InTeGrate

Interdisciplinary Teaching of Geoscience for a Sustainable Future

A five-year community effort to improve geoscience literacy and build a workforce prepared to tackle environmental and resource issues

InTeGrate supports the teaching of geoscience in the context of societal issues both within geoscience courses and across the undergraduate curriculum.

An NSF STEP Center
DUE-1125331

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Teaching Geoscience in the Context of Societal Issues

- Geoscience has important expertise and perspective to contribute as our nation and the world struggle with significant environmental and resource challenges.
- Meeting these challenges will require a savvy public, a new kind of geoscience workforce, and a broader understanding of geoscience by all who engage these issues

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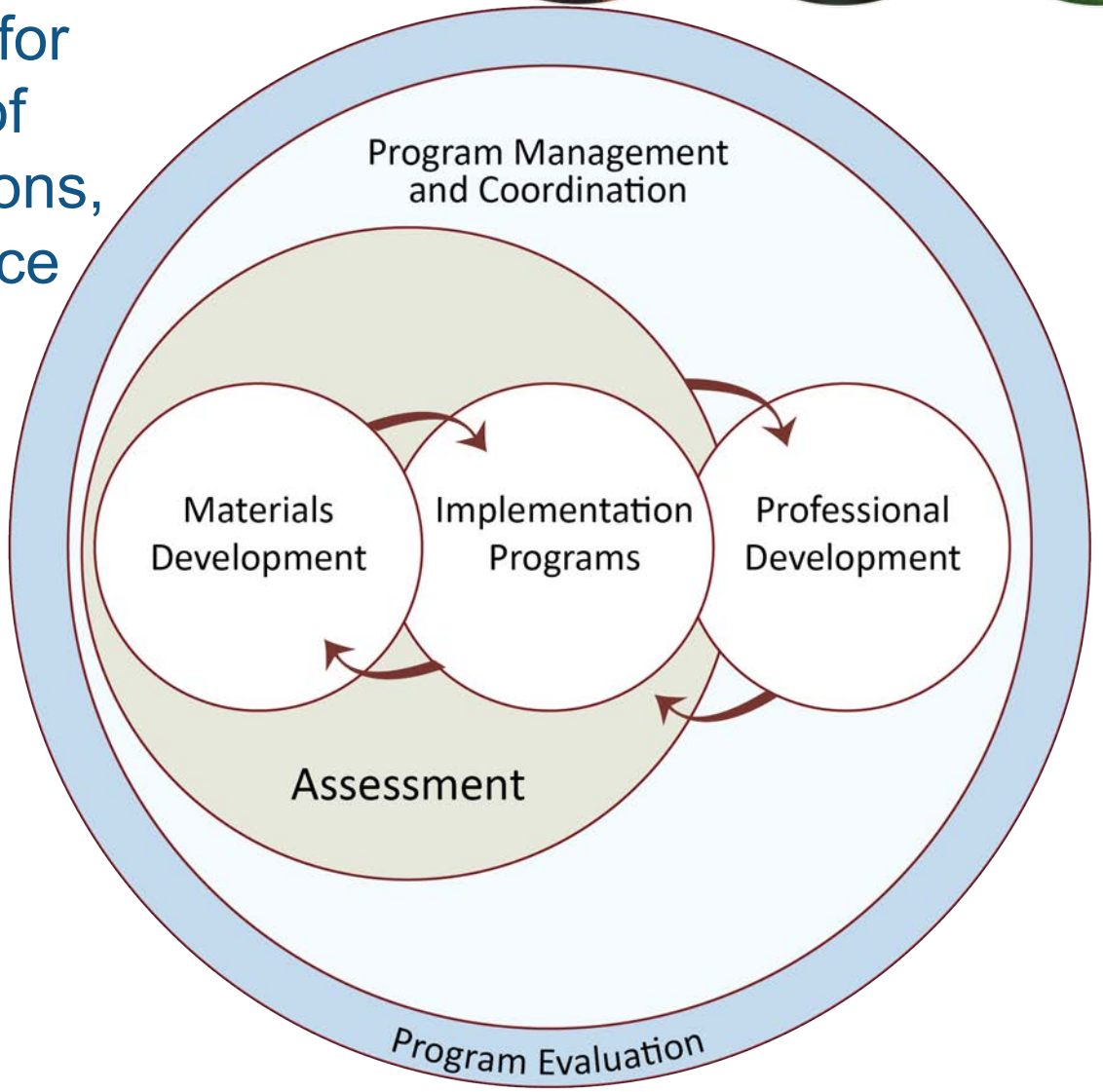
A Systems Model for Transformation of Individuals, Institutions, and the Geoscience Community



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2012 Workshops

Related Links
Workshop stipends

Programs that Bring Together Geoscience and Sustainability

May 23–25, 2012, Stanford University, Palo Alto, CA
Application deadline: March 5, 2012

This workshop will bring together undergraduate faculty from across the disciplines to share challenges and successful strategies for programs integrating sustainable perspectives and geoscience. We encourage applicants from the geosciences, other sciences, social sciences, economics, and humanities.

Teaching the Methods of Geoscience

June 27–29, 2012, plus optional field trip June 30, Montana State University, Bozeman MT
Application deadline: March 30, 2012

The methods and ways of thinking that are intrinsic to Earth science differ in important ways from the experimental method that is commonly taught in schools as *the* scientific method. This workshop is for undergraduate faculty who are interested in integrating explicit teaching about the methods of geoscience into their classroom.

Systems, Society, Sustainability and the Geosciences

July 24 – 26, 2012 – Carleton College, Northfield, MN
Application deadline: April 20, 2012

This workshop is for undergraduate faculty from all disciplines who are interested in a stronger integration of geoscience and other perspectives in teaching sustainability. We encourage applicants from the geosciences, other sciences, social sciences, economics, and humanities.

Partnership Workshop: Teaching Environmental Geology, from *On the Cutting Edge*

June 2–6, 2012, Montana State University, Bozeman
Application deadline: March 1, 2012

This workshop connects with the InTeGrate project by emphasizing how geoscience literacy is integral to environmental challenges. Session topics will focus on exploring ways to effectively teach environmental geology in undergraduate Earth science courses.

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Search the Site Go

InTeGrate supports the teaching of geoscience in the context of societal issues both within geoscience courses and across the undergraduate curriculum. Our goal is to develop a citizenry and workforce that can address environmental and resource issues facing our society.

Why InTeGrate?

Why is it important to teach geoscience in the context of societal issues? How do we support the needed changes in the undergraduate curriculum? more »

What do we mean by 'Societal Issues'?

So many of the major challenges that face us as a species are intertwined with the larger Earth system. These issues are key hurdles in our path to long term sustainability. more »

Teaching Materials and Strategies

Bringing the intersection of geoscience and societal issues into the undergraduate classroom requires both new teaching materials and innovative teaching approaches. InTeGrate supports this through collection and organization of existing community expertise as well as an ambitious effort to develop new curricular modules targeted at InTeGrate's core themes.

Undergraduate Program Design and Development

Movement in the undergraduate curriculum toward more strongly addressing geoscience and societal issues is reflected in program level change. Learn how successful programs have met the challenges of evolving in this direction, and how you can support change at your own institution.

Get Involved

InTeGrate is a community program. There are a number of avenues to contribute your expertise and energy to this important work. A centerpiece of our engagement of the community is a series of workshops.

Already engaged in the project? Find the materials related to your work in our area for team members

Announcements

2013 Calls for InTeGrate Course and Module Authors

We are excited to announce and invite you to apply to our 2013 InTeGrate call for introductory geoscience/environmental science module authors and/or geoscientific thinking, societal issues, or teacher preparation course or module authors. Proposal deadline is Feb 15, 2013.

InTeGrate 2013 Workshops Announced

The InTeGrate program is offering 3 new workshops for 2013, plus one partnership workshop in collaboration with *On the Cutting Edge*.

Call for GLE Assessment Assistance

We are looking for faculty who are interested in testing the Geoscience Literacy Exam (GLE) – one of many instruments being developed by the InTeGrate Assessment Team to evaluate the effectiveness of InTeGrate teaching materials on student learning.

First Materials Development Teams

First materials development teams announced for Introductory and Teacher Preparation

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2013 Workshops

Related Links
Workshop stipends

Engineering, Sustainability, and the Geosciences

March 13–15, 2013, Colorado School of Mines, Golden, CO
Application deadline: January 7, 2013

This workshop is for undergraduate engineering and geoscience faculty interested in creating a stronger integration of engineering and geoscience for engineering students.

Teaching Environmental Justice: Interdisciplinary Approaches

April 14–16, 2013, Carleton College, Northfield, MN
Application deadline: January 21, 2013

Equitable distribution of risks and resources, long a discussion of interest to economists, ethicists and others, now requires an understanding of geoscience topics from natural hazards to ground water hydrology to mineral and energy resources. This workshop will explore how we bring together concepts from humanities, social science and geoscience to develop students' understanding of issues and choices addressing environmental justice.

Geoscience and the 21st Century Workforce: Considering undergraduate programs in the context of changing employment opportunities

June 26–28, 2013, Penn State University
Application deadline: February 22, 2013

This workshop will focus on understanding the breadth and depth of employment opportunities for students with geologic understanding and articulating the skills/outcomes that are of interest to employers, particularly for new kinds of jobs where these skills/outcomes are less well defined. We will look at the job prospects for all students, including those at 2YCs.

Partnership Workshop: Teaching Oceanography, from *On the Cutting Edge*

June 18–20, 2013, with optional field trips on June 17 and 21, City College of San Francisco
Application deadline: March 1, 2013

This workshop explores effective strategies for teaching introductory undergraduate-level oceanography. Focal points include integrating content from multiple disciplines, improving geoscience literacy, and addressing environmental

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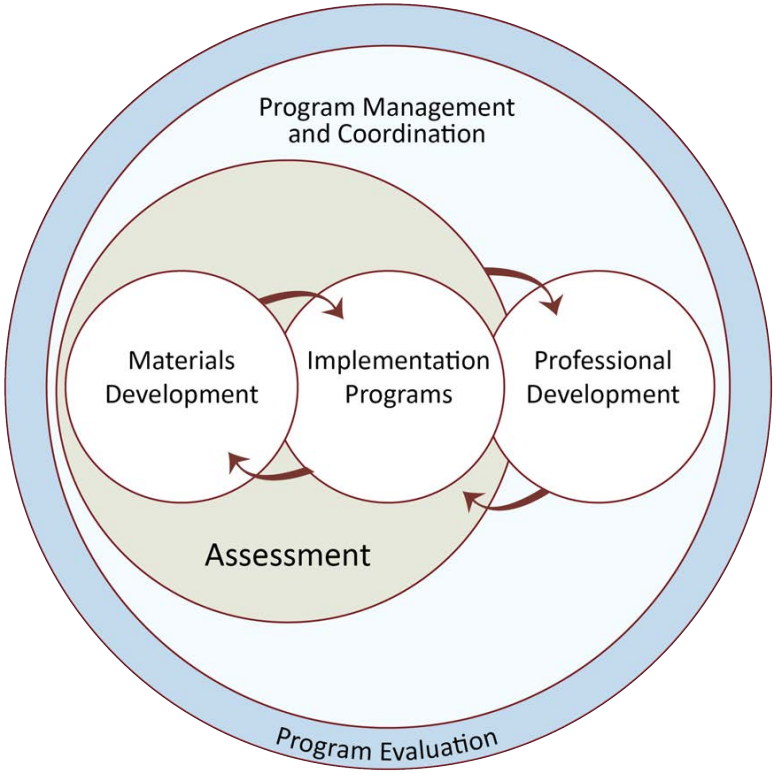
Materials Development Teams

- Developed and tested by teams with members from at least 3 institutions
- 2 year commitment to development, testing, revision and publication
- Supported by assessment team member to meet design rubric, develop embedded assessments for use in testing
- $15,000 stipend for each team member



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Call for Proposals

Introductory Geology Modules

- Energy and sustainability for the next generation
- Living on the edge (of tectonic plates)
- Earth systems and ecosystems in Earth's history
- Changing the chemistry of Earth
- Into the Blue: Human Impacts on Ocean

Closes Feb 15

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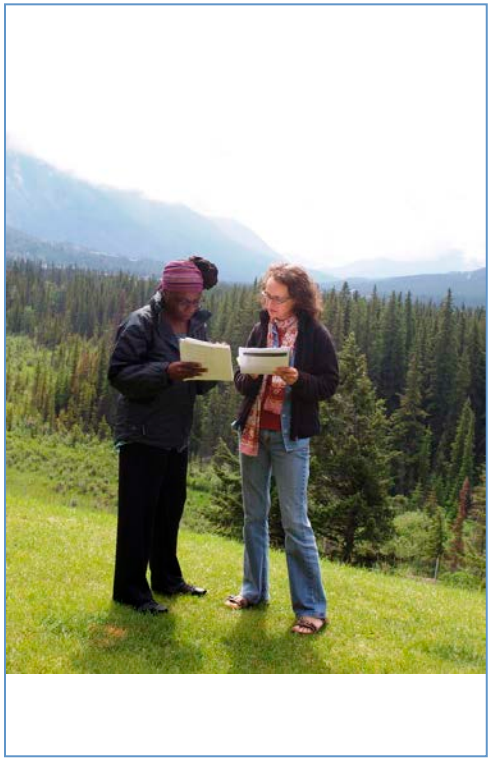
Courses or Modules

- Developing students' geoscientific thinking skills
- Integrating geoscience concepts into teaching about societal issues outside of geoscience programs
- Integrating linkages to societal issues into upper division geoscience courses
- Integrating geoscience methods and concepts into elementary and/or secondary teacher preparation curricula



Closes Feb 15

Testing Assessments

The Geoscience Literacy Exam (GLE)

- probes concepts elucidated in geoscience literacy documents
- Uses a set of questions that address each core content areas
- understand- or apply- level as well as more challenging questions that involve analysis.

Goal is a computer-gradable essay question database

Help needed obtaining student responses and testing questions, creating additional questions

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Town Hall Tuesday 12:30 MW 2018

http://serc.carleton.edu/integrate