

Project Deliverable 2: Project Schedule

Completing a design project takes planning. As a part of the project, your team will need to create a plan to meet all of the project deliverables. During the project, many considerations will be taken into account, including budget concerns, size constraints, and building materials (among others). For this project deliverable, your team must create a project schedule in the form of a Gantt chart.

Identifying Tasks:

As a team, identify all the tasks you will have for the project. Please be as specific as possible. **You may refer to the course syllabus (which shows the course schedule) and the Project Overview (which shows project deliverables with due dates), and think about the Engineering Design Process.** You will need to consider the dependence of a task on another and consider tasks that may run simultaneously. Estimate the time it may take your team to complete each task. Make sure that all deadlines are met (i.e., all deliverable due dates, etc.). You should also consider holidays.

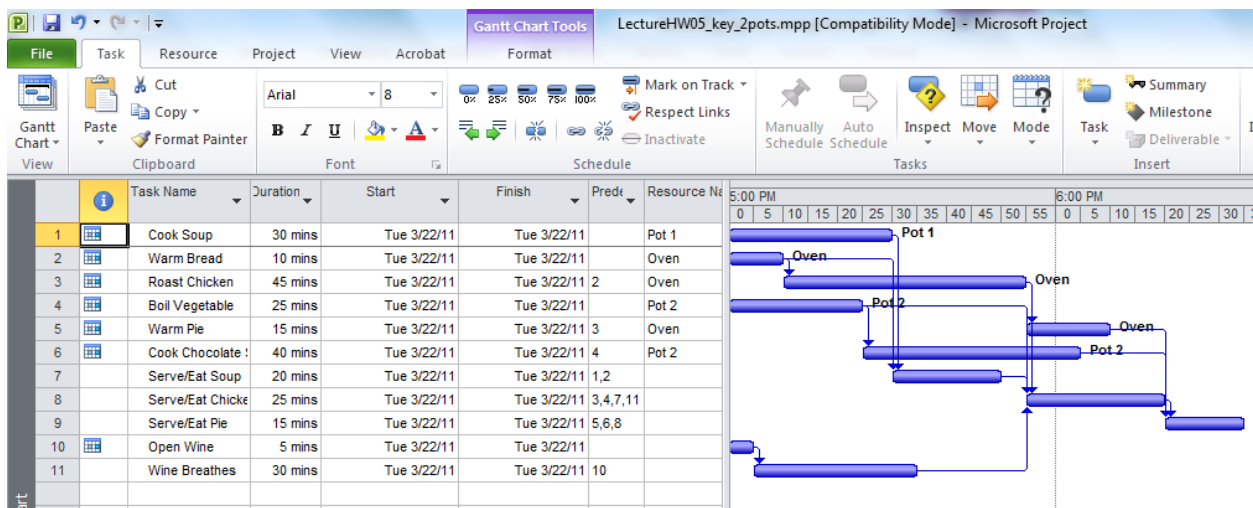
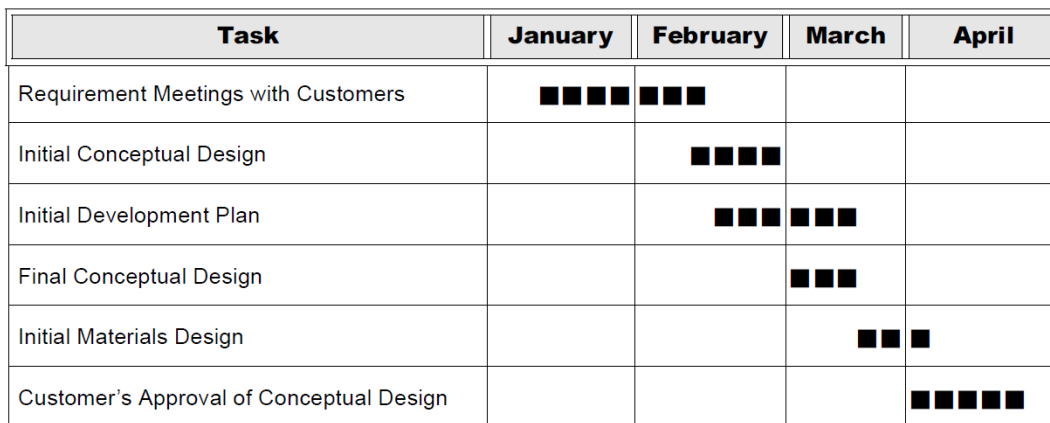
Creating a Gantt Chart:

You may create a Gantt chart in Excel, MS Project, or Ganttter (<http://gantter.com/>). In a Gantt chart, tasks are listed in the left column (one task per row), and dates run along the top in increments of days, weeks, or months depending on the total length of the project. The expected duration of each task is represented by a horizontal colored bar, with the left end at the expected start date for that task, and the right end at the expected completion date. Some tasks may run simultaneously (in parallel), some may overlap in time, and some may occur sequentially (one task ends, then another starts). If a task is *dependent* on another task, the two tasks are connected with an arrow to indicate that one cannot start until the other ends. For example, if Task A is to purchase materials, and Task C is to construct a component, Task C is *dependent* on Task A because you cannot construct a component until after you have purchased the necessary materials. (See Example Gantt Charts below.)

It is often a good idea to include milestones or other events on your Gantt chart that indicate your progress but are not tasks. For example, you may want to include when the final prototype will be complete, when certain project deliverables are due, etc. These 'milestone' events are entered as a symbol (often a triangle or diamond) on a single date on the Gantt chart. (See Example Gantt Charts below.)

Using your Gantt Chart:

You should check your Gantt chart regularly (preferably twice a week and at the beginning of your team meetings) to identify what tasks need to be completed, and to ensure that your team stays on track to successfully complete the project on time. As you proceed through the design process, you may identify more specific tasks that should be added to your project schedule. The project schedule can be continually updated—when you identify additional tasks that need to be completed, you should add them. The more detailed you can be early on in making your schedule, the easier it will be to complete the project on time (for instance, “Build prototype” is not as useful of a task as “Build base,” “Cut holes,” etc.). A revised project schedule will be due before you begin construction of your prototype (as a part of your proposal document), so the more detail you are able to add now, the less you will have to change later.

Gantt Chart Examples:

Deliverables:

This project deliverable should be turned in as a **TEAM** (one submission per team). **One** person per team should submit a PDF or Word document to the **assignment in the course shell by the due date specified**. Follow the format described below.

- You should include your team number and all team member names in the top right corner of your deliverable (Note, if your name is on the document it means that you helped create the document, understand everything in the document, and stand by ALL the work presented in the document).
- A title 'Project Schedule' should be included at the top. Your deliverable should **be typed** (single spaced) in paragraph form (if appropriate), with appropriately formatted section headings (use bold and/or underline, and/or larger font size). You should use consistent spacing, formatting, font, and style, as well as correct grammar and spelling.

Make sure to include:

- The Gantt Chart for the design project.
Note: It is best to use the 'landscape' orientation (page layout) for your Gantt chart. It is OK for the Gantt chart to span multiple pages.