

Individual Activity: Produce and Submit an Engineering Notebook (ENB) Entry for today's work

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Activity Kind

This is an individual activity.

Purpose

Keeping and maintaining effective engineering notebooks for your professional work will bring significant return to you over your career. This activity is performed every day you perform work on the project and should be done at exactly the same time that you did the work. Please do not put off capturing your notes until the evening time. Your memory is not perfect, you are likely to improperly record something, and when others find out that you did not write things down at the time of the work, they will begin to doubt the quality of your work!

Prerequisite

You are expected to have carefully watched the video: Engineering Notebook (ENB) – A powerful tool for inventors and professionals before you finalize and submit today's engineering notebook entry. You should also student the related grading rubric and peer review form for this activity. You should also consider skimming the additional reading materials.

Tasking

Working as an individual as you perform your engineering, inventing, research, or other professional activities, you are expected to take notes about your work and gather together compelling evidence, at the time the work was done, that you personally have done the work that you have claimed. If a client asks you to justify the amount of time you have billed to his project, having a detailed ENB will go a long way of convincing the person that your bill is legitimate.

The best way to benefit from your engineering notebook efforts is to transcribe your rough notes into final form before recording them into your official notebook. You want to be sure that each item you provide is expressed clearly in your own words. **Do not** blindly copy the work of others into your notebook. If you **must** include someone else's work, be sure to point to the original and give due credit for their original work in your notebook. It is almost always better to explain, in your own words, what there was about the work of some other that made it compelling for you and to provide a solid professional citation to the work so that others (including you) can find the source material again, when you need it.

Your rough notes should be captured **while** you are doing the work. This can't be stressed enough. Do **not** trust your member and even more importantly, do not do the work twice just to produce good notes.

At a minimum, your ENB must include a log of your effort, or reference to a separate effort log if you have been required to produce one. Such a log is a list of activities you performed, how long it took, an itemization of what you produce (e.g. deliverables), and any other additional information (such as a project ID) in order to properly account for your time.

As with any true scholar, scientist, engineer, or professional, your engineering notebook captures the notes you produced as you did your day's work. Again, do not blindly copy material into your engineering notebook. Log the results of your work as required by your firm. You should list the key accomplishments and any insights you learned from the effort and refer to other documents as opposed to copying them in your notebook. Given your engineering notebook and access to the referenced documents, others should be able to replicate your work and/or pick up and carry on your work with little disruption, assuming they have adequate experience. The degree to which your work is new and novel, the more care must be

provided about the processes, methods, and tools used as well as any insights to help other replicate your work or to build upon it.

After the bulk of the day's work is done, it's good to reflect on the day's work and take notes about things that now appear clear about things that went very well or went very wrong. The details of the actual event and the facts should have been recorded at the time of the work. The reflection is typically captured later, but before the start of the new day. Capture reflections and lessons learned should be done as soon as you realize that you have an insight. If you do not capture it then and there, there is a good chance it will fade, and you will not be able to recall it later. Should that happen and you realize you have lost something, log that in order to remind yourself **"Don't put off logging notes into your ENB!"**

Once each week, you need to look ahead to see what work you are expected to perform on various deliverables. Recognize that some activities require preparatory work, such as reading a document. How long is the document? How long will it take you to read it? If you put off thinking about this until the evening before a deliverable is due, you may suddenly find that the document you were asked to read is 100 pages long and you have only a couple hours available to do this work this evening. Take a little time to understand what work you need to do and estimate how long that work will take. In order to do that, you need to start gathering data about how quickly you do various tasks, such as reading documents. If you keep track of the amount of time you spend doing tasks you regularly do and how large the deliverable is, it is easy to assess units, such as pages to be read, screens of a webpage to be studied, etc., the easier it will be for you to produce a set of production rates for common tasks and use them to estimate how much work you need to perform.

Your plan for next week, becomes this week's plan, but think about it. The passage of time, during the week, can change your thinking and you once again need to be thinking about the plan for next week and updating your plan in the ENB.

To remind yourself about what you are supposed to do with your ENB, please read over the ENB Rubric and Peer Review forms, and ask yourself, if someone professional actually peer reviewed your ENB, how many of the items would they mark as being fully compliant?

Deliverables

The engineering notebook submissions are the deliverables for this assignment. The prerequisite video provides concrete examples of what should be submitted. Rewriting your notes makes it clearer what was actually done, how it was done, and to make it easier for others to follow your work in order to replicate it or to continue it in your absence. Organizing and structuring your notes to help make it easier to find key information in the future is a worthy extra effort. It is best to think of your ENB like a table of contents and/or index to all of your sources and work products. The time you spend making it easy to use will pay big benefits moving forward in your professional career, because you will be able to find things and then actually use them in the future.

Submission

Each student must submit an ENB entry for each and every day work is performed on the projects. Lack of an entry in the ENB logically means that no work was done during that day. If it isn't in your ENB, you didn't do it!