**Stony Brook University**

Department of Technology and Society

College of Engineering and Applied Sciences

**EST441 Interdisciplinary Senior Project**

Tu Thu 1:00 – 2:20PM Room: DTS Seminar Rm 1310 Spring Semester 2020

Instructor: Professor Moriarty, Email: kevin.moriarty@stonybrook.edu
 Old Computer Science Room 1423 Ph# 632-1898

 Office Hours:

Other times available by appointment

COURSE:

**Course Description (from the catalog)**:

Students carry through to completion their own research, development or product evaluation project based on the proposal submitted and approved in EST 440. Requires practical steps including garnering faculty mentorship, creating a schedule, assembling resources, conducting research or working on prototype, and a final paper and presentation.

Students will select a technology-oriented topic related to inequality, sustainability or societal impacts of technology. Students will work individually on the topic and present on their research. A paper will also be produced. We will closely read a book on what “technology” is, and how new technologies develop.

**Learning Outcomes**:

Students will improve research and oral and written presentation skills.

Students will learn to carefully analyze a piece of writing in their skill area.

Students will refine their understanding of how technology develops.

Students will improve their ability to speak extemporaneously on technical matters and in a substantive fashion.

TEXT: Arthur, W. Brian. 2009. *The Nature of Technology*. Free Press, New York, NY. 246 pp.

 (in bookstore, on line, etc.)

**GENERAL NOTES:**  The course will be conducted as a Lecture, Black Board, during scheduled weeks. Homework solutions to engineering economics problems will be required. This provides ample opportunity for learning, and also evaluation of the student's performance. Homework assignments will be due the following week in which they are assigned as designated by the online calendar of assignments. The problem solutions should be presented in a clear format so computations can be evaluated easily. Prepared spreadsheet solutions and graphics will be accepted. Any notes and assumptions or summary comments should be included.

All work will be promptly graded. Late home works will not be accepted.

 Work will be given under academic conditions, and will be administered by faculty and/or TA’s. Assignments should be prepared individually, although they are not required to be, and it is understood that collaboration with others on the homework may be educationally beneficial.

**The details of this syllabus are subject to change as the course progresses.**

GRADES: Senior Design Project: % of grade Due Date

Project step 1: Topic 10 Feb 16th

Project step 2: Outline 20 Mar 10th

Project step 3: Final Paper 25 May 3rd

Presentation 20 Start Mar 10th Last Apr 30th

Attendance/Participation 10

Reading summaries 10 Discussion Board

Sample project critique 5 Mar 9th

COURSE SYLLABUS:

**WEEKLY CONTENT**

Note: This is a general guideline of the course content and syllabus. This outline is subject to change as determined by the instructor during the semester.

**REQUIRED STATEMENTS:**

**Student Accessibility Support Center Statement**

 If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Student Accessibility Support Center, ECC (Educational Communications Center) Building, Room 128, (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 Student Accessibility Support Center. For procedures and information go to the following website: http://www.stonybrook.edu/ehs/fire/disabilities.

**Academic Integrity Statement**

 Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at http://www.stonybrook.edu/commcms/academic\_integrity/index.html

**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 University Community Standards 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. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.

**Course Academic Integrity:**

 Fundamental Engineering Ethics require engineers to give proper credit for engineering work where credit is due. Therefore, references should be cited on all written work to acknowledge the aid of other individuals and both published and unpublished references. “Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Any suspected instance of academic dishonesty will be reported to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at <http://www.stonybrook.edu/uaa/academicjudiciary/> “

 “The University at Stony Brook expects students to maintain standards of personal integrity that are in harmony with the educational goals of the institution; to observe national, state, and local laws and University regulations; and to respect the rights, privileges, and property of other people. Faculty is required to report disruptive behavior that interrupts faculty’s ability to teach, the safety of the learning environment, and/or students’ ability to learn to Judicial Affairs.”

 The University Senate Undergraduate and Graduate Councils have authorized that the following required statements appear in all teaching syllabi (graduate and undergraduate courses) on the Stony Brook Campus.

**Americans with Disabilities Act:**

 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.