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Memorandum

To: All SCU Faculty

From: The Core Committee for Science, Technology, and Society, a faculty committee charged with guiding the development of courses to meet the Science, Technology, and Society (STS) component of the new core.

Colleagues,

As a follow-up to the call for honoraria proposals, the Core Committee for Science, Technology and Society invites and encourages faculty across the university to participate in this new component of the core. This document provides some guidelines that may be helpful for faculty interested in submitting a proposal for a Core Honorarium in order to develop an STS course.

The STS element of the new core is not simply a revision of the old technology requirement, but is an entirely new component, described more fully below. As such, the committee anticipates the need for many new courses to be developed. In addition to formal proposals for honoraria, we welcome interested faculty to contact us with questions or requests for further information.

General Description of STS:

STS (Science, Technology and Society) is an interdisciplinary field that has emerged in the last few decades in response to the need for rigorous and ongoing study of the ways in which science and technology impact society, and vice versa. The field does not artificially unite three distinct and self-contained regions of human activity; instead, it recognizes that science, technology and society are, and have always been, fundamentally inter-related dimensions of human existence. The recent emergence of STS as a dedicated field, however, is due in large part to the increasing visibility, speed, and global reach of science and technology's impact on the economy, the environment, communication, health, education, culture, and politics, and the practical need for scholarship that can drive sound public policy with respect to these impacts as well as inform good scientific, engineering and design practice. Significant contributions to this framework come from the natural and social sciences, engineering, humanities, business and law.

Learning Goals for STS courses:

- Knowledge of the formative influences, dynamics, social impacts, and ethical consequences of scientific and technological development
- Knowledge of the principles of the scientific method and how they are applied in the natural and social sciences
- Development of *complexity* as a habit of mind, i.e., an approach to understanding the world that appreciates ambiguity and nuance as well as clarity and precision
- Development of *critical thinking* as a habit of mind, i.e., the ability to identify, reflect upon, evaluate, integrate, and apply different types of information and knowledge to form independent judgments

Specific Guidelines for Proposals:

1) STS courses will integrate the social dimensions of science and technology with significant and rigorous attention to the relevant science and/or technologies themselves. Courses may focus on the social implications of science, of technology or of both. The extent and depth of the scientific/technological and social content presented in each course will vary with the nature of the subject matter, the expected student audience, faculty expertise, and pedagogical concerns. However, the committee anticipates a minimum of 30% of coursework will be devoted to understanding scientific principles/content or hands-on use of technology, and a minimum of 30% devoted to understanding the social impact of the science and/or technology.

2) "Scientific principles/content" should be understood to include any or all of the following: methods and process of scientific inquiry; relevant scientific concepts, laws, theories and their application; methods of data collection and analysis; standards of scientific communication and assessment; experimental techniques, protocol and design; technological design, operation and function. "Social content" should be understood to include any or all of the following: the historical and social context of scientific and technological development and activity; the philosophical principles, logic and normative standards of scientific/technological reasoning and language; the economic, cultural, political and environmental impact of science and technology, globally and/or with respect to particular populations; the ethical significance of scientific and technological development.

3) Broad interdisciplinarity is encouraged. In this respect the new core is the same as the old core. We anticipate and welcome participation from faculty in the natural and social sciences, humanities, engineering, and business.

Other Pertinent Facts:

A) General guidelines for Core Honoraria are posted at www.scu.edu/core2009/grants_workshops.cfm The "Specific Guidelines" above are intended to provide additional guidance to faculty interested in applying for Honoraria to develop STS courses. The process of applying for Core Honoraria is distinct from the Core course approval process. As indicated in the general guidelines, Honoraria proposals should include a brief course description (and, if applicable, an electronic copy of the syllabus to be transformed). The extended deadlines for proposals for Curriculum Transformation and Development Honoraria are: January 14, 2008, March 14, 2008, and May 14, 2008.

B) Proposals can be from individuals or from teams of two or more people. $1000 will be available for substantial transformations of current courses, $1500 will be available to faculty developing new courses for the Core, and up to $3000 (for each participant) will be available to faculty working collaboratively to develop innovative or pioneering courses or modules that promise to make a lasting contribution to a department, program, or Core requirement, or to develop courses that multiple faculty could teach.

C) Formal proposals should be submitted to Kristin Boscia (kboscia@scu.edu). Faculty inquiries may be directed to any member of the STS core committee: Geof Bowker, Chair (CSTS), Phil Kesten, Liaison (Physics), Rich Barber (Physics), Jack Gilbert (Chemistry), Shoba Krishnan (Electrical Engineering), Chuck Powers (Sociology), Shannon Vallor (Philosophy).