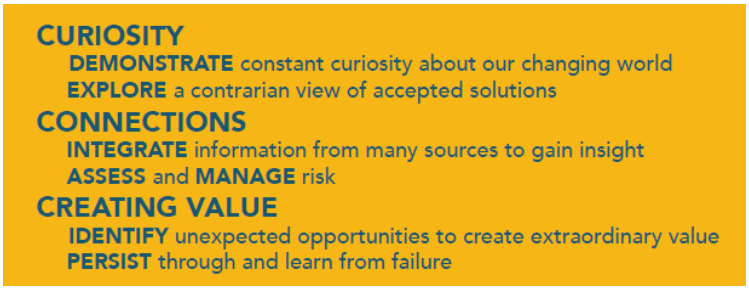
Example Activities to Promote Development of the Entrepreneurial Mindset in Engineering Courses



1. Assign or have students select an innovation related to your course content and select one of the approaches to communicating its Minimum Viable Product described here - http://scalemybusiness.com/the-ultimate-guide-to-minimum-viable-products/ - via a Word doc mock up, and address the following:

- What are you trying to learn with this particular MVP?
- What data might you collect by sharing it with potential stakeholders?
- How will you determine success or failure (or how you might need to pivot) based on the information you glean from sharing it?

2. Have students examine the Minimum Viable Product examples described here - https://speckyboy.com/2014/10/01/successful-minimum-viable-products/, rate them from best to least best based on a criteria of their choosing, and then describe the criteria they used to rate them and then describe which ones might be useful examples for innovations connected to your course content.

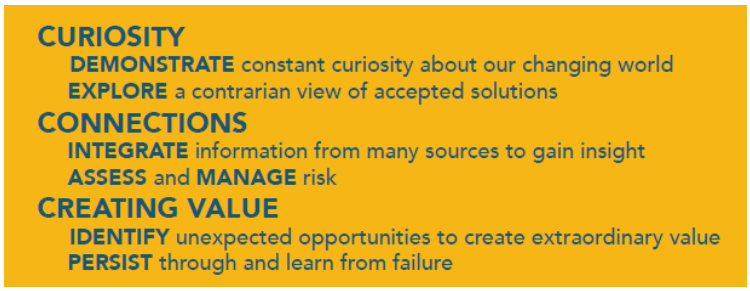
3. Assign or have students select an innovation related to your course content, and create a story map (described here - http://www.leanstartupcircle.com/links/128) that could be used to develop a Minimum Viable Product.

4. Assign or have students select an innovation related to your course content and describe which of the benefits of a Minimum Viable Product (described here - https://www.elegantthemes.com/blog/tips-tricks/successful-launches-a-closer-look-at-minimum-viable-product) are most relevant to it.

5. Assign or have students select an innovation related to your course content. Have students identify a list of the kinds of people (CEOs, particular customer segments, etc.) with whom they would field test a Minimum Viable Product and produce a list of interview questions that they think will result in the most useful information for continuing to develop the product.

6. Have students select a product from the list of famously failed products available at - http://www.businessinsider.com/biggest-product-failures-in-business-history-2014-7?op=1 – and then construct a list of interview questions for potential consumers that might have helped the company appropriately "pivot" at a Minimum Viable Product stage of the development of the product.

Example Discussion Prompts to Promote Development of the Entrepreneurial Mindset in Engineering Course Online Discussions



	Introduction to Engineering	Computer Integrated Manufacturing	Engineering Statistics
John Peterson – What are the basics of the business model? What makes a high performance business model? How do you test your business model?	Curiosity: In talking with potential customers about your design project, what questions would you ask to validate the value proposition? What other solutions are currently available? Identify 3 advantages and 3 disadvantages for a customer to switch over to your new product. Connections: What potential roles can engineers play in the business model process? Creating Value: Select an engineering design firm and identify their value proposition and customer segments. (This part could require going on a field trip and/or interviewing an engineer at a design firm.)	Curiosity: What role does technology and automation play within a company's business model? Connections: Lean manufacturing promotes eliminating wastes in the manufacturing process. Select a company (e.g. Amazon, Walmart) and identify 3 ways in which they apply the lean philosophy within their Business Model. Creating Value: Select a manufacturing company and identify their value proposition and customer segments. (This part could require going on a field trip and/or interviewing an engineer at a manufacturing company.)	Curiosity: How can statistics be used to validate the business model? Connections: Regression analysis can be used to predict sales and demand based off of historical data. What data collection should startup companies be doing early on to assess and manage risk, ultimately predicting the success of the company? Creating Value: Select a company that relies heavily on statistics to assist in maintaining a profit. Identify the role of statistics in their overall value proposition. (Examples might include insurance companies, national laboratories, marketing firms, etc…)