

Active Learning - MIT Examples*

Introducing Students to Active Learning

- 6.01 Introduction to EECS I
 - Prof. Freeman explains his course's "practice-theory-practice" approach.
- 8.581J Systems Biology
 - Prof. Gore motivates his use of active learning on the first day of class.
- 16.06 Principles of Automatic Control
 - Prof. Hall describes introducing students to active learning and how they respond (Instructor Insights Interview)

Examples of Active Learning Activities

- 5.111SC Principles of Chemical Science
 - Prof. <u>Drennan uses electronic clickers to do an in-class concept question</u>.
- 5.95J Teaching College-Level Science and Engineering
 - Lightning Round (<u>Interview</u> & <u>Classroom Video</u>)
 - Think-Pair-Share (Interview & Classroom Video)
 - Debate (<u>Interview & Classroom Video</u>)
 - Jigsaw (Interview & Classroom Video)
 - Mud Cards (Instructor Insights Interview)
- 6.01 Introduction to EECS I
 - Prof. Freeman has students vote on a multiple choice concept question by holding up fingers.
- 6.033 Computer System Engineering
 - Computer system engineering recitation where students act out an algorithm
- 8.581J Systems Biology
 - Prof. Gore uses voting cards to do an in-class multiple choice concept question with follow-up discussion between students.
- A vacancy diffusion demo using people
- A math proof heavy class (University of British Columbia).
- An active lab class (University of British Columbia)

Students Collaborating to Solve Practice Problems

- 16.06 Principles of Automatic Control
 - Prof. Hall discusses the benefits of students doing group work on the board during <u>recitation</u> (Instructor Insights Interview)
- 18.05 Introduction to Probability and Statistics
 - Students work collaboratively on practice problems at whiteboards while instructors circulate.

^{*}With two examples from outside of MIT.