Introducing Students to Science Policy: A Scientific Society Perspective

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Outline

- Why & how I developed science policy courses
- The approach I used to teach
- How you can “bring policy into the classroom”

Is there a need for policy courses targeted to science students?

- Policy decisions about science are being made by those without science training
- More and more science students are interested in science policy careers, but not sure where to begin
- In general, not being fulfilled by political science or science technology studies departments
- Scientific organizations see growing interests in policy workshops, but are still only reaching a fraction

Science students will face policy issues in their careers

- Will they be prepared to deal with the following?
  - Federal funding
  - Legislation and regulations
  - Interactions with policy makers
  - International issues
  - Impacts of their work on society

- How can you help prepare them?
  - A policy course for science majors is one approach

Things to consider when developing a course

Challenge		Strategy
Lack of interest/time by other faculty	→	**Find champion at highest level, (Dept Chair, Dean, President)**
Students already have long list of requirements; no time for more classes	→	**Arrange to make your course be counted as a general requirement**
It can take over a year to get a course listed	→	**Consider a seminar course**

How I developed a course

- Conceptualized course
- Identified interested university administrators and faculty
- Socialized and built up support for course across departments
- Validated course content and approach
- Obtained required administrative approval to offer course
- Marketed course to students

Tools I use to teach course

- Science Policy Basics
  - *Beyond Sputnik, NSF S&E Indicators, Pasteur's Quadrant, Science-the Endless Frontier*, etc
  - What is science policy, budget, players in policy, how policy is made, etc
- Policy Memos
- Research Paper
- Guest Lecturers
- Current issues (articles, email alerts, etc.)

Policy analysis

- Science students use the scientific method as a framework to perform their analysis
- Analyzing science policy issues also requires a structured framework:
  - Issue
  - Background
  - Interests, Key conflicts/concerns
  - Policy Alternatives
  - Recommendation

Example of class: Federal Budget

- Students do background reading on budget process and players involved (e.g., *Beyond Sputnik*)
- Supplemental materials provided in class including historical and current budgets analysis (e.g., from AAAS website and NSF S&E Indicators)
- Students apply policy analysis tools to evaluate the AAAS Appropriations Bill Group Exercise

How you can teach a course

- Use current and past syllabi as a starting point
- Consider team teaching
- Use online material developed by AAAS, AMS Policy Program and others
- Integrate material within a course/seminar
- Bring in guest speakers (state & federal government, university government relations office, other faculty)
- Use your own experiences

AMS Policy Program
Policy Curricula Development

- AMS Summer Policy Colloquium (SPC)
  - 10 day immersion in policy for grad students & professionals (May 31-June 9, 2009)
  - started in 2001, has 300 alumni
  - still not reaching enough people
- Developing online resources
  - syllabi
  - ppts
  - reading lists
  - case studies
  - and more

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FAQs

What universities offer courses in science policy?

Why is APP developing science policy curriculum?

Is there a need for this?

What is the plan?

How do I go about teaching a science policy course?

As a science student, how can I learn more about science policy?

Are there books I should read to learn more about policy?

Science Policy Curriculum Development

The AMS Policy Program is developing material for science policy course curricula targeted for:

- University faculty wanting to teach a course
- Departments integrating policy issues into their science classes
- Individuals who want to learn more

Our staff have begun to collaborate with educators in the Earth system sciences with the goal of creating a *community curricula* and *clearinghouse*.

Topics

Starred (*) topics are forthcoming

Select a Fundamental Go

Select a Current Issue (forthcoming) Go

Past support for this project provided by the National Science Foundation & The Lounsbery Foundation.

Do you want to

See examples of syllabi to create your own course

AMS Summer Policy Colloquium Case Studies

Contact

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Thank you

For more information on AMS curricula activities, please contact me at:

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