### CONTEXT

As course instructors, what we may think needs changing, or how to make the change, may not really hit at the root of intended outcomes.

**Perceived Needs to Improve EPIC 265:**
- Better grasp of relevance for students to understand how daily topics tie to desired design concepts and how the course ties to the CHEN and CBEN degrees and careers
- Improve student engagement in complex problems/topics during in-class activities to avoid the “I give up, just tell me the answer” syndrome
- Retention of design concepts sophomore year → Senior Design
- Student satisfaction that the course was important, captured their attention, and was really worth the challenge

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### WHAT WE ARE CHANGING

Expanding faculty thinking and mindset surrounding instructional methodologies

**Specific to EPIC 265:**
- **Clarity in Learning Outcomes** defines expectations and relevance
- **Detailed Course Map** explains what we’re doing, and why
- **Extending the flipped approach** creates expectation of preparation accountability, mentoring how to learn, with less talking at students and more interacting with students
- **Varied active learning formats + well-designed activities** taps into their curiosity and moves students to a greater understanding
- **Planned discussions** assists in relevance connections
- **Use and explanation of formative assessment** creates a less threatening environment as students are not being “graded” all the time

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### INTENDED OUTCOMES

Demonstrate benefits of incorporating Engineering Learning as measured through enhanced student and program outcomes

**The PBL/Design Professional Learning Community (our focused working group) is actively collaborating!**
- **Collaborative activity development**
- **Vertical alignment**
  - EPICS 1 → EPICS 2 → Capstone Design
- **Future – coordination of core skills instruction across all 1st and 2nd year courses** (e.g., Excel plots, communication skills)
- **Future – move repetitive and review content online with online assessment**

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John Persichetti, Teaching Associate Professor, Chemical and Biological Engineering

*Instruction emphasis:* Design (Senior Design & EPICS II), Simulation, Field Session (hand’s-on experiences), Multi-Disciplinary Projects, Innovative Design Concepts

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June 2016 Cohort

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Thank you for supporting our faculty!

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Visible innovation actively addressing stakeholder needs