

# AME20210: Intro to Design Thinking in Engineering

Integration into Lectures, Weekly Reflections, and Projects:

## Virtues – Open-Mindedness

- Open-Mindedness
  - Intellectual Virtue
    - Character traits necessary for discernment, right action, and the pursuit of knowledge, truth, and understanding.
  - Definition (Cambridge English Dictionary):
    - the quality of being willing to consider ideas and opinions that are new or different from your own
  - Working as an effective team requires each member to keep an open mind about new ideas, especially when they differ significantly from their own ideas
  - Helps to promote respect and trust between team members
  - Being open to new ideas and welcoming differing opinions will lead to better project outcomes throughout your professional careers
  - It will also lead to increased knowledge by exposing you to a wider variety of concepts and points of view

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## Virtues – Humility

- Humility
  - Moral Virtue
    - Character traits that enable us to act well in situations that require an ethical response.
  - Definition (Cambridge English Dictionary):
    - the quality of not being proud because you are aware of your bad qualities
    - the feeling or attitude that you have no special importance that makes you better than others
    - lack of pride
  - It is important for engineers to recognize that they do not know everything and must constantly be curious and learning more about the world around them
  - Helps to extend compassion and empathy towards team members
  - Being aware of your strengths AND your shortcomings will allow for better communication and collaborative growth throughout your professional careers

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**Weekly Reflections (Completed as Individuals)**

**Assignment Directions:**

For this assignment, each student will submit a short weekly reflection on their personal growth as a student/engineer/person throughout the semester.

**Deliverables:**

1. Submit a short memo as a single PDF to Canvas that includes the following:
  - a. How much time (in hours) did you spend on this course outside of class over the past week?
    - i. Consider reading assignments, taking chapter notes, watching videos, in-class exercises (that were not finished during class), homework assignments, group meetings, project work, studying, etc...
    - ii. Was it the correct amount of time to fully grasp the material (in your opinion) and put forward your best effort on all deliverables?
    - iii. If not, did you spend too much time on this course (wasted time in some way or had to spend extra time to understand something) or did you not spend enough time on this course (put in the minimum to get stuff done)? What can you do differently the next week so this will not be the case again moving forward?
  - b. What course topic(s) made the most sense to you over the past week? Why? Which topic(s) did not? Why?
  - c. How have you grown as an engineer and a person over the past week? What makes you say that?
  - d. In Project 1, you selected a “personal virtue” that you’d like to work on throughout this semester. What changes do you see in yourself with respect to your selected virtue over the past week?
    - i. Please be sure to specify which virtue you are referencing each week.

**Project 7 (Completed as Individuals)****Assignment Directions:**

For this assignment, each student will write a comprehensive report on their personal growth over the past semester related to the virtue that was selected in Project 1. Specifically, be sure to address the question: How have you changed as a person and as an engineer over the course of the semester?