



2015 Summer Biotechnology Institute for Secondary Teachers



Microscopy and Microlife: Exploring the Impacts of Climate Change on Microscopic Organisms

DATES

June 29— July 2, 2015
Monday—Thursday
8:30 a.m.—4:30 p.m.

LOCATION

Hagerstown Community
College
11400 Robinwood Drive
Hagerstown, MD 21742

Fully equipped
biotechnology facility in
the new Science, Technol-
ogy, Engineering, & Math
(STEM) Building

TO APPLY

Submit application by
March 15, 2015 by mail or
fax to:

Summer Biotech
Institute for Teachers
c/o Robin Thomas
STEM Building
11400 Robinwood Drive
Hagerstown MD 21742
rethomas@hagerstowncc.edu
240-500-2268
Fax: 301-393-3694
Subject line:
BSI for Teachers 2015
www.hagerstowncc.edu/
biotech

Hagerstown Community College is proud to offer its seventh annual Summer Biotechnology Institute for secondary teachers. Middle and high school teachers (grades 6-12) will spend four days learning about the role that microorganisms play in ecosystem stability and will engage in lab investigations that explore how climate change may impact microscopic organisms. Participants will have time for extended practice with microscopes, as well as the opportunity to develop grade-level and content appropriate microscopy activities for use in their classroom. Instructors for the institute will include Rebecca Beecroft, MS, Terrie Biddinger, MS and Cindy Dove, PhD, Kristen Lennon, PhD and Judith Peisen, PhD, from the Science, Technology, Engineering and Math Division of Hagerstown Community College .

Participants will:

- Explore the use of dissecting, brightfield, phase-contrast, fluorescence and scanning electron microscopy in studying microlife.
- Explore habitats and basic needs of microscopic organisms utilizing microscopy and other technologies
- Investigate the impacts of climate change on microscopic organisms in a lab setting
- Explore laboratory techniques for counting microscopic organisms and estimating population size
- Learn how to determine optimal physical and environmental requirements for microscopic organisms and develop cultures for their classroom
- Explore lethal-dose properties of household chemicals on microscopic communities
- Capture digital microscopic images and use them to create an original poster
- Develop appropriate lesson materials that incorporate the use of microscopes into their respective grade and content level instruction
- Learn about resources for the use of microscopy in the classroom
- Hear presentations by guest experts
- Network with teachers with similar interests
- Earn \$400.00 stipend for participating
- Have the option to earn continuing education units from their respective school systems
- Have the option to earn Frostburg State University graduate credits with concurrent registration (tuition required per FSU rates.)

