Scheduling - why bother?

Students please note, you are required to submit a copy of this sheet in the appendix of all of your ME 401 Project reports.

Why make a schedule?
Help identify and prioritize all tasks
Help make realistic estimate of time and resources
Communicate to the customer and team members (stakeholders)
Identify when you are behind

“If you don’t know where you are going, you will wind up somewhere else”  -Yogi Berra

Terminology
Gantt Chart – a horizontal bar chart indicating activity for a project
Duration – the amount of time required to complete an activity
Milestone – a representation of a significant point in time that has no duration (eg. Completion of material selection for wingtip.)
Float – the amount of time that the start or finish of an activity can be delayed without affecting the project completion date.
Critical Path – the sequence of related activities that determine the earliest possible completion date for a project. It is the longest path through the schedule. All activities in the critical path have zero float.
Predecessors – an activity that must occur before another activity
Successors – an activity that must occur after another activity.

How to make schedules:
Scheduling and planning should be done as a team
1) Define the problem very clearly and specifically
2) Define the scope – what are you going to do/accomplish – what are the deliverables
3) Determine all tasks – going from the “top down”
4) Determine relative order of tasks (predecessors and successors)
5) Make a Gantt Chart
6) Use the schedule to manage the project!

Estimating:
Reduce unknowns by being as detailed as possible when identifying tasks
**Do NOT negotiate estimates** – make a best guess and stick with it. Just because the boss says “I want it done for less money in a shorted time” does not make it possible.
Do not forget that it takes time waiting for other people, materials, etc.
If you have little related experience, assume it will take 2-4 times longer, and cost 2-4 times your best estimate.

Continued on backside…
MS Project How To’s:

Each task must contain a verb (since they are “tasks” you are doing something) – for the verb should NOT be “design” (that is ambiguous). Do not forget to include in the schedule the tasks of writing reports, holding meetings, etc.

Identifying critical milestones (due dates). Enter these as tasks with zero duration.

Generally, do NOT enter start and end dates for tasks. Enter the duration for each task, and then link as predecessors and successors to determine start and end dates. If the duration is to be 1 day, then enter it as such – the default duration is 1day? – the question mark should be removed by changing the duration from 1day? to 2day and back to 1 day.

You should enter the start date for the project itself. To do this, click Project Information from the Project menu. Enter the project start date.

To show progress on the schedule, double click on a specific task, select “General” tab, and enter percent complete (50% if half done, 100% if completely finished with that task, etc.).

The schedule can be several pages in length, but the task bars MUST be on the same page as the text describing that task. You may want to change column widths (click and drag) appropriately, including hiding all columns except: task number, task name, duration, start date, and the task bars. Zoom in or out to adjust task bar width.