

*Center for Science and Mathematics Education and Department of Chemistry
Present:*

Hugo Rossi Lecture Series

Jeffrey S. Moore

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Murchison-Mallory Professor of Chemistry
Professor of Materials Science and Engineering
Howard Hughes Medical Institute Professor

College Coaching for 21st Century Minds

This lecture will describe the methods we use to transform our traditional, kilostudent classroom into a modern-day learning environment. Formal instruction emphasizes rote learning and algorithmic problem solving though these tasks are better done by machines than by humans. Since knowing the solution to a problem is less important than knowing how to solve a problem, we have restructured our large, instructor-centered lecture into an open, student-centered problem-solving forum. Here, instructors serve the role of coaches preparing students to learn on their own and become better equipped to tackle the complex problems of 21st-century science and medicine.

Objectives:

- To improve student confidence
- To regularly engage students in intense thought
- To sharpen students' skills in filtering irrelevant information
- To train students to accept and manage intellectual risks
- To improve students' ability to deal with ambiguity
- To help learn to persevere and grow from daily setbacks

The most important finding is the positive outcome from a semester-long group project that puts students' knowledge into action by communicating a molecular mode of action exhibited in a compound of interest. The talk will conclude with ongoing future activities aimed at personalizing undergraduate instruction as a means to promote curiosity-driven learning.



Tuesday, January 27, 2015

1:30-2:00 pm refreshments

2:00-3:30 pm lecture

TBBC 4630 (Chemistry: Thatcher Seminar Room - 4th floor)