IK2200: Communication Systems Design (CSD): 2022*

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1 Expectations of students

Students taking this course are expected to:

- Fulfill the prerequisite requirements.
- Not underestimate the challenge of the course.
- Pull their weight in the project.
- Contribute to the course by being engaged in the dialogue during seminars and on the web.
- Observe KTH rules and regulations.
- Not copying code from anyone (or the Internet) *without* the TA's permission
- No use libraries to speed up development *without* the TA's permission

2 Course evaluation meeting

After the course, the teacher(s) and representatives of the students should meet for a discussion about lessons learned during the course and share ideas that could shape the future development of the course.

3 Course Details

This section gives some of the practical details about this course.

3.1 Course credits

1. In the project plan, all students have to show how they are going to contribute to the project.
2. Students can sign up only for IK2200 for 15 credits (Remember that 1.5 credit equals 40 hours of work.)

3.2 Course objective

The objective of the course is to offer students an opportunity to learn about advanced emerging technologies. Students will work in teams in order to develop their abilities to work with others in order to achive a common objective.

3.3 Pedagogical model

The course implements problem based learning driven by projects. By solving "real-world" problems in project teams, the students will learn advanced technology issues and at the same time become aware of many non-technical aspects that are relevant to solving problems, such as iterative design, teamwork, and project management.

In addition to the problem based, project driven approach, the course includes a set of methods to facilitate learning, including peer learning (learning from other team members), vicarious learning (to

* This document is an updated version of the previous rule book developed by professor em. Björn Pehrson.

exploit experiences from earlier offerings of the course), and bench learning (to learn from the best existing solutions to similar problems and the problem solvers behind them).

3.4 Deliverables and grading

The deliverables are summarized in Table 1 (on page 7). Student's will be graded based on two dimensions: (1) the quality of the project related deliverables and (2) individual contribution to the learning in the course, i.e., active participation during seminars and other course activities, and the level of participation in the projects. All deliverables have to be posted on the team's web site, on or before the deadline for each deliverable.

3.5 Course program

We are using Canvas, where the official course content will be posted over time. Note that KTH Social (https://www.kth.se/social/course/IK2200/) contains the 2015 and 2014 material, while material in the current Canvas course takes precedence over this earlier material.

A detailed schedule for the course can be found via the "Schedule" link on the upper right hand menu of the course page in KTH Social. The course spans a whole semester, i.e. two periods - totaling 20 weeks. The CSD project course includes lectures and seminars. Information about these lectures and seminars, including schedules, will be on the course web. The course web site will be updated as the course proceeds.

During the first week of the course there will be an introduction workshop over Zoom.

Approximately within two weeks after the course starts a project plan is due for all projects. After this, the project teams continue their work until the Midterm workshop.

The Midterm workshop includes status presentations, group discussions, seminars, and project work.

After the Midterm workshop, the groups continue working. The course ends with a Final workshop including oral presentations. The Lessons Learned paper and the students' evaluation of the course are due immediately after the final workshop.

3.5.1 Course web

You need to check the Canvas course web regularly, for both news and for course material. The course material includes text documents, articles, audio and video clips, and links to other sources of relevant information.

3.5.2 Course administration

The course is administrated via the Canvas course web. If you have any questions, do not hesitate to contact the teaching team. The teaching team and their contact information will be available from the Canvas course web.

Communication with the teaching team (and within a project team) takes place via Canvas, within per group discussion forums. Please do not create additional discussions.

3.6 Course rules

Absence: We expect all students to attend all scheduled activities unless there is a valid reason. We expect students who know that they will be absent to inform us in advance. In case of an emergency, we expect the student to inform us at their earliest convenience. Such notice is to be sent in an email to dmk@kth.se with an explanation.

Workspace: in 2022, due to the covid-19 pandemic uncertainties and ease of collaboration, all work will take place online (e.g., over Zoom).

3.7 Grading

Group and Individual contributions: Members of a team can receive a different grade for the following deliverables: Project plan, Peer reviews of other teams' midterm reports, Midterm Presentation, Final Oral Presentation, Final Written Report, Video, and Lessons Learned. The grade will be based upon their contribution to the project.

Individual grades are based on Individual Contributions and (new from 2017) Code reviews.

Note that the weekly progress reports are *not* graded – as they are meant to be for the group's *own* benefit (i.e., to provide formative feedback). However, (new from 2017) the peer review written for the benefit of other teams' are graded. **Participating in discussing different topics in the discussion forum:** If a team member is not meeting his or her commitments in a project, the team should bring this matter to the teacher's attention as soon as possible. Any such issues should be brought **before** the mid-term workshop. After this point it becomes more difficult to deal with students that are to be expelled from a team, and such requests will **not** be honored by the teaching team. Given that team members do not have to receive the same grade, expelling a team member should only occur only in extreme cases.

Contributions to the project and entire course's learning objectives are based on teaching team's evaluations of each individual's performance (for example in class, team meetings, and presentations).

3.8 Dividing up the work/final presentation

It is perfectly okay that you divide up the work within the team that utilizes each person's strengths. Maybe somebody is better in coding maybe somebody is better at writing the report. Somebody else completely might be better at organizing the team. At the midterm workshop you will be allowed to choose which the members will do the demo and who will do the presentation.

The point of the course is, however, that you learn from each other and therefore at the final workshop everyone will be expected to explain every line of code and everything that is written in the report (meaning also answer questions about the work). This is why all of you are supposed to be doing code reviews all the time.

Everyone will have to demonstrate some programming during the course of the project. However, this can be in the form of automating running of the experiments, plotting the results, etc.

3.9 Course activities

- Workshops:
  - Kick-off Workshop
  - Mid-Term Workshop
  - Final Workshop
- Deliverables:
  - Project Website
  - Project plan
  - Weekly Progress Report
  - Midterm Progress Report
  - Midterm Peer Review
  - Video
  - Final Report

- Final Presentation
- Lessons Learned

Course Modules

- Project Website
- Technical Modules (1. Using Mininet, 2. Lessons from Google (prerecorded), 3. SDN in general)
- Project Management (if needed)
- Video production (if needed)

3.10 Course Schedule (Overview)

The actual course schedule will be updated on the Canvas course web site throughout the course. The following gives an overview of the course's schedule.

Notes:

- Details in this schedule can **change**! Be sure to check the Canvas course web page for updates.
- The duration of the sessions will be adjusted based upon the number of project teams participating in the course.

Week Course/calendar	Day	Time	Name of activity
Week 1/35			**Kick-off workshop** (see Section 3.9.1)
Week 2/36	2022.09.05	16:59	Project teams formed, websites up
Week 3/37	2022.09.14	12:00	Project plans posted on project website (draft and then final after feedback)
Week 10/43	2022.10.26 (at least)		**Midterm workshop** (see Section 3.10.2)
Week 20/2 (2021)			**Final workshop** (see Section 3.10.3)
	2023.01.10		Final report posted on web site Press release posted on web site Video posted on web site
	2023.01.10+11		**Presentations**
	2023.01.14		Lessons Learned report from students Feedback to teaching team
			Equipment hand-in (where applicable)

3.10.1 Kick-off Workshop

The opening Kick-off workshop is compulsory for all students. If you for some reason cannot attend, please contact the teaching team as soon as possible. At the end of the week all teams should:

- Have attended all seminars during the week, including the introduction,
- Formed groups,
- Ranked the offered projects so that the teaching staff can assign groups to projects according to their preferences,
- Have named their team/project,
- Have met with the teaching-team,
- Have presented their team's website,
- Have gotten access to the necessary equipment that the teams need in order to start doing their work,

3.10.2 Mid·Term Workshop

The Midterm Workshop consists of the following parts:

1. Peer review sessions. Each team is to provide a review and feedback to **two** other project teams,
2. Project presentations, oppositions, discussions, and feedback, and
3. Course evaluation meeting to be organized by the students themselves to provide feedback to the teaching team.

3.10.3 Final Workshop

All projects will have 30-45 minutes for the following (there will be a post in canvas with detailed instructions and the time available):

1. The formal presentation from the team,
2. Demo or 3-minute video (depending on the time available,)
3. Questions and answers (Q&A), and
4. General comments and discussion.

4 Deliverables

Table 1 summarizes the deliverables for this course. Details of each of these deliverables are described in detail in the following sections.

Table 1: Summary of Deliverables

Deliverable #	Description	Due date
1	Project Website	2022.09.09 at noon
2	Project plan	Draft 2022.09.09 at noon Final 2022.09.13 at 12:00
3	Weekly progress report	Before meeting with the teaching team
4	Midterm Progress Report/ Peer Review Report	Reports due 2022.10.25 at 17.00† Reviews due 2022.10.27 at 17.00
5	Video (3 minutes long)	2023.01.10 at 09.00
6	Final report	2023.01.10 at 09.00
7	Final Presentation	2023.01.10+11 (two whole days, slot depends on the team)
8	Lessons Learned document	2023.01.13 at 09.00

4.1 Deliverable 1: Project Website

Guidelines for the Project Web Page

Each team will create a group page on course web page to be used for publishing the mandatory project web page and all the team members have permissions to change the site. The project web page has to be stored at the assigned place. Material stored outside this space will not be considered for grading.

The per-project course web page will be a Group Page and set of submissions on Canvas.

You have to have the **Project Title** and the **Course Code** on the front page. From the front page there should be clear links to or information about:

- A Short Project Description
- The Project Team Members with contact information
- Other External Contacts
- References (Documents/Webpages/etc.)
- The Deliverables: The deliverables that have to be put on the web are:
  - Project plan
  - Midterm presentation
  - Midterm peer review (the public part)
  - Final report
  - Lessons Learned paper
- Video

- Optional but useful items for your project web are for example:
  - Paper for IEEE/ACM or other conference or journal based upon your project
  - Discussion board
  - Pictures
  - Team calendar
  - File sharing system
  - Tools for tracking the team progress
  - Anything you find useful or interesting

Remember that the project web is a face out to the teaching team and when used correctly it can be a useful tool for your project work.

4.2 Deliverable 2: Project plan

Project Plan Template with Instructions to the Teams on how to complete the Project Plan will be on the course web page.

12 things to remember **to include when submitting the project-plan**

1. A Title Page with the name of the project, names of the team-members, the name of the course, the course offering (year/semester), for the different team-members.
2. Describe the background and the context for the project
3. Crystallize the goal of the project, i.e., a crisp statement of what the end result with the project is.
4. Discuss the goal chosen, i.e., what is the unique contribution of the project
5. Present activities, starting from a work breakdown structure
6. Specify all the different deliverables.
7. Present a realistic time-schedule with:
   - Objectives, i.e., identifiable milestones to reach the goal.
   - Communication-plan for the interaction with the Principle.
8. Describe different methods, approaches, and resources that are going to be used, include a discussion of the feasibility of the methods and approaches.
9. Describe how you will evaluate your implementation, including the metrics.
10. Develop a risk-analysis and a stakeholder-analysis
11. Include a complete list of all the sources used for the project-plan
12. Describe how each individual is going to contribute and how the project will keep of the contributions by each project-member.
13. CVs for all students in the project

What happens next with the Project Plan?

- **Responsibilities of the project teams**: To post the Project Plans on their projects' homepages before the specified deadline.
- **Responsibilities of the teaching team:** All projects will receive feedback and grades for their Project Plans from the teaching team.

4.3 Deliverable 3: Weekly progress report

Each team should write a weekly progress report summarizing their progress each week. This report should help both the team and the teaching team to understand what are the solved problems, the open problems, and to spot developing problems that might seriously affect the project's outcome. For details see Section 6 on page 18.

Important: please get used to putting your graphs and the text that analyzes and explains the results in your final reports. You can always remove graphs that become superfluous later.

I will look at the PDF of the final report to judge your overall progress, so only change the project plan if there is a serious deviation. This means that all groups need to update their front page with the following content:

Links to the latest version of the project plan and revisions:

1) GroupName-Project-Plan(current, pointing to a google doc)

2) GroupName-Project-Plan-YYYYMMDD.pdf (for each major revision)

Link to the latest version of final report:

1) GroupName-Final-Report (current, pointing to a google doc or overleaf)

Links to weekly deliverables consisting of PDF snapshots of the following documents:

Week WW (WW is the Swedish week number of the week you are uploading this review in)

1) GroupName-Weekly-Report-WW.pdf

2) GroupName-Final-Report-YYYYMMDD.pdf

(This mean that you will generate 2 new PDFs each week)

This will enable easy access to documents with consistent naming scheme across the groups.

4.3.1 Contents of the weekly progress report

The canvas course page specifies a link to a sample weekly progress report. You need to account for every day of your work and in particular fill in the following items in the table:

DAY	ACTIVITY	DESCRIPTION	HOURS	RESULTS	GIT	
					Commit	Review
date (no year needed), e.g., Mon, 19 Sep	High level activity that you are working on, e.g., Phase 1 of the project	Single sentence description of the work you're doing, e.g., Simulator Initialization	Number of hours worked	Clearly spelled out the results starting with an active verb, e.g., implemented initialization of the node and edge array using weights read from a file	X = Done Empty = Not Done	
Tue, 20 Sep	Code review	e.g., Simulator Initialization	Number of hours worked	Anything specific you found in the review		Pull request number

4.4 Deliverable 4: Midterm Peer Review

Each team is to critically review the work and progress of two other CSD projects. The purpose of this review task is manifold:

- **Peer learning**: By studying how others have approached their tasks and the problems they have encountered, you will be more able to recognize problems and learn how to address them based on other project's experiences.
- **Aligning your work efforts to the goals**: It is often very instructive to review the work of others, since in doing so, you learn what a reviewer looks for in your work. Knowing this allows you to focus your efforts on the important parts of your project, and helps you understand how to document your project so that you get proper credit for the work you have done.
- **Learning how to evaluate the work of others:** In industry well as academia, providing feedback on others work is a task that is often as important as performing your own work. This task frequently occurs in the guise of acceptance testing of products, evaluating offers by vendors and consultants, performance evaluations of people working with/for you, interviewing prospective new employees, etc.
- **Receiving more and better feedback on your own work**: When it comes to feedback, both quality and quantity matters. While the feedback from the teaching team is based on more experience both in the reviewing process and in the subject matters, the time constraints of providing feedback to all teams means that the teaching team must focus on a small set of criteria in their evaluation. Reviews by other teams are expected to fill in the gaps and often provide feedback based on a deeper examination of your project.

Rules

We have reserved all of the first day of the midterm workshop for your peer review task, and we thus expect you to invest this time into your reviews. We also expect you to make yourselves available to the groups reviewing your work during these days.

Since your presentation is an integral part of the material being reviewed, your midterm project reports and presentations must be finished and available on your project's home page before the start of the workshop: You should also ensure that you have updated the content on your project's home page, since this material will be the basis of the review. (Remember that only the material actually published on your web page is used for grading your project, so make sure that you put all relevant material there.) Participation in the workshop is mandatory, and this includes both the presentations and the review.

Your finished reviews should be posted among the deliverables on your website right after the workshop, as per the instructions below.

Peer reviewing instructions

Being able to critique the work of another is one of the highest levels of learning. To critique others requires deep knowledge and sharp analytical skills. The objective of the critique is to thoroughly review the team's process, deliverables, and other output. However, in doing this review of two other teams, it is strongly hoped that the team will learn how to critically examine their *own* internal processes, deliverables, and output as well. This self-reflection is a very important task and skill to develop.

The review is also supposed to provide constructive criticism. By providing a relatively objective view of the project, it is hoped that you will be able to give both general and detailed advice that will enable the project team members to improve the quality of their processes and the quality of their output & deliverables.

In order to perform a satisfactory review, the reviewing team should at least do the following:

1. Examine all of the deliverables including the project plan, biweekly reports, the web site, and other information that is publicly available.
2. Interview the team to get at processes and output that are not publicly available. (You are advised to contact the teams you are reviewing as early as possible to set up appointments. Every team will have four interviews to schedule: two with other teams interviewing them and two with teams they are interviewing.)
3. Provide a review report with a public part posted on your team website and a private part (sent by email) to the reviewed team and to the teaching team. This private part is **not** posted.

The public part should include observations and constructive conclusions of a general nature, including level of ambition, realism and decidability of the objectives and goals, deviations from the project plan and quality of the deliverables available for review.

The private part should include observations and constructive conclusions of a more personal nature, including team spirit, project management, and commitments of individual team members.

Other information

The teaching team may also contact project teams/members during the workshop for their own reviews**.**

4.5 Deliverable 5: Video

Instructions to the Teams

Instructions on how to complete the Video will be available on the course website and in a seminar. *What happens next with the Video?*

The video will be shown as part of a loop at the Exhibition.

Responsibilities:

The project teams: The projects have to upload their **videos on their home pages.**

The teaching team: The grade for the video will be included in the final grade for the course.

4.6 Deliverable 6: Final report

Detailed instructions on how to complete the Final Written Report will made available on the course website**.**

Things to remember when submitting the Final Written Report:

- A Title Page with the name of the project, names of the team-members, the name of the course, course number, and year.
- Describe the background and the context for the project
- Crystallize the goal of the project, i.e., a crisp statement of what the end result of the project is.
- Discuss the selected goals, i.e., what are the unique contributions of the project?
- Describe different methods, approaches, and resources that have been used and include a discussion about the feasibility of the different methods and approaches.
- Make a clear distinction between the part where you describe, where you analyze and the part where you draw conclusions. You are welcome to both "solid" conclusions and conclusions that are more speculative. Make sure that the reader is aware of the difference between the two.
- Try to suggest ideas for further research within the scope of your project.

Important information about the final Written Report – dates and responsibilities.

Responsibilities: the team

The project teams: At designated time (Table 1), the projects must post their Final Written Reports on their home pages.

The teaching team: The grade for the Final Written Report will be included in the final grade for the course. The final grades are to be assigned a week after the final workshop.

4.7 Deliverable 7: Final Presentation

The final presentation includes the parts described in Section 3.10.3.

4.8 Deliverable 8: Lessons Learned document

Instructions to the Teams Instructions are divided into:

- Guidelines for Team Reflections
- Guidelines for Individual Reflections

4.8.1 Guidelines for Team Reflections

The following questions should be answered by each team in their Group Reflections' part of the paper:

- What have we learned about working in projects?
- How can we try to be creative?

4.8.2 How do we work as a team? -Pick several examples from your work, use class materials (for example, examine the teambuilding module and try some of the tools presented) to diagnose and analyze the examples. Identify strengths & weaknesses, challenges, and opportunities.

4.8.3 Guidelines for the Individual Reflections

The purpose with the Individual Contribution Paper is to allow each and every student in the course to individually express their thoughts.

Remember to include when submitting the Lessons Learned Paper a Title Page with names, email addresses, the name of the course, course number, and year of all the students in the team.

What happens next with the Lessons Learned Papers?

Responsibilities

The project teams: The teams have to post their Lessons Learned Papers including both Group Reflections and Individual Reflections on their projects' homepages. Students that do not want to share their Individual Reflection Paper with their team members may submit it directly to the teacher in an email with the Subject: IC-paper for: Name, Team-name.

The teaching team: All projects will receive their grades for the Lessons Learned Paper.

5 Learning goals & grading

5.1 What parameters will be graded?

These parameters are graded in the Communication Systems Design course:

1. Demonstrate your ability to solve a "real-world" problem

   - Identify and select a relevant problem
   - Define the project scope
   - Evaluate possible solutions:
     - considering the issues of integrating multiple technologies
     - considering market aspects of the proposed solution
   - Implement a working prototype.
   - Thoroughly evaluate your implementation
   - Thoroughly analyze the evaluation results
   - Explain the reason for the observed behavior
   - Reflection on the sustainability and ethical aspects of the project

2. Demonstrate independent learning skills:

   Integrate learning from different sources into the proposed solution (e.g., past learning, course.. materials provided in the course, contact with teachers, external material, external contacts)

3. Show self-assessment skills

   Handle the infinite/open-ended ("real-world") character of the project

4. Demonstrate effective project management

   - Devise a realistic-and structured project plan identifying deadlines
   - Clearly defining responsibilities
   - Carry out the project according to the plan
   - Motivate and document deviations from the plan
   - Meet deadlines
   - Reinforce team credibility by being on time, within budget, and taking special care to insure quality in the details. These include correct grammar, spelling, and numbers, complete footnotes showing your sources, a thorough, consistent bibliography, and the aesthetics of the paper.

5. Show communication skills when working with the project

   - Manage scope and stakeholder expectations effectively as the project evolved
   - Communicate with stakeholders effectively by voice mail, e-mail
   - Make wise use of stakeholder time and project budget
   - Respect the stakeholders points of view
   - Take criticism non-defensively
   - Revise the deliverable when stakeholders have a better idea;
   - Give credit to stakeholders and other peoples input where appropriate (through footnotes and comments).

6. Show communication skills when presenting the solution

   - Include relevant content
   - Apply proper structure
   - Use correct and appropriate language
   - Devise a realistic and structured project plan
   - the target group will be the course teachers, external experts, and other project groups in the class the target group will try to simulate potential investors
   - Make presentations interesting and enjoyable to others

7. Work as a successful team

   - Communicate effectively within group
   - Contribute to the group work
   - Contribute to the learning experience of the whole group (was there, reemphasizing from 2017)
   - Handle conflicts effectively
   - Interact with other project groups giving constructive feedback on other group's projects (was there, reemphasizing from 2017)
   - acting as suppliers/consumers to other projects where relevant
   - Be aware of their competence and act out of it with authority.

5.2 The grade

New from 2017 is that team members can receive different grades. These grades will be assigned as follows:

10% individual code reviews within the group

40% individual contribution

10% group review of two other teams' midterm report

40% group grade

Your final individual grade is based on your individual performance and your contribution to the general learning environment for all teams, as well as on the performance of the team. The grade reflects your individual contributions to the objectives in the project, the success of your team members as well as your fellow course members.

The grades are based on the quality of the deliverables, including both those common for all projects and the project specific deliverables defined and negotiated in the contracts for the different projects.

The deliverables common to all projects are:

- A project web site
- A project plan including a contract defining the project deliverables
- A Lessons Learned paper, including Individual Contribution Papers from all students individually
- A mid-term presentation
- An oral presentation at the final workshop
- A final report
- A video
- A press-release

In the assessment of the deliverables, emphasis will be placed on how the team has completed the project, communicated with the principal, presented the results in a workshop as well as in an exhibition and a promoting video.

In the Lessons Learned Paper and the Individual Contribution Papers, the teams of students are expected to describe and analyze the work in their project during the first half of the course. The grading will be based on the quality of describing and analyzing situations and topic of relevance. Formal requirements for academic papers, such as footnotes, bibliography, etc. are also of importance to the grades given.

Not all members of a team have to receive the same grade for all deliverables. Only in extreme cases (subject to the examiner's assessment), if a team member is not meeting his or her commitments, the team can petition and be allowed to have the person put on probation, and then "fired" from the project. Faculty will decide all such petitions. Contribution to project and entire course learning is based on teaching team evaluations of each individual's performance in for example class and team meetings.

Individual Contribution to the Learning Environment

In this category, emphasis is put on how different students contribute to the learning process both within their specific projects and to class. Higher grades will be given to students that have been active in asking questions, suggesting answers, etc. In short: This grade is to encourage active participation in order to provide an efficient learning environment for all involved.

The team has the responsibility to include any additional information that is of necessity for understanding, and assessing the work that the different team-members commit themselves to do during the course.

An opportunity for the students in the course is to function as "references" to other related projects in the course. If someone in the team plan to do that, the name of the other project has to be specified, the intended contribution has to be communicated, and the interest from the other group to have a certain person as a reference has to be spoken for.

Grading Process

All students will get feedback on two *occasions during the course, including tentative feedback in the form of verbal comments at the midterm workshop and final feedback at the end of the course in the form of a grade (A-F).*

Learning Goals/Deliverables Matrix

In order to assess both the mandatory deliverables and the deliverables that the projects propose in their project plan, the teams have to motivate the deliverables in accordance with the matrix shown in Table 2.

Table 2: Learning goals/Deliverables Matrix

Learning goals/deliverables	Solve real-world problems	Independent learning skills	Effective project management	Communication skills when working	Communication skills when presenting	Work as a successful team
Project plan	1	1	1	2	1	2
Lessons learned	2	2	1	1	2	1
Midterm presentation	1	1	2	NA	1	2
Individual contribution	2	2	1	1	2	1
Final report	1	1	2	NA	1	2
Video	1	1	2	NA	1	2
Oral presentation	1	1	2	NA	1	2

1 = primary objective with the deliverable

2 = secondary objective with the deliverable

NA = not applicable

6 Progress reports

6.1 Progress report meetings

Between the kick-off and the midterm workshop, there are weekly progress report meetings, i.e., about 18 meetings will scheduled on days to be agreed upon with the teams.

A purpose of these meetings is to catch potential problems as early as possible. Problems can and will arise of all sorts: technical problems, administrative problems, team-related problems, etc. The cost of solving problems early is considerably lower than the cost of solving them later. It is the responsibility of *all* team members to make sure that problems are dealt with appropriately - without unnecessary delay. Problems that the team cannot solve on their own should be discussed with the teacher. A not unusual team-related problem is that of free-riders or individual team members under-performing for various reasons. Such problems are particularly harmful if not dealt with early or swept under the carpet. They will inevitably show up, if not before, at the final workshop. If this happens without prior knowledge of the teaching team, all team members will be held accountable for not reporting the problem earlier. The teaching team will not expel students from teams after the mid-term workshop. Therefore, issues **have** to be brought up before the mid-term workshop.

6.2 Progress reports

A weekly progress report is due for each week during the whole course, to be posted on the project website no later than noon on the following Monday. The first progress report is due on Monday the fourth week of the course and the last report is due on the last Monday before the final workshop. The first report should be numbered 1, the second as 2, etc. The reports are to be uploaded in the PDF format to the group website. The PDF should include your group name, group number, week number in the title as well as in text.

The progress reports should include:

For each team member:

1. A list of the activities in the project plan addressed during the previous week, including the time spent on each of the activities (in hours), references to input used during the activity and a description of the output of each activity, with active references to documents produced, etc.
2. The pending activities for the coming week
3. Start-stop-keep feedback from each team to each other team member. For the team: joint conclusion as to whether the project is on track or if any reallocations of resources are necessary.