

CSE 145 - Course Tasks

The following set of assignments and tasks are scheduled over the quarter.

Weekly:

1. Group meetings with Prof. Kastner (starting week 4).
2. Weekly updates to your websites that describe your progress, updating milestones, tasks for the next week, etc. These are due 24 hours before your weekly meeting with Prof. Kastner. Please email him when you post your report (at least 24 hours before the meeting time).

One Time Events:

Before Week 3: Schedule weekly group meeting with Prof. Kastner. These will start Week 4.

April 11, 12:30pm – [Project Specification](#)

April 11, 12:30pm – [Project Webpage](#)

April 16 & 18, in class – [Project Overviews](#)

April 25, 12:30pm – [Milestone Report](#)

May 2 & 7 in class – [Oral Project Updates](#)

May 21, 12:30pm – [Final Milestone Report](#)

Week 10 – [Final Oral Presentations](#)

June 13, 11:59pm – [Final Report](#)

June 13, 11:59pm – [Group Evaluation](#)

June 13, 11:59pm – [Final Project Video](#)

Project Specification, Schedule, Milestones, and Member Assignments

The first stage of the quarter is to specify your project, define a schedule and a set of milestones, and assign members to the various components of your project.

Your specification should cover the following topics:

- **Project Charter**
 - The charter provides a ONE-PAGE high level description of your project
 - Project Overview – Describe the project briefly in layman's terms (one that your grandmother could understand). This should not be more than a few sentences.
 - Project Approach – Provide more technical detail (one that other students could understand). List the team members and their roles.
 - Project Objectives, Milestones and Major Deliverables – List your objectives and milestones without getting too detailed (you will do that later). What are the specific goals of the project for this quarter? What are potential longer term goals? Deliverables should include a description, a date, and the persons who are responsible.
 - Constraints, Risk and Feasibility – What are the potential stumbling blocks? What is realistically feasible here? The quarter goes by very quickly. The better approach is to over-deliver on what you promise, rather than under deliver on a set of unrealistic goals. Be sure to include risks – a list of things that could go wrong and how to avoid them.
- **Group Management**
 - What are the major roles in your group's management?
 - How will decisions be made? By leader, consensus?
 - How will you communicate? Email, meetings in the lab, discussion board?
 - How will you know when you're off schedule, and how will you deal with schedule slips?
 - Who is responsible for which deliverables and milestones?
 - Who will produce the weekly group status reports?
- **Project Development**
 - What are the development roles and who will handle them?
 - What hardware/software will you use? What do you have available? What do you need?
 - If there is software/hardware that is needed, provide a justification for its cost. Where will you order it? When will it arrive?
 - How will you do testing?
 - How will you do documentation?
- **Project Schedule**
 - Define a set of milestones with a specific definition of what each milestone is, what it means to complete each milestone, and when you expect to complete them. Define the milestones at two scales, a high level set of key milestones, and a low level set of weekly milestones. Also prioritize them. Some that are necessary, others that are useful, some are hopeful if time permits, etc. Gantt charts are often helpful to better visualize the milestones and understand their dependencies.

Like everything else in this course, you want to do this job only once. Of course, everything you plan now will be changed as reality imposes itself, but the more seriously you take the planning now the more productive you'll be at getting it done. Do not think of this as just another course makework assignment. This is something that you should feel in your soul is an integral part of building your system. It is your blueprint for a successful project for the quarter.

The writeup should go on your course Web page. Send the professor mail when it is available.

Webpage

You should develop a webpage that hosts both internal and external information about your project. The external portion of your page is important for visitors to understand what your project is about, who are the team members, etc. You should also have a place to post weekly reports. The internal part can be used to organize the team members. I can provide space for your website or you are free to make your own.

You can look at examples of projects from [previous years](#) for ideas.

CSE 145 - Mini-Project Overviews

These are 5 minute project overviews done in class. Each group should select one person who will provide an "elevator speech" to me and the rest of the class. This should give a high-level overview of your project, which provides an general idea of your application domain and describes the specific project goals. Think of this as giving a pitch to a VC or other person that you are trying to get funding or sell the project. There is no need to discuss money, rather this should be focused on garnering the interest in an attempt to proceed to more discussions.

Most groups in the past have used slides, though this is not necessary.

Milestone Report

In your project specification and various presentations, you were tasked with devising a set of milestones. Each milestone is composed of its definition, a means to completing it, a priority, and an expected date of completion. The milestones were all required to be demonstrable.

In this report, I want you to demonstrate your progress on these milestones. For each milestone that is completed, I expect that you somehow show that it is finished. This can be with a picture, video, or For video please send me a link to youtube or some similar video hosting service.

If you need to revise any of the milestones, then you must provide an in-depth description of what you changed and why you changed it.

If you are on schedule, the first part of this report should be easy. List your milestone and for each milestone in the past demonstrate that it is completed.

Finally, I expect that you develop one final sprint; this should be a detailed plan on what each team member will accomplish until the end of the quarter.

Oral Project Updates

This is a 10 minute presentation done during class to everyone in the class with a short amount of time (~2 min) for Q+A. It should provide a brief overview of your project (just enough to remind the audience what you are doing and setup the work that has been done as well as what will be done). Additionally it should describe the work each team member has done, what you plan to do by the end of the quarter and the schedule for the remainder of the quarter.

A general rule of thumb is that each slide takes about 1 minute, but be sure to practice with a timer to make sure that you are under the 10 minute mark. Slides should not have a lot of text (pictures/diagrams/figures/charts are worth a thousand words), meaning that you should not read off your slides. One person can give the presentation or multiple people. If the latter be sure to practice your handoffs.

For the presentation this week I expect that you cover the following topics.

- Overview: One slide succinctly describing the project.
- Previous Milestones: One slide showing your initial (first) milestones.
- Current Milestones: One or more slides showing your current milestones. Show the exact changes from the initial milestone. Describe why you made these changes. These milestones should all be measurable, meaning that there is a clear way to show that you have accomplished them.
- Sprint: N slides providing an exact plan for what your team, and each individual team member, plans to do over the next two weeks. I expect a good amount of detail here (e.g., Gantt charts, mapping tasks to specific team members, diagrams, etc.).
- Quarter Plan: Give a brief overview of how you will accomplish the remaining milestones until the end of the quarter.
- Conclusion

Each team has 10 minutes (I will time you) with 2 minutes for Q+A.

Final Oral Presentations

This is a 10 minute presentation done during class to everyone in the class. It should provide a final summary of your project. This includes a brief overview of your project (just enough to remind the audience what you are doing, and by this time everyone should know your project pretty well).

Additionally it should describe the work each team member has done and possible a final demonstration.

A general rule of thumb is that each slide takes about 1 minute, but be sure to practice with a timer to make sure that you are under the 10 minute mark. Slides should not have a lot of text (pictures/diagrams/figures/charts are worth a thousand words), meaning that you should not read off your slides. One person can give the presentation or multiple people. If the latter be sure to practice your handoffs.

Below is a suggested outline. You are of course free to deviate from it assuming you explain all of the necessary topics.

- 10 minutes or less (you will be timed)
- Powerpoint slides (send me slides one day before your presentation)
- Overview of the problem (2–3 slides)
- What did you do (3–5 slides)
- Problems faced and major challenges (1–2 slides)
- What you did not do (1–2 slides)
- Conclusion (1 slide)
- Project Demonstration (this can possibly be integrated into your presentation elsewhere)
- 5 minute Question and Answer

CSE 145 Final Report

The final report should be written for a technical audience, but you should not assume that they know anything about your project before reading the report. The goal of the final report is to describe the project, highlighting the novel aspects, summarize the progress over the quarter, and give a "white paper"-like description of the technical aspects of the work. This is expected to be around 8–10 pages (single column, single spaced, 1" margins in 10 point font).

More specifically, I expect the following sections. These are not inclusive (meaning you can have more), but these are mandatory and will be closely scrutinized:

1. Abstract – A few sentence overview of the entire document. This provides the reader an overview of the paper, and will be the primary factor as to whether they will read the document. Hence it is extremely important. It should be no more than 120 words.
2. Introduction – A longer version of the abstract. This provides a high level overview of the research area and distinctly summarizes (in a few bullet points) the contributions of the article. This should be around 1–2 pages.
3. Technical Material – The next portion of the paper makes up the bulk of the paper, and can be organized in several sections; the organization depends heavily on the specific project.

4. Milestones – This section should describe the milestones that you stated at the beginning of the quarter, the revisions that you made in the middle of the quarter. It should provide details on the milestones that you did and did not achieve, with an explanation on why you did not achieve any milestones. It should also discuss the problems that you encountered over the quarter and how you managed them. This is not in a typical technical paper.
5. Conclusion – A summary of the work, highlighting the significance of the problem, the specific goals and contributions of the project and a discussion on possible future work. This is less than 1 pages
6. References – Any references that you cited in the document

CSE 145 Group Evaluation

Each group member should individually write a short (one page) description of their contributions to the group. Additionally, this should discuss group dynamics, describing how the group functioned as a whole, how problems were solved and any significant group issues that occurred over the quarter.

It must include a declaration of how each of the members contributed to the group. This should explicitly state the percentage of time that each member spent on the project (e.g., if there were two members and they spent equal time, then Member 1 = 50% and Member 2 = 50%). This should include yourself. It should also describe, at a very high level, the major contributions of each group member to the project.

This should be sent to me individually. It will be treated as confidential; I will not share this information with your other group members.

CSE 145 Final Video

Note: this is an optional task. If you choose to do it, you will get one of two benefits (you can choose; please let me know which one you want).

- 1) Reduction in the final report from 8–10 pages to 5 pages
- 2) Increase your grade by one increment (A to A+, C+ to B–, etc.) for each team member

If you do not want to do this, it will not hurt your final grade.

The mission, should you choose to accept it...

Develop a professional looking video describing your project. This have the following componets

- 1) Briefly introduce the team members
- 2) Describe the goals of your project
- 3) Demonstrate the final project

I expect that you will use some professional editing software. Apple's iMovie comes with Mac OS X and you can get a trial copy of Adobe Premiere. I would expect that the sound quality is good and consistent, that the video is well edited (e.g., not shot in one take unless you plan to do some amazing a la OK Go), and that you use text and audio overlays to describe your demo and projects. It should not be just your group members talking. Be creative.

I suggest that you first develop a story board for what you think you will shoot in your video. I'm happy to give you feedback on that.

I will be using these to promote the classes in the future (e.g., on webpage and first day of class to show the students what awesome project were done in the past).

I reserve the right to ask you to do more after I see your video. I'm always happy to look over early versions of your video.