1. 12
2. 123
3. Learning Style
   1. Four Learning Styles
      1. Reflective: 3
      2. Intuitive: 3
      3. Visual: 7
      4. Global: 5
   2. What did you expect your learning style would be? How do the test results compare?
      1. I was confident that visual and reflective learning styles would constitute my preferred learning style, and the results confirmed my prediction. For most of my life, I have exceeded with visual imagination and careful thinking. Whenever I face a complex problem, my first step is visualization so that I can better understand what the problem is. Furthermore, I have always seemed to have answers and solutions “pop up” unexpectedly, and this probably indicates my learning styles of Global and Intuitive.
4. Textbook 3.1-3.4, 5.1
   1. What are the 3 types of learning identified in 3.1?
      1. Cognitive Learning
      2. Psychomotor Learning
      3. Affective Learning
   2. Respond in Moodle to the reflection box on p. 93
      1. When I learn new information, I prefer to learn factual information visually. With facts, rather than theories and ideas, I can gain a better understanding of the way things work and are connected by connecting the dots between the facts. For the most part, I use my intuition to reason an explanation of the facts, and in doing so, I can process the information into understanding. However, when interpreting information into ideas, I do best with visualization. Sometimes, my visualization makes abstract and non visual ideas come to life inside my head, and other times, non visual demonstrations and lectures go right over my head. With preferred factual information, intuitive learning, and visual thinking, I believe that I am a visual learner.
      2. Being a visual learner will help me in visually taught courses, but will possibly hurt me in nonvisual courses, such as English. According to the textbook, visual learners might need to take more time to translate verbal and abstract ideas into their own visual language and thinking style. Hopefully, taking notes and drawing might help me succeed in college.
   3. Respond in Moodle to the reflection box on p. 94
      1. According to my past learning in highschool, I believe that I am both an active and a thinking learner who learns globally. Whenever I am met in class with a problem, I try to think it through before the teacher explains it, and then I proceed to try it out on my own. Sometimes, especially in math, applying what you learned before thinking reflectively works well, while other times, especially in English classes, I find thinking while learning is better. Either way, I prefer to think of the big picture to map out my learning, rather than follow sequential steps. For me, I need to know the end goal and the bigger picture in order to stay motivated to learn.
      2. It is very valuable to understand how you prefer processing information, so that you can acknowledge and compliment courses in which your learning style is not addressed. In this way, your path to learning will not be hindered by a learning style difference between the teacher and the student.
   4. The key to improving your learning process is \_by observing it.\_\_
5. Read sections 7.1-7.5
   1. List all of the student organization opportunities that are available to Calvin engineering students.
      1. American Society of Civil Engineers
      2. American Society of Mechanical Engineers
      3. Institute of Electrical and Electronics Engineers, Inc
      4. National Society of Black Engineers
      5. Society of Women Engineers
   2. Explain how “cooperative education” works for Calvin engineering students.
      1. For Calvin, students are highly encouraged to learn outside the classroom through internships. For this reason, Calvin hosts the computing and engineering fair for engineering students to contact and hopefully get an internship at an engineering firm.
6. Read the Text in sections 8.1-8.3
7. Read the Text in sections 8.6
8. Review the three versions of the Engineering Design Process presented Iecture.
   1. What themes are common on the 3 processes?
      1. All three versions of the Engineering Design Process presented in the lecture laid out a path of the engineering process. Each started with the idea or the need, and each logically progresses towards production and end of life of the product.
   2. Do all the processes present a structured way to design?
      1. While the first version and the video process have a clear visual depiction of the iterative steps in the design process, the Landis appears to not have as structured of a process. Although it is ordered from top to bottom with steps needed to be taken, it is not easy to tell from the structure how the design process works when it goes back to a certain step. Other than that, all are structured practically for different needs of planners.
   3. What is different about the different processes?
      1. The versions differ on their emphasis and their division of the tasks of the steps in design. The first engineering process emphasizes the iterative process, or the steps that must be cycled through multiple times before continuing. For example, the prototype, testing, and redesign steps are clearly shown in a circular pie formation, meaning that depending on the tests and results, the sub process can be used multiple times. On the other hand, the Landis process does not clearly show this and emphasizes a more practical and linear view of the process, assuming the progression continues step by step. The video’s process combines the brief quality of the Landis and the iterative display of the first engineering process into one concise flow chart. Unlike the other two processes, the video divides the process into two parts, the design and analysis stage and the solution stage.
   4. Did any of the processes presented in class follow the lawnmower design?
      1. The lawnmower design process most like followed the first version of the process, as it followed a very lengthy and iterative process to ensure that the lawnmowers were designed as expected and were made to fit all specifications by the hiring firm. However, if one were to simplify the lawnmower design in its most basic parts, the video’s process, if itself used iteratively, could show how the lawnmower was first designed, then tested, and then redesigned. Either process could be used, since both showcase the cyclic process that was used to continually refine the design.