Microbes, Metals, and Hands-On Education
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Teaching Philosophy & Course Implementation

- My goal as an educator is to teach my students the importance of microorganisms in environmental, ecological, and industrial processes while providing them a skill set that they can apply in the future.
- I aim to achieve these goals through:
  - Interactive lectures to ensure student comprehension
  - Data Incorporation and Research-Based Activities to Enhance Critical Thinking Skills
  - Collaborative Student Activities to Inspire Problem-Solving and Knowledge-based Learning
- I apply these goals in the courses I teach as I have:
  - Developed a hands-on lecture and lab course BIOL 4420 Microbial Biotechnology
  - Developed a graduate level lecture and lab course BIOL 6220 Advanced Sequencing Techniques
  - Integrated in class activities using news articles & new scientific articles in BIOL Microbiology

Research Interests & Accomplishments

- My lab’s research incorporates environmental microbiology, microbial ecology, and geochemistry to address three central foci:
  1) Identifying the role of iron-oxidizing bacteria in the biocorrosion of steel structures (e.g. pipes, bridges, shipwrecks) in aquatic systems
  2) Evaluating the effects of iron mat microbial communities in contaminant mobility and sequestration
  3) Microbial interactions and their effects on coastal aquatic processes

Research & Student Successes in the Field Lab

- Student research has been funded through national sources including Graduate Women in Science, Lerner-Gray Fund for Marine Research, and the American Society for Microbiology Undergraduate Research Fellowships and URCA awards.
- The publication by Price et al. 2020 about microbes associated with the Pappy Lane Shipwreck was featured in Popular Science, The Scientist, Inverse Magazine, Chemical and Engineering News and discussed in an interview on Science Friday with Ira Flatow.

A special thanks to Field lab members past and present, research collaborators, colleagues and students who wrote letters of support, all the students have taken my courses (especially the BIOL 4420 students), and the Department of Biology for your overwhelming support. These successes truly are a team effort!