



Delta Internship Opportunity at MATC (Biotechnology Laboratory Technician Program)

For more information, email us at internship@delta.wisc.edu.

MATC contact: Lisa Seidman

When: ongoing

Funding: N/A

Number of interns sought: 1

A Delta Intern will benefit from the following:

- Experience in instructional materials development, implementation and assessment
- Experience in curriculum design and implementation
- An opportunity to work on new projects with a lot of latitude
- More structured opportunities to revise existing laboratories and teach them
- Practical application and use of information and knowledge
- An opportunity to interact with faculty and instructional staff from different departments at MATC
- An opportunity to work with MATC students

The Biotechnology Laboratory Technician Program at MATC is a 2 yr. associate degree course of study. Students graduating from the program have the skills and knowledge required for entry level employment as a laboratory technician in biological research (non-clinical), industrial and government laboratories. Courses emphasize basic science understanding in topics like cell biology, chemistry, molecular biology and mathematics. Laboratory aptitude, communication and employment skills are also emphasized. The associate degree is also a stepping stone to a bachelors degree at the UW-Madison, or several other institutions.

Lisa Seidman is also involved with a NSF-funded project that is aimed at enhancing student critical thinking, problem solving and communication skills by imbedding mathematical concepts in biotechnology cases. This project aims to connect the mathematical concepts that students are learning to real world problems that are relevant to the technical field they are studying.

Specific opportunities:

- Curriculum design and implementation
The MATC Biotechnology and Computer Science programs are developing a Bioinformatics program. There are ongoing opportunities for curriculum design, development and implementation.
- Instructional materials development
As part of the mathematics and biotechnology project aimed at imbedding mathematics in biotechnology problems, there are opportunities to enhance and improve laboratory manuals for a number of the core courses (i.e. fermentation, chromatography and cell biology). There are opportunities to design, run and evaluate new or revised laboratory exercises.
MATC also maintains two web sites that provide materials to high school teachers. There are opportunities to create, implement and assess materials for the web sites.

Preference will be given to applicants who have:

- Content expertise (e.g. biology, chemistry, mathematics, bioinformatics)

Starting point for research questions:

1. Does the instructional material created by the intern improve student understanding of a topic (assess pre- and post-material understanding)?
2. How does a student's incoming math aptitude translate into his/her ability to do laboratory based math?
3. When a curricular change is implemented, what evidence is sufficient to convince an instructor that the change improved student learning and should be adopted?

Intern professional development objectives:

- Work in partnership with MATC faculty or instructional staff to hypothesize about and create a curricular change;
- Test/implement curricular change in the classroom or laboratory setting
- Assess its efficacy for enhancing learning
- Reflect as a practitioner (think about the process of teaching)

Interns will benefit MATC and the Biotechnology Laboratory Technician Program by providing:

- Materials for different courses/programs
- An assessment of the efficacy of the materials for improving student learning