Advanced Theory and Practice in Science, Technology, Innovation Systems, and Policy

Spring 2018 – EST 625
Seminar sessions: Thursdays, 1-3:50pm, 1310 (Old) Computer Science Building

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Office Hours: Thursdays 9 am to Noon, or by appointment
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Overview: This PhD seminar evaluates ideas and applications of science, technology, policy and innovation systems by drawing from a wide range of early and contemporary literature. Emphasis is placed on deconstructing seminal ideas in the context of policy and technology change objectives. Students will refine analytical and communication skills that are relevant for working in positions at the interface of technology and management.

Course specifications: The course has a significant reading and writing focus each week. It is required for doctoral students in the Department of Technology and Society, and open to students from other departments upon approval of instructor.

Learning objectives: Successful students will develop a fuller understanding of influential ideas relating to course themes; be able to critically evaluate theoretical concepts in the context of contemporary issues; and professionally convey substantive analysis of policy-relevant applications in writing and discussion.

Course Text:

Blackboard will be the most current source for course updates, assignments and readings.

Grading:
Weekly writing assignments and participation (25%); exam (30%); presentation (20%); Final paper (25%). Late assignments lose 10% of the possible score per day.

Weekly readings and analysis: Readings and written analysis of the readings should be completed in advance of each course session. Written analysis should be submitted through Blackboard by 5:00 pm Tuesday prior to the given course session.

Presentations: Students will choose an issue at the intersection of science, technology, innovation
and policy as the basis to prepare a preliminary research proposal. Coverage should include the rationale for a study, method, practical considerations, and why a funder should support it. (Note: Topics should be discussed with professor by Week 3.) In Weeks 13-14, students will present a polished proposal with in-depth perspective on the issue, demonstrating knowledge of course concepts in theory and practice.

Exam: A take-home exam will be posted on-line. Students will have a week to complete it.

Final paper: A research proposal for a project at the intersection of science, technology, innovation and policy will be submitted by May 4th (7-10 pages). See ‘Presentations’ above for additional detail.

General Outline:

- Week 1: Introduction and requirements
- Week 2: STIP overview
- Week 3: Science and technology ecosystems
- Week 4: Technology and large systems
- Week 5: Lock-in, agency and diffusion
- Week 6: Innovation systems and transitions I
- Week 7: Exam
- Week 8: Spring Break
- Week 9: Innovation systems and transitions II
- Week 10: Experts and Policy I
- Week 11: Experts and Policy II
- Week 12: Experts and Policy III
- Week 13-14: Presentations and Taking Stock
- Week 15: Final papers due

Class Requirements:
Electronic devices, including laptops, must remain off during seminar time out of respect for all participants.

Disability Support Services
If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, ECC (Educational Communications Center) Building, room128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential. Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website: http://www.stonybrook.edu/ehs/fire/disabilities
Academic Integrity
Intellectual honesty is the cornerstone of all academic and scholarly work. Therefore, the University views any form of academic or scholarly dishonesty as a serious matter. Instructors are required to report all allegations of academic or scholarly dishonesty to their Graduate Program Director and the student’s home Graduate Program Director if different. Furthermore, Graduate Program Directors must report all incidents in which a student is found guilty to the Graduate School. Additional details on procedures for hearings and other functions at the judiciary processes are available in the Grievances and Appeals section of the Bulletin.
http://sb.cc.stonybrook.edu/gradbulletin/current/regulations/academic_probation/academic_honesty.php

Critical Incident Management
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures.

Attendance and late arrival policy
Attendance is mandatory. Absences and lateness will impact grades.