Science, Technology, and Innovation for Sustainable Prosperity

STP-502Y

John F. Kennedy School of Government
Spring Semester
v. May 3, 2005

Course Meetings: Tuesdays, 10:10-11:30 AM, alternating between the BCSIA Library (3rd floor of Littauer) and Perkins Room (Rubenstein [Eliot] 415).

Instructors: Bill Clark (L360, x53981), John Holdren (L370, x51464), Calestous Juma (L362, x68127) and Kelly Sims Gallagher (L333, x51960)

Conveners: Science, Technology, and Public Policy Program, Belfer Center for Science and International Affairs, and Science, Environment, and Development (SED) project, Center for International Development.

Course Objectives and Overview: This seminar will address the role of science, technology, and innovation in economic development in general, and with respect to the particular problems related to sustainable development. There are three primary aims of the seminar:

(1) Conduct a critical survey of the classic research literature and development of theory in the field of science, technology, innovation, and public policy in order to provide all participants with a common intellectual foundation.
(2) Identify and discuss the big unresolved questions in the field, the gaps in our collective understanding, the new controversies that are emerging, and the methods that can be productively employed to contribute to the field.
(3) Allow participants to present research proposals and work in progress so that everyone practices shaping proposals, critiquing ongoing research, and how to give and receive constructive peer review.

Format: Outside speakers or instructors will lecture for 25 minutes, followed by commentary from a discussant for 10 min., followed by general discussion. Fellows will present for 35 min., with a 5 min. discussant commentary, and then general discussion.

Requirements: Students taking the class for credit are required to submit a full research proposal by February 15, 2005, based on their one-page research plan submitted and reviewed in the fall. The final paper will be due April 19, 2005. In addition to the research proposal and paper, students will be expected to do all the reading, attend all seminars, and to contribute to discussions, occasionally as a formal discussant. Participants not taking the course for credit are asked to attend regularly, to do the reading, and to contribute to discussions, occasionally as a formal discussant.

Web Page: Contact Rob Stowe for access: robert_stowe@harvard.edu; x64265.
February 8, 2005; Location: BCSIA Library
Chair: Holdren
Speaker: Calestous Juma

February 15, 2005; Location: Perkins Room
Speakers: John Holdren and Kelly Gallagher
Topic: National Commission on Energy Policy: Research Inputs and Development Implications
Discussant: Jørgen Henningsen, Principal Adviser, Directorate-General Energy & Transport, European Commission,

February 22, 2005
Location: BCSIA Library
Speaker: Bill Clark
Topic: A Framework for Analysis of Knowledge Systems for Sustainable Development
March 1, 2005  
**Location:** Perkins Room; **Chair:** Clark  
**Speaker:** Richard K. Lester, Professor of Nuclear Engineering, MIT, and founding Director, MIT Industrial Performance Center  
**Topic:** Innovation—the Missing Dimension  

March 8, 2005  
**Location:** Perkins Room  
**Chair:** Clark  
**Speaker:** Carolyn Kousky, Fellow in the Science, Environment, and Development Group  
**Topic:** Institutional Design Lessons for the Production of National Level Indicators on the State of the Nation’s Environment  

March 15, 2005  
**Location:** Perkins Room  
**Chair:** Clark  
**Speakers:** Student presentation: Nina Dudnik  
**Topic:** Connecting scientists and farmers through participatory plant breeding  
No reading

March 22, 2005  
**Location:** BCSIA Library  
**Chair:** Clark  
**Speaker:** Student presentation: Elta Smith  
**Topic:** Re-presenting rice: genomics, intellectual property, and sustainable development  
No reading

March 29, 2005 – Spring Break

April 5, 2005  
**Location:** Perkins Room  
**Chair:** Juma  
**Speakers:** Jeff Bielicki  
Carbon Sequestration and the Energy System Transition: An Embryonic Framework  
No reading.
April 12, 2005
Location: BCSIA Library
Chair: Holdren
Speaker: Hongyan He Oliver, ETIP Fellow, and Kelly Sims Gallagher, ETIP Director
Topic: Research Proposal on In-Use Vehicle Emissions in China
Discussant: Ambuj Sagar
No reading

April 19, 2005
Location: Perkins Room
Chair: Clark
Speakers: Nicole Szlezák, Ph.D. student, and Lorrae Van Kerkhoff, SED Fellow
Topic: Knowledge flows and cash flows: investigating how the Global Fund to fight AIDS, Tuberculosis and Malaria connects research and practice
NOTE: Research papers due

April 26, 2005
Location: BCSIA Library
Chair: Juma
Speaker: Apiwat Ratanawaraha, STG Fellow
Topic: Late Standardization: From Catching Up to Forging Ahead
No reading.

May 3, 2005
Location: Perkins Room
Speaker: All instructors
Topic: Science, Technology, and Innovation for Sustainable Prosperity: What Have We Learned?
Discussant: Class Discussion