                   |   |  |

# Appointments for optional oral presentation of Assignment 2:

Available times for an oral presentation are:

- Thursday, October 1, 8.00 a.m. 10.00 a.m., 1.00 p.m. 6.00 p.m.
- Friday, October 2, 8.00 a.m. 12.00 noon, 4.00 p.m.- 6.00 p.m.

Note that it is important to be on time for the oral presentations! A booking list with available times for appointments will be at lectures 7, 8, 9, 10 and 11.

#### **Guidance sessions**

| No.   |      | Time     |       | Content |  |  |
|-------|------|----------|-------|---------|--|--|
| G1    | Tues | 01 Sept  | 08-10 | A1      |  |  |
| G2    | Wed  | 02 Sept  | 15-17 | A1      |  |  |
| G3    | Fri  | 04 Sept. | 15-17 | A1      |  |  |
| G4    | Fri  | 11 Sept. | 15-17 | A3      |  |  |
| G5    | Thu  | 17 Sept  | 08-10 | A3      |  |  |
| G6    | Fri  | 18 Sept  | 15-17 | A3/A2   |  |  |
| G7    | Fri  | 25 Sept. | 08-10 | A2/A4   |  |  |
| G8    | Wed  | 30 Sept. | 13-15 | A4      |  |  |
| G9    | Tue  | 06 Oct.  | 10-12 | A1      |  |  |
| G10   | Wed  | 14 Oct.  | 15-17 | X       |  |  |
| Total | 20 h |          |       |         |  |  |

The venue for guidance sessions is the classroom on the 7th floor at Osquldas väg 12. At the guidance sessions you can ask specific questions about the assignments. Remember to be well-prepared – do not just ask for a general opinion on your drafts!

# Dates for submitting and correcting assignments

Submit through Bilda. Assignments should be received no later than at the indicated hour.

|      |          |                        | Corrections            |                        | Corrections of re-     |
|------|----------|------------------------|------------------------|------------------------|------------------------|
| Date |          | Submissions due        | complete               | Re-submissions due     | submissions complete   |
|      |          | A1 Project plan        | •                      |                        | •                      |
| Mon. | 07 Sept. | 5.00 p.m.              |                        |                        |                        |
|      |          |                        | A1 Project plan        |                        |                        |
| Mon. | 14 Sept. |                        | 3.00 p.m.              |                        |                        |
|      |          | A3 Risk analysis       |                        |                        |                        |
|      |          | A1 Status report 1     |                        | A1 Project plan        |                        |
| Fri. | 18 Sept. | 5.00 p.m.              |                        | 5.00 p.m.              |                        |
|      |          | A2 Project description | A3 Risk analysis       |                        | A1 Project plan        |
|      |          | 5.00 p.m.              | A1 Status report 1     |                        | 1.00 p.m.              |
| Fri. | 25 Sept. |                        | 3.00 p.m.              |                        |                        |
|      |          | A4 Project Handbook,   | 1                      | A3 Risk analysis       |                        |
|      |          | A1 Status report 2     |                        | A1 Status report 1     |                        |
| Fri. | 02 Oct.  | 5.00 p.m.              |                        | 5.00 p.m.              |                        |
|      |          |                        | A2 Project description |                        |                        |
| Mon. | 05 Oct.  |                        | 3.00 p.m.              |                        |                        |
|      |          | A1 Final report        | A4 Project Handbook,   | A2 Project description | A3 Risk analysis       |
|      |          | 5.00 p.m.              | A1 Status report 2     | 5.00 p.m.              | A1 Status report 1     |
| Fri. | 09 Oct.  |                        | 3.00 p.m.              |                        | 3.00 p.m.              |
| Mon. | 12 Oct.  |                        |                        |                        |                        |
|      |          |                        | A1 Final report        | A4 Project Handbook,   | A2 Project description |
|      |          |                        | 1.00 p.m.              | A1 Status report 2     | 3.00 p.m.              |
| Fri. | 16 Oct.  |                        |                        | 5.00 p.m.              |                        |
|      |          |                        |                        | A1 Final report        |                        |
| Mon. | 19 Oct.  |                        |                        | 5.00 p.m.              |                        |
|      |          |                        |                        |                        | A4 Project Handbook,   |
| Б.   | 22.0     |                        |                        |                        | A1 Status report 2     |
| Fri. | 23 Oct.  |                        |                        |                        | 3.00 p.m.              |
| 3.6  | 24.0     |                        |                        |                        | A1 Final report        |
| Mon. | 26 Oct.  |                        |                        |                        | 3.00 p.m.              |