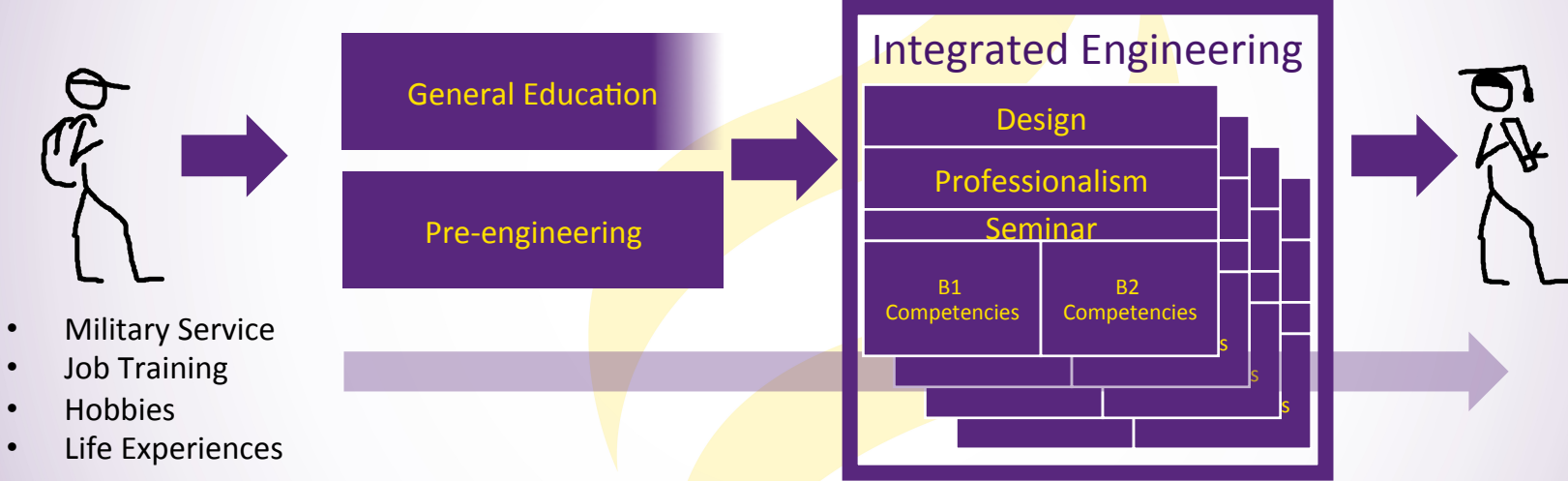


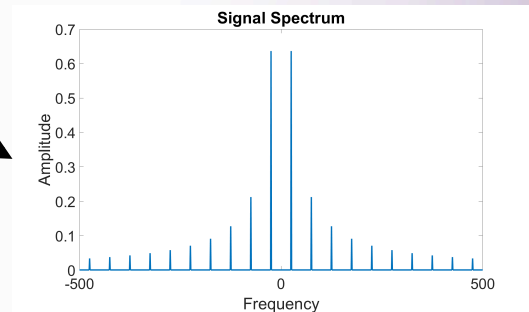
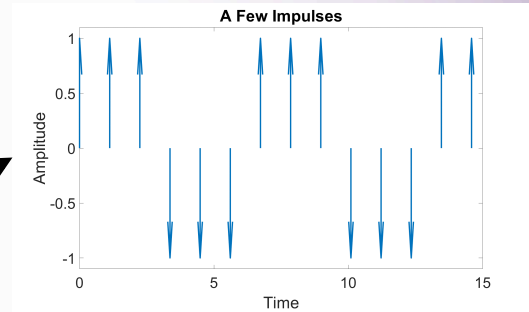
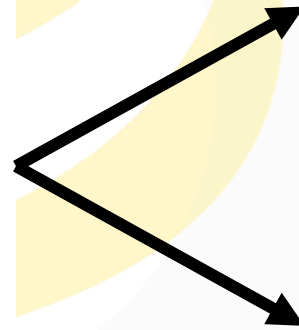
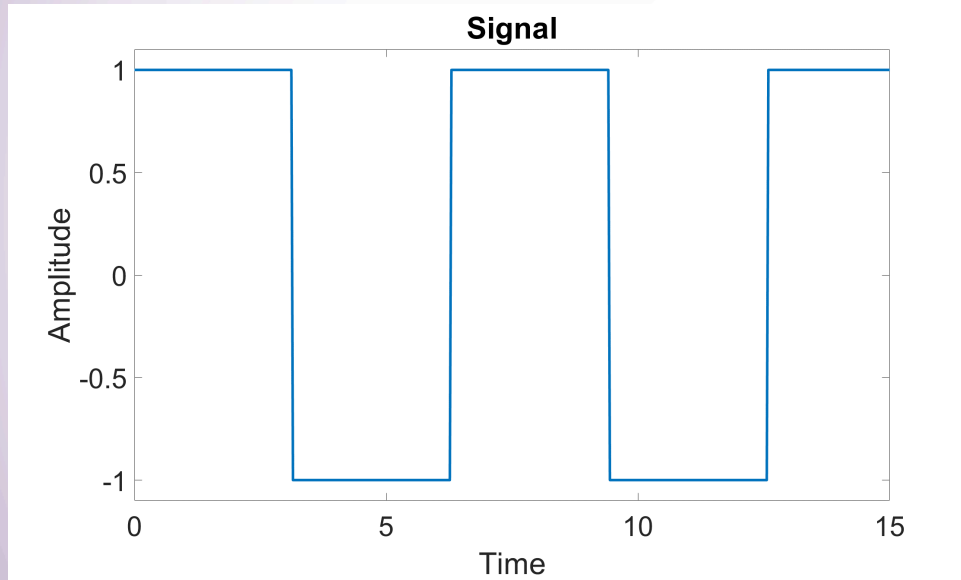
Teaching Signals and Systems in a Project Based Learning Environment

Robert Sleezer, Eleanor Leung, and Rebecca Bates

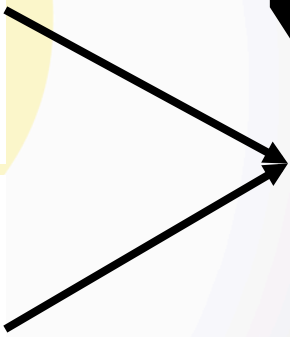
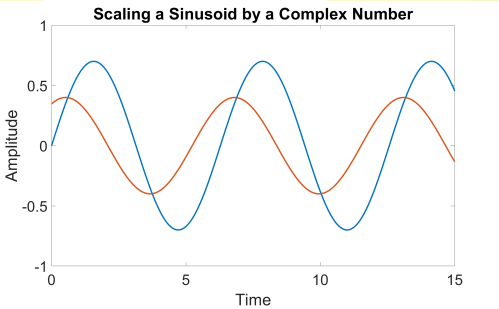
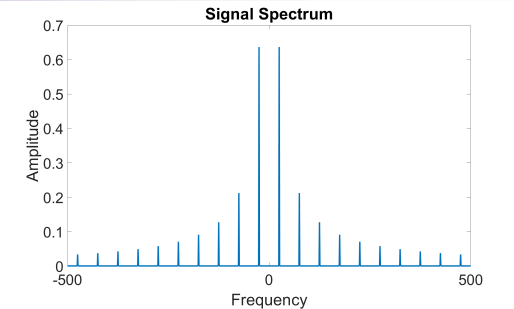
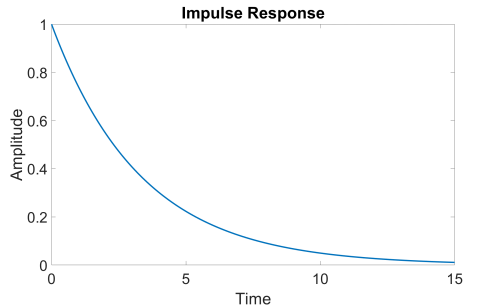
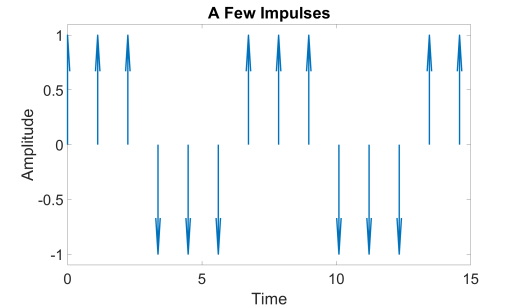
Projects provide context for design, professional, and technical learning.



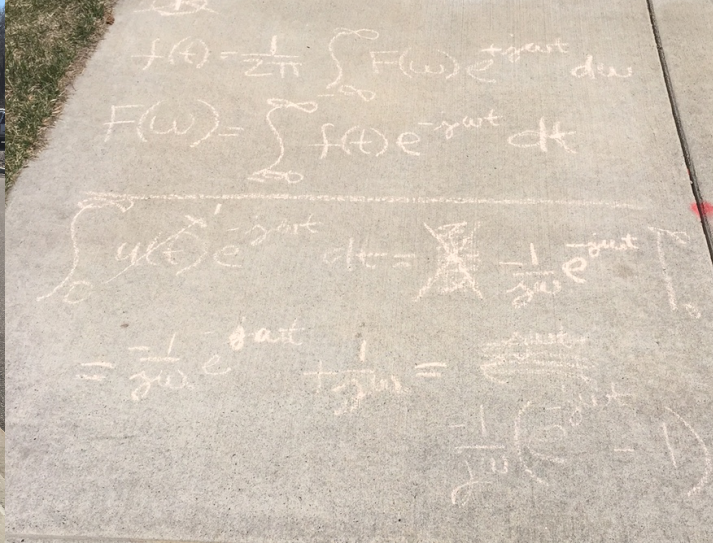
Connection to the big picture mitigates students perception that Signals and Systems is all abstract theory.



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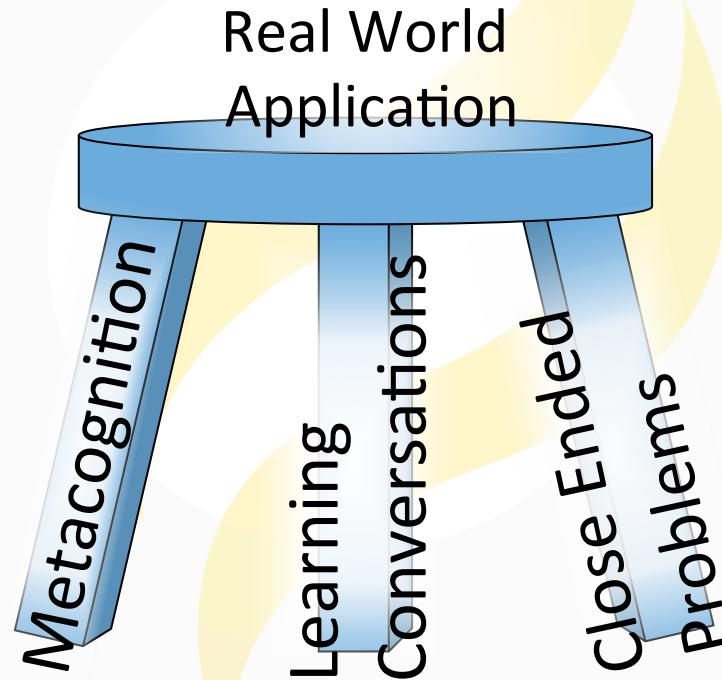
Experiences like
“4S” (sunny sidewalk
signals and systems) day
make some of the tedious
work more fun.



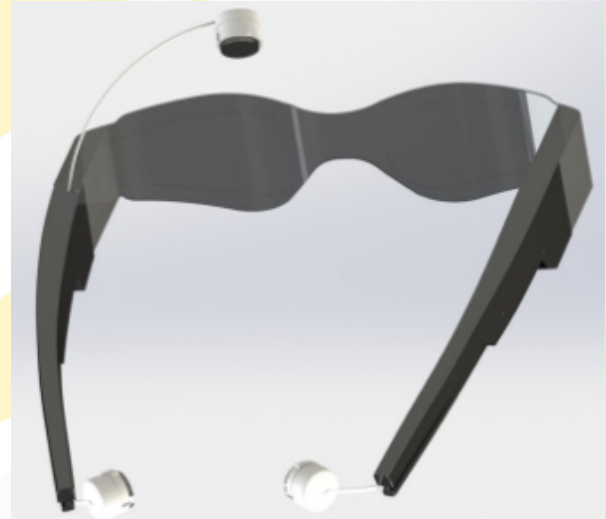
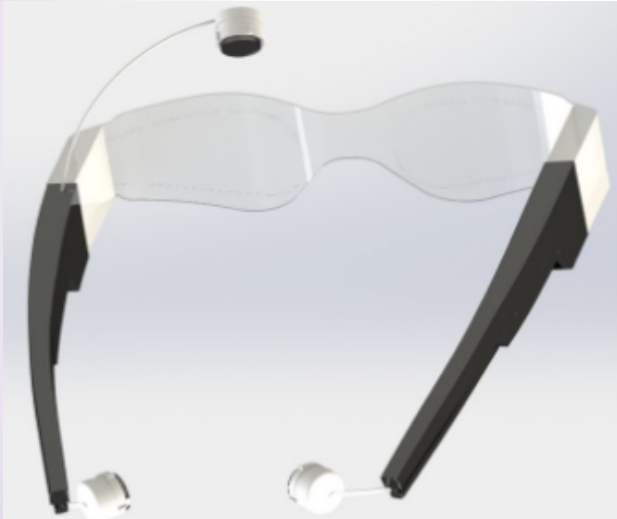
Gamification



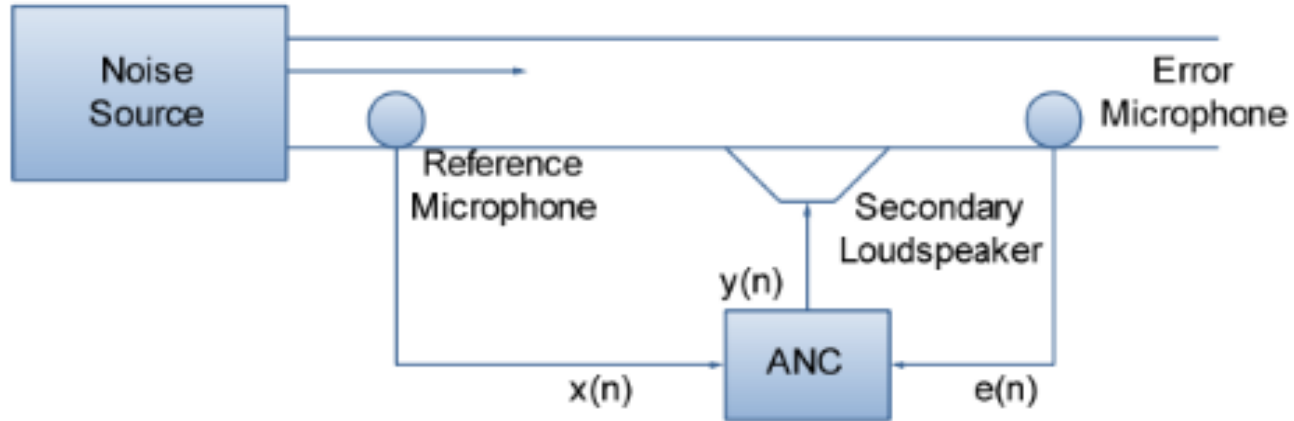
Connecting signals and systems learning to student projects.



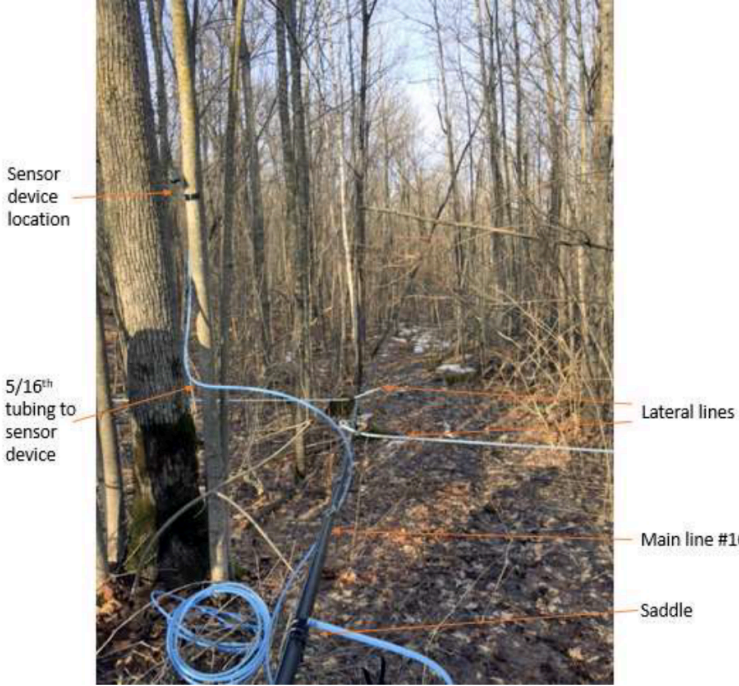
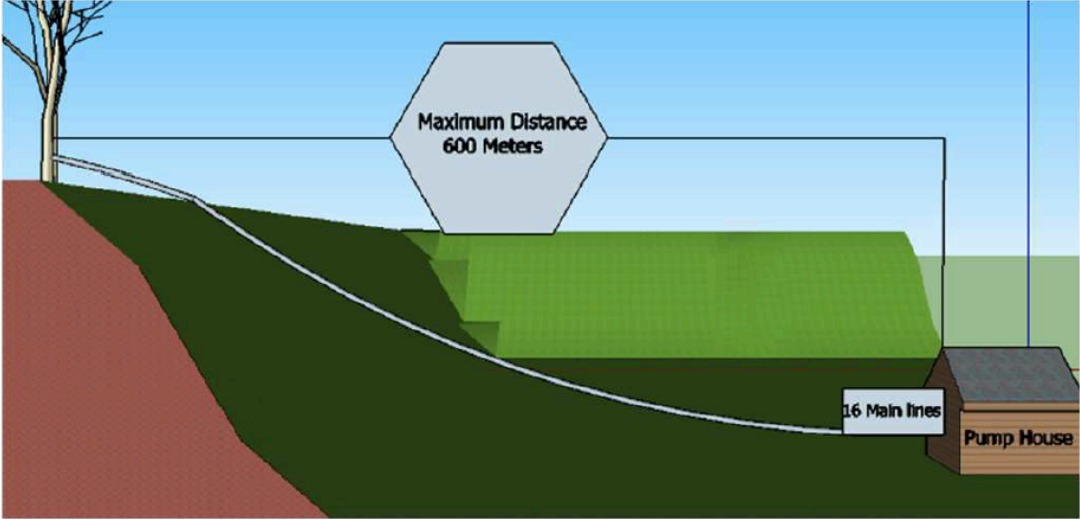
Some real world applications are . . .



Some real world applications are . . .



Some real world applications are . . .



Student feedback to this method is generally positive.

Table 1. Student Feedback ($N = 12$)

| Question | % Positive Feedback |
|--|---------------------|
| Students were engaged in the learning conversation. | 66 |
| Instructor followed the 1/x rule. | 66 |
| The learning environment was safe (i.e, ask questions, make errors, and learn from mistakes without negative repercussions). | 83 |
| I learned a lot from this module. | 50 |
| I believe my grade will reflect my capabilities in this area. | 80 |
| The professional expectations were adhered to. | 100 |
| Assignments were helpful, appropriate in scope, & relevant. | 66 |
| The information learned was valuable to my future. | 50 |

Faculty reflections on Signals and Systems in a PBL context.

Motivation

Contextualization

Scaffolding

Iterative
Improvement

Questions?

Feel free to contact us at:

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- Eleanor Leung
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- Rebecca Bates
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More information on our
program can be found at:

<http://cset.mnsu.edu/ie/>
<http://www.ire.minnstate.edu>