Teaching the New Mediators: A Curriculum in Science, Technology, and Society

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Virginia Tech
GUNI Conference on Humanities and Higher Education
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The context and challenge
State Funding for Higher Education Remains Far Below Pre-Recession Levels in Most States

Percent change in state spending per student, inflation adjusted, 2008-2016
Increasing enrollment

Decline of the humanities: share of bachelor’s degrees awarded
• Interdisciplinary social science and humanities, studying the relationship of science and technology to society, culture, and politics
• Our department includes anthropologists, sociologists, philosophers, historians
• Development of scientific knowledge and emerging technologies as a social product
• We study institutions, ethics, values, cultural images, imaginaries as components of socio-technical systems
Strongly Participatory Science and Knowledge Justice in an Environmentally Contested Region

Barbara L. Allen

Abstract

This article draws insights from a case study examining questions of resilience in two polluted towns in the southern United States. A participatory health study, in one of these towns, is presented as a way to address environmental justice issues with relevant data supporting the health claims. The study included in the health survey, from the format to the final data analysis. Through the research process, the narrative reveals the participatory science as the data could be used to enact improving a program and policy work is already being enacted. Drawing from the literature on participatory science and from the initial outcomes of the local health work, this produces a framework of knowledge justice. Understanding making as part of a social justice agenda aligns well with Virginia Tech’s mission to solve world problems and to contribute to the common good.

Matthew Weisnhaus

Engineers for Change

Competing Visions of Technology in 1960s America

SONJA O. SCHMID

Designing a market-like entity: Economics in the politics of market formation

Daniel Brodbeck

Department of History and Social Sciences

Animal Constructions and Technological Knowledge

ASHLEY SHEW
Our goals in building a new undergraduate degree

- Assure support for our department in the ecology of the university
- Prepare students for non-technical roles that are saturated with science and technology
- Build a community
Our curriculum model - skills

- Knowledge of science and technology policy domains
- STS conceptual frameworks
- Research skills
- Liberal arts skills: writing, public speaking, critical thinking, collaboration
- Transactional expertise in at least one problem area
• Students learn concepts and methods while covering contemporary research
• They immediately apply these approaches to novel problems and data
• Every student engages in individual and collaborative research on a contemporary problem
• They make research products for real audiences: scholars and broader publics
Example 1: Undergraduate research day
Example 2: Choices and challenges

We created a new course linked to Choices and Challenges.

Students in the course will plan and run the forum.

They will meet with the visiting panelists.

Prepare “background sessions”

The Choices and Challenges Project, since 1995, has been running public forums on issues of public concern in emerging science and technology.

February 27, 2014

The Choices and Challenges Project, since 1995, has been running public forums on issues of public concern in emerging science and technology.
• Introductory course
• Core courses are defined by problem areas
  • Life Sciences and Society
  • Innovation in Context
  • Global Science and Technology Policy
  • Science, Technology, and Environment
• Collaboration and Public Engagement
• Focus area electives
  • Bachelor of Arts option
  • Bachelor of Science option
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Thank you