

# Notebook grading policy

## Background

A design notebook is a complete chronological diary of your *individual* effort in the design process. These entries assist you in referencing the work you did earlier in the semester. You may revisit an idea later in the semester and wonder why you had earlier tabled it. Strong notebooks can assist you in future semesters if you continue the project or if you pass the project on to another team. It can prevent future teams from making the same mistakes that you make on the project. If your project develops intellectual property, the dated records of your lab notebook will be used in your submission for a possible patent application. A strong notebook will also be useful if your patent is ever challenged or needs to be defended if others are charged with infringing your patent. For all of these reasons, the notebook must be written with enough detail to be useful by a qualified but unfamiliar reader. This reader should be able to reproduce your work exactly by following your notebook. Your work to meet these requirements will help you develop good habits that will be useful to you throughout your career.

## Grading

The criteria used to grade design student notebooks are listed in three categories. The first two are fairly basic. Failing to meet them will harm your grade but will not be used to distinguish between average, very good, and outstanding students. Content, the last category, is assessed to provide this distinction.

### 1. Basic minimal notebook requirements

The basic minimum notebook requirements assure that your lab notebook can be identified as yours (name, e-mail address, phone number, address, course name and number, and project name). You should also include contact information for your advisor, client, and teammates. A notebook should only be used for one project.

### 2. Basic formatting and logging requirements

Good laboratory practices require that you log work on a project with enough diligence so that your notebook can be used later as a historical record for yourself, your team, and for intellectual property purposes. Entries should clearly identify the creator of the content and reference outside materials. It should list whether the session involved individual work, a group meeting, or a meeting or contact with a client. You should record all project meetings and relevant phone or email conversations pertaining to your design including those with your advisor, team, subgroup, client, or anyone consulting with you on the project (but avoid emails not etc. not related to the design such as scheduling of meetings). Entries should list who took part in the meeting, contact information for new contacts, time and the duration of the meeting. For group entries, a log of what was discussed and the endpoints and action items of the meetings should be included. If any of the information is to be useful in your lab notebook, it must be readable.

### 3. Content

Your notebook will be assessed for its content in relation to the skills we aim to teach in this course. Your notebook should follow a logical sequence that demonstrates that you determine the specifications of the project through analysis of your client's needs and priorities. This work should tie in closely with developing your Product Design Specification (PDS). The notebook should attribute prior work done in relevant and related areas, citing publications, patents, and commercial products. When applicable, your notebook should show what steps you have undertaken to assure safety for the user of your device and/or patient whom it is designed to serve. Reference materials should be summarized noting what they contain and how it is related to the project and complete citations should be listed (since we are using an electronic notebook the pdf of the reference can even be included).

## Criteria for an Outstanding Notebook

Notebooks are one of the essential methods used to distinguish contributions among team members. The instructors can verify information in the notebook on individual contributions via various methods, so be careful to remain truthful about your work and results and not overstate them. Students who lead a project yet keep a vague notebook will have to work harder in other aspects of the class to get their contributions recognized.

Notebook best practices include starting each entry with a clear purpose, detailing notes, procedures, or results as the meat of the entry, and ending with clear conclusions and action items resulting from the entry. The overall notebook should tell a story and all notebooks from the same team should tell the complete story. You should use SI units in your notebook.

## Design Notebook Evaluation

- Instructors may perform “spot checks” of your notebook at any time – you must keep your notebook up-to-date.
- Do not put in your notebook information that is available elsewhere, such as on your web site including PDS, weekly progress reports, presentations, reports.
- The quality of your notebook is part of your grade for this course.
- The form which will be used to evaluate your notebooks can be found on the course moodle page under: HOME > Course Information > Evaluation forms and grading > Evaluation Forms > Faculty Evaluation Forms > **Faculty Form for Notebook Evaluation.xlsx**
- The the grading criteria to obtain a score of 4/4 on the ABET student outcome notebook criteria can be found on the course moodle page under: HOME > Course Information > Evaluation forms and grading > Evaluation Forms > BME Design Grading Criteria > **Assessment rubric for BME Design-2013.pdf**