

Design Journal Instructions

EIND 499

Please use your journal to keep a complete record of all activity related to your senior design project. We want to track the evolution of your thinking about your design project, from beginning to bitter end. We want *everything* -- the good, the bad, and the ugly -- recorded. Thoroughness is the main idea.

The basic journal procedures are:

1. Record the date in the upper left corner. Start each day on a new page.
2. Use ink. *Do not erase*. Delete an entry by neatly drawing a single line through it.
3. Use consecutive pages. Do not remove pages, and do not skip pages.
4. Record the start time for the activity in the left-hand margin.
5. Label the entry (e.g., advisor meeting, brainstorming session, web research, etc.) and note other participants, if any.
6. Record journal contents. This is your *individual* design journal, so record only your activities or group activities in which you participated.
7. When you've finished the activity, record the end time in the left-hand margin. Record a new start/end time every time you change activities. The difference between start and end times should represent total time spent on that activity (including journal writing).

Purchase a blank, 9" x 12" journal with numbered pages from the bookstore (AMPAD #22-157 is recommended, since it lays flat. AMPAD #22-156 is also acceptable. No lab composition books!). Use the journal to record of all class-related activities and information. Journals will be assessed periodically throughout the semester on journal check dates.

What should I put in my design journal?

In a word, *everything* related to your design project ... good, bad, *and* ugly. Some things to include are:

- Notes from site visit
- Meeting notes
- Data collection
- Sketches & doodling
- Brainstorming
- Half-baked ideas
- Sources of ideas
- Work-in-progress
- Scratch work
- Class notes
- Customer needs/requirements
- Internet research
- Specifications
- Math calculations
- Design review feedback
- Decision criteria
- Decision process and results
- Decision rationale
- Evaluation results
- Analysis results

How will my design journal be evaluated?

Your journal evaluation will be based on *thoroughness* more so than correctness: how well have you documented your process? Is the record complete? *You will turn in your journal every 2-3 weeks for evaluation.*

We will not grade your journal on whether ideas or “good” or “bad,” or on the amount of time spent on a given activity. Great designers go through lots of crummy ideas before they find one that works (Thomas Edison tried literally hundreds of filament designs before he found “the one” that made electric light possible—fail often to succeed quickly). The important thing is to be thorough in your record keeping—you will not be graded on how much time you put into this course.

That said, we will use the Design Journal Evaluation Form to evaluate your journal. As you read through it, notice that lack of activity on the project will hurt your journal grade—there does need to be some content for us to evaluate.

A Few Guidelines

- If it’s a meeting, note attendees by name.
- Label your entries (e.g., topic of discussion, captions on diagrams and sketches) to provide proper context for understanding the information that follows.
- Label sketches, drawings, and diagrams so you’ll remember what they are three months from now.
- Avoid backfilling. Record your notes as best you can in real time. (Of course, if you realize later that you left something out, or just want to summarize a discussion, go ahead and write it in, noting that it’s after-the-fact. More is better than less.)
- Do not staple items into your journal. To include print outs and other hardcopy items, tape them into your journal so that they are fully contained and visible on one page (don’t forget to label it!).
- If you do not work on your project for a stretch of several days, please note that in your journal so we don’t think you’re being lazy on the journal.
- If you change activities (e.g., switch from brainstorming to working on an AutoCAD drawing, or from group meeting to solo work), try to note the time.

How do I handle computer work?

Your team should keep a cloud drive or file share with up-to-date copies of all computer files pertaining to the project (including communications). For your journal entry, simply write a detailed description of the activity, and reference the file(s) changed. Use the same date and time recording procedure as for any other entry. While it often does not make sense to duplicate your computer work on paper, it is often useful to do some preparatory work or note things you’ve learned as you worked on the computer, problems encountered, ideas that popped into your mind, or next steps. And, take the time to reflect – what insights did you gain? What is missing that should be addressed? How does what you learned inform next steps?

Making the most of your journal

We would like your journal to be more than a mere activity log. Your journal can help you think through problems, assess and evaluate progress while the information is fresh, muse about better approaches, and reflect on how to improve. Taking a few minutes for reflection can greatly increase the utility of keeping a journal by helping you think more deeply about the problems you're working on and apply the learning to your project or other areas of your life. Here are some ideas to add reflection/insight content into your journal:

If you just finished...	Ask yourself...
A meeting,	<ul style="list-style-type: none">➤ What were the main outcomes of the meeting?➤ Was the meeting productive, and why?➤ What are/should be the next steps?➤ Is the team heading in the right direction?
Brainstorming,	<ul style="list-style-type: none">➤ Do we have a large enough set of ideas?➤ Which ideas seem most feasible, and why?➤ How could we have made the session better?
Analyzing data,	<ul style="list-style-type: none">➤ What were the most important findings?➤ What do the results mean? How should we apply them?
Designing (by hand or in CAD),	<ul style="list-style-type: none">➤ What did I learn about the problem or solution possibilities?➤ What problems did we resolve, and which still need to be addressed?➤ How does this piece integrate with the whole?
An internet search,	<ul style="list-style-type: none">➤ Do we have a complete picture? Are there other sources we should pursue?➤ What key information did I find? Why is it key? How does it help us achieve our objectives?

Why do this?

For starters, you'll need a good journal grade to get an "A" in this course. Remember, it constitutes 10% of your final grade. So do a good job.

Second, students in past semesters have found the journal surprisingly useful as they proceeded through the semester. It's one place to store all the bits of information you will gather over the course of the project—names, phone #'s, URL's, spontaneous ideas, checklists, and so on—so you can easily keep track of everything.

Third, keeping a design journal is an excellent habit to carry forward into your professional career. You will find that it records ideas and information that you would've forgotten otherwise; that the act of writing things down helps you think through problems more thoroughly, systematically, and efficiently; that a detailed record of your professional activity will come in handy on lots of occasions such as promotion time or in a legal dispute; that having an accurate estimate of how much time you spent on an activity is often essential information, like when calculating billable hours for a client or creating a project plan. So start the habit now, and you'll benefit for many years to come.

Finally, keeping a journal is fun! You'll gain a greater appreciation for the work you've done when you read through it at semester's end. Have at it, do good work, and have a great time.