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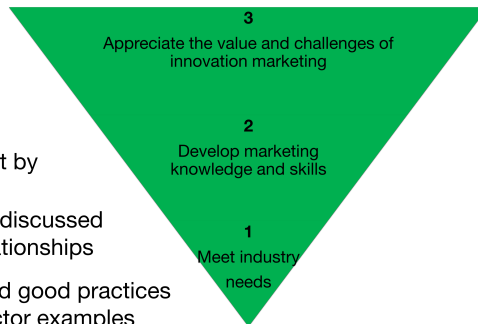


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# Educating Engineers to be Innovation Marketers

## Goals



## Design Strategy

How we achieved the goals



- 1 – Taught component by component
- 2 - Recursively discussed component relationships
- 3 – Modeled good practices with instructor examples
- 4 – Students worked on their own ideas
- 5 - Hands-on application in-class and project work
- 6 - Extensive actionable feedback
- 7 – Success rubrics shared with students

## Lessons Learned

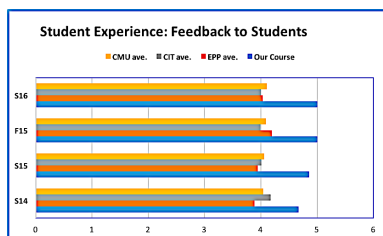
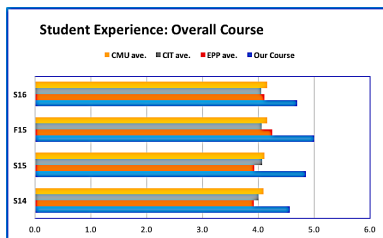
What worked and what we'll improve next

Design and pedagogy improved with Eberly Center feedback	Project design decisions reinforced by student feedback
Extensive feedback accelerated skill development and sustained student motivation	Teaching complex tasks component by component worked
Student motivation maintained by working on their own idea	Synthesis skills can be tested by asking students to explain implications of decision changes

Next:  
More opportunities for students to learn from other students

## Evaluation

How we evaluated our results



Source: Course evaluation results from student surveys (SmartEvals.com)

### Learner Feedback

**The Student Experience**  
"One of the best courses I took at CMU!"  
"I thought all the above methods helped create a more personalized experience for the students."  
**Students worked on their own idea**  
"By far the most practical course I have had, and because it was our own idea, I was driven to learn more."  
"Being able to work on your own project and learn the material so that your idea grows, is really what makes you want to listen in class and gain as much info as possible."  
"As much as it messed up my sleeping pattern for a couple of days, completing the project on my own was a much more effective way to learn all of the required material."  
**Extensive, actionable feedback**  
"The best part of the entire project were the detailed feedbacks, which are a good source to fall back on for improvement."  
"I really appreciate the feedback from the instructors about our own projects. It is very specific and helps a lot. It is not like some general words like "not related to the topic", "should be more specific" that we have received from other courses. We got individualized comments that are directly related to our topics."

### Eberly Center Expert Feedback

**Extensive, actionable feedback**  
"Incorporated practice and feedback heavily into the lecture structure" allowed immediate application of new knowledge and helped students to gauge their own learning and progress.  
• "Personalized feedback is very helpful."  
• "...offered encouraging feedback and timely, specific suggestions for improvement."  
• "...acknowledged the low stakes nature of the 'practice' portion of class."  
**Modeled good practices with instructor examples**  
• "Used examples effectively" to help motivate students to learn the material in multiple ways.  
• "All of these examples clearly engaged students, and participation rates were high."  
**Classroom climate**  
"Built positive classroom climate" that activated learning and heightened retention.  
• "Provided balanced, constructive feedback"  
• "Used student names and referred to their individual projects as examples to illustrate concepts."  
• "Reminded students that the classroom is a safe place for risk-taking and making mistakes."  
• "Students were visibly engaged in this interactive exercise."  
• "All 16 students spoke at some point during the class session, and most did so voluntarily."

Representative companies employing students in marketing roles.

