

CIVE 534: Applied and Environmental Molecular Biology

Course Description: This course will introduce students to environmental microbiology and cover how molecular biology tools can be used to improve our understanding of the microbial communities present in environmental systems, including both natural systems and engineered processes. Instruction will include lectures and laboratory work that will prepare students to apply molecular biology assays to assess and characterize microbial communities. Additionally, students will learn to interpret data generated using these tools to support planning and design for engineered processes.

Course Pre/Co-Requisite: CIVE 540 or equivalent

Course Objectives: The successful student in this course will be able to:

- Perform basic environmental microbiology laboratory techniques
- Conduct an array of molecular biology assays relevant to environmental engineering and natural systems
- Interpret the data generated to improve understanding of environmental systems
- Apply data generated to support design and monitoring of engineered processes

Course Instructor:

Dr. Susan De Long
Assistant Professor, Dept. of Civil and Environmental Engineering
Office: ENGR A207C; Office Phone: 970-491-6606
Email: Susan.De_Long@colostate.edu

Course Evaluation:

Students will be required to submit periodic laboratory reports and one journal article review. There will be two examinations. Grades will be calculated according to the following breakdown:

- laboratory reports 35%
- journal article review 10%
- midterm 20%
- final 30%
- class participation 5%

Term grades for this course will use the +/- grading system as described in the CSU catalog.