

|  |
| --- |
| **Amplifying Guidelines for Engineering Notebook** |

Introduction

These guidelines are based upon the Engineering Notebook Rubric published as part of PLTW’s EDD curriculum. Please refer to this rubric as you use these guidelines. Schools and/or students using an engineering notebook such as those available from Bookfactory.com will find instructions similar to these inside the front cover. Attached to this document is a copy of the inside cover of a generic real engineering notebook. You may use one of these books in class, but they are expensive.

**Physical specifications:** The EDD Engineering Notebook should be a bound book. At minimum a college ruled notebook is sufficient. Alternately, engineering ruled (i.e., graph paper format) or completely blank (unruled) notebooks are acceptable. The pre-numbered page books and hard-covered books are also accepted. The notebook should have a bound binding, not a glued, loose leaf or spiral bound. A bound binding provides immediate evidence when pages are removed or added.

**Specific Categories:**

Organization:

* There should be a clear way to identify the owner prominently written on the cover or inside the cover. This must include the owner’s name and a valid point of contact. The latter may be a phone number, an email address that is frequently checked, or an academic mailing address.
* The engineering notebook should include an index or table of contents two to three pages in length. The engineering notebook should be written on only one side of each sheet. This includes the index. It is expected that the index will be initially blank but will be filled in with major topics as they are entered in the chronological section.
* The bulk of the engineering notebook is the chronological section, where daily entries are made.
* The notebook should include a References section. This section should be in the last quarter of the engineering notebook. The reference section contains reference information as it is accumulated. Twenty pages should be sufficient.
* There should be a Contacts section. This section should be the last section of the Notebook. Five pages are sufficient.

Daily Entries/Content:

* Must account for actual time & effort spent on each day.
* Use the structure “I (action verb) \_\_\_\_” to document your thoughts, decisions, and actions.
* Avoid comments on other group members’ activities unless they directly affect you that day.
* Be technically specific. Avoid statements of a non-technical nature. For example, “The test went very well” does not add any real value or detail to the event.
* This is not intended to be a diary. Do not write things like, “We went out for a bite to eat and then went to the store to get the materials needed.”
* Include annotated hand sketches as they occur.
* Do not skip more than one line.
* When referring to a computer file, include the file name and location where it can be found (file path).
* When referring to information from outside your group, include a reference regardless of the source.
* When referring to another group member’s work, identify by name and state the location of said document.
* Avoid large blocks of undifferentiated text such that a reader is not required to read a long passage in order to identify the purpose of the text. Organize the entries with headers, underlines, or some reasonable method to quickly scan the page to find information you seek.
* All design decisions should be documented by including all possibilities considered, considerations for comparison, and the decision outcome. Include a technical defense (rationale) for the decision. If the decision is made using a matrix or other form, ensure the form is uniquely identified and its location is included in the engineering notebook. It is not necessary to copy the decision matrix into your engineering notebook.
* Each entry must begin at the top of the next blank page. Each page should be dated and numbered.
* Each entry should end with a clear end mark. This is usually a diagonal line or X drawn across all remaining blank lines. There must be no room on a page to squeeze in an entry after the day of that entry.

Proper Citation of Journals, Books, Videos, Websites, etc.:

* In the Chronological section, a simple (i.e., sufficient to identify by referring to the listing in the Reference section) connection to the source is made. In the Reference section, a complete reference to the source of information is required. You may choose your standard, but it must be consistently adhered to. It is recommended to use the APA style.
* Once a specific reference is listed in the reference section of your engineering notebook, you do not need to enter it again, no matter how many times you cite the reference in the chronological section.

Proper Recording of Contact Data:

* In the Chronological section, a simple (i.e., sufficient to identify by referring to the listing in the Contact section) reference to the individual is made. In the Contact section, a means of identifying the person, their function, and at least one means of contact is required. Once a specific contact is in the Contact section of your engineering notebook, you do not need to enter it again, no matter how many times you refer to him or her in the chronological section.

Drawings and Sketches:

* Drawings and Sketches should be included in the Chronological section. These should include enough detail to convey the idea or technical detail. They should be as neat as possible, but must be in ink, the same as all other text entries. Annotations, notes, and leader lines must be included to label and explain functioning. Sketches can show motion using before and after position phantom lines. In this case you are limited only by your individual talent. If referring to someone else’s sketch, you do not need to copy it, only provide sufficient reference information to lead to that other sketch. Drawings made using software should be referred to by file name and path. It is not necessary to copy the drawing into your Notebook.

Phone Conservation Abstracts:

* Include the summary of the phone call in the chronological section in the day’s entry of the day the call was made. Make sure the person you spoke to is identified by name and included in your Contacts section. You may use the “Phone Call Summary Sheet” included in student support section, but you must transcribe this information into your notebook.

Business Contacts

* See “Proper Recording of Contact Data” above.