Let’s Scrum: A Flexible Approach to Course Design

Scrum Applied to Design of Undergraduate Mechanical Engineering Course

Epic
As a second-year mechanical engineering course, Thermodynamics 1 introduces students to fundamental engineering concepts and prepares them to take additional thermal-fluid courses.

Example Stories
As a <type of user>, I want <goal> so that <reason>.

- As a second-year mechanical engineering major, I can determine the difference between closed systems and open systems in order to analyze both types of systems.
- As a second-year mechanical engineering major, I can apply the first law of thermodynamics to closed systems to solve problems related to common engineering systems.
- As an engineering student, I can state the second law of thermodynamics and explain its significance in order to analyze common engineering systems.

Activities
Course materials, assignments, and interactions were planned to support the learning outcomes.
Assessments and Reflection
Course learning outcomes were assessed through short quizzes with specifications grading.

A reflection assignment was required at the end of each module.

Example Reflection Assignment

Think about the work you have completed in Module 2. Answer any or all of the following questions.
• What is the most important thing you learned in this module?
• What was challenging about this module?
• What learning strategies worked for you?
• Will you need to make any changes for the next few weeks?

Additional Examples


Resources


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