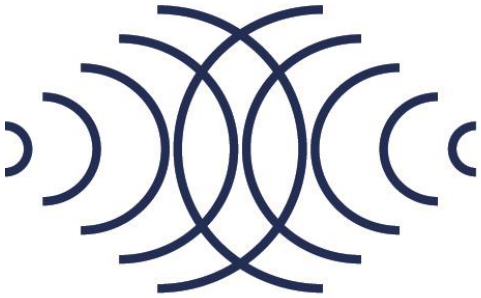
Science Education for New Civic Engagements and Responsibilities

Engaging faculty and students in the stewardship of the Bay



SENCER

APPLYING THE SCIENCE OF LEARNING TO THE LEARNING OF SCIENCE

NATIONAL CENTER FOR
SCIENCE & CIVIC ENGAGEMENT

SENCER Ideals

- SENCER robustly connects science and civic engagement by teaching “through” complex, contested, capacious, current, and unresolved public issues “to” basic science.

- SENCER, by focusing on contested issues, encourages student engagement with “multidisciplinary trouble” and with civic questions that require attention now. By doing so, SENCER hopes to help students overcome both unfounded fears and unquestioning awe of science.

Does it work?

Relevant organizational scales

- National (and international) community of scholars
  - SENCER Summer Institute
  - Washington DC Symposium
  - Leadership Fellows
- Nine regional Centers for Innovation
  - Regional meetings
- College and University teams
- Courses

Course Models

- Environmental Biology: Ecosystems of Southwest Florida
- Stem Cells and Social Justice
- Living Systems: Global Concepts, Living Connections
- Assessing Exposure to Toxic Chemicals: General Chemistry Applied to Human and Environmental Health
- Undergraduate Biochemistry Through Public Health Issues
- Food for Thought: Engaging the Citizen in the Science and Politics of Food Information, Food Consumerism, Nutrition, and Health
- Introductory Statistics with Community-Based Projects
- Life Science in Context: Sub-Saharan Africa and HIV/AIDS
- Ordinary Differential Equations: Mathematics in Real World Situations
- Pregnancy Outcomes in American Women
- The Science of Sleep

Course Models

Learning real science in context

Critical dialog outside the classroom

Engagement with the community

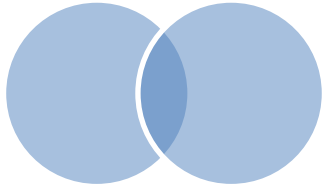
SENCER Center for Innovation Chesapeake Bay

About SCI-Chesapeake Bay

The Chesapeake Bay SENCER Center for Innovation is a new collaboration of faculty from universities and colleges in Maryland, Virginia, and the District of Columbia focused on the complex issues associated with our most important regional natural resource, the Chesapeake Bay.

Combining expertise in undergraduate teaching, course design and research, faculty from the SCI-Chesapeake Bay institutions bring interdisciplinary expertise to a variety of long-standing problems associated with alterations of the natural ecosystems that once sustained the Bay. Collaborations will improve faculty development, increased opportunities for undergraduate student learning and research, and stimulate improved public awareness of complex issues associated with the Bay.

SENCER and STAC



- Connecting interested faculty with CB resources?
  - Understanding the capacious public issues
- Engaging students in real work?
  - CB Agreement?
  - Volunteer monitoring?
  - With local decision makers?
  - For outreach?
  - For their “pre-disciplinarity”?
- STAC connections with SENCER?

Pedagogical publication

PROJECT REPORT

Full Immersion: The Chesapeake Bay Watershed as an Environment for Learning Science in a Civic Context