

Add Course Request

Submitted on: 2012-10-31 11:36:21

1. COURSE SUBJECT	ENGR
2. COURSE NUMBER (OR PROPOSED NUMBER)	2243
3. COURSE TITLE	Nanoscience & Society
4. INITIATING DEPARTMENT or UNIT	3187
5. NAME OF SUBMITTER	Kimberly A Duby
6. PHONE of SUBMITTER	Phone: +1 860 486 5466
7. EMAIL of SUBMITTER	Email: kimberly.duby@uconn.edu
8. CONTACT PERSON	Marcelle Wood
9. UNIT NUMBER of CONTACT PERSON (U-BOX)	3187
10. PHONE of contact person	Phone: 486-2167
11. EMAIL of of contact person	Email: marty@engr.uconn.edu
12. Departmental Approval Date	10/01/2011
13. School/College Approval Date	10/13/2011
14. Names and Dates of additional Department and School/College approvals	04/26/2011
15. Proposed Implementation Date	Term: Spring, Year: 2013
16. Offered before next printed catalog is distributed?	Yes
17. General Education Content Area	
18. General Education Skill Code (W/Q). Any non-W section?	None
19. Terms Offered	Semester: Spring Year: Every_Year
20. Sections	Sections Taught: 1
21. Student Number	Students/Sections: 40
22. Clarification: This will be an honor's core course.	
23. Number of Credits	3 if VAR Min: Max: credits each term
24. INSTRUCTIONAL PATTERN 2 days a week for 1 hour 15 mins.	
25. Will this course be taught in a language other than	No

English?	If yes, then name the language:
26. Please list any prerequisites, recommended preparation or suggested preparation:	
27. Is Instructor, Dept. Head or Unit Consent Required?	No
28. Permissions and Exclusions:	
Not open for credit to students who have passed ECE 3243 Open only to students in the Honors Program	
29. Is this course repeatable for credit?	No If yes, total credits allowed: Allow multiple enrollments in same term?
30. Grading Basis	Graded
31. If satisfactory/unsatisfactory grading is proposed, please provide rationale :	
32. Will the course or any sections of the course be taught as Honors? AsHonors	
33. Additional Details:	
34. Special Attributes:	
35. REGIONAL CAMPUS AVAILABILITY:	
36. PROVIDE THE PROPOSED TITLE AND COMPLETE CATALOG COPY:	
ENGR 2243 Nanoscience and Society 3 credits, Three 1-hour lectures Introductory, interdisciplinary honors core course on nanoscale science and society. Introduction to the fundamentals of nanoscience and to the broader societal implications of implementing nanotechnology locally and globally. Nanoscience fundamentals (basic concepts and results of quantum physics), fabrication (how to make nano-scale structures, imaging and analysis, applications (electronics, biomedical, environment, new products), society and ethics in nanoscience and technology. Relevant case studies.	
37. RATIONALE FOR ACTION REQUESTED	
We are developing an ENGR class, Nanoscience and Society, as part of the honors program. The class will be open to non-honors as well, and will be taught for the first time in Spring 2012, cross-listed with a class that we already have in ECE and I teach, ECE 3243, Introduction to Nanotechnology.	
We haven't done the paperwork for that yet but the idea is that the class will be a gen-ed class, area 3. We missed the deadline to apply to obtain an ENGR # and Marty had mentioned we could perhaps use a temporary number for now, like ENGR 3195. Could we do this? We would like to list it as ECE/ENGR.	
I have attached our proposal for this course and also the syllabus for my current class that we would like to cross-list (ECE 3243).	

38. SYLLABUS:

Online URL: (https://web2.uconn.edu/senateform/request/course_uploads/kaa00009-1351691551-syllabus-ENGR2243-13-upd.pdf)

39. Course Information: ALL General Education courses, including W and Q courses, MUST answer this question

40. Goals of General Education: All Courses Proposed for a Gen Ed Content Area MUST answer this question

41. Content Area and/or Competency Criteria: ALL General Education courses, including W and Q courses, MUST answer this question.: Specific Criteria

- a. **Arts and Humanities:**
- b. **Social Sciences:**
- c. **Science and Technology:**
 - i. **Laboratory:**
- d. **Diversity and Multiculturalism:**
 - 43. **International:**
- e. **Q course:**
- f. **W course:**

42. RESOURCES:

Does the department/school/program currently have resources to offer the course as proposed
YES

If NO, please explain why and what resources are required to offer the course.

43. SUPPLEMENTARY INFORMATION:

ADMIN COMMENT:

Senate approved new course 2.25.2013

ENG2243 Nanoscience and Society

Spring, 2013 3 credits, time and location tba

Instructor: Prof. Bryan D. Huey

IMS Plaza, Room 158, bhuey@ims.uconn.edu Office Hours: tba

Course Web Page: online (huskyCT)

Required Textbook: 1) Nanoethics: The Ethical and Social Implications of Nanotechnology by Fritz Allhoff, Patrick Lin, James Moor, John Weckert, Wiley (2007).

2) Coursepack: This will include content from popular culture (Wired magazine, National Geographic), federal agencies (EPA, NOAA, DOE, NSF, NIH), non-profits (the National Academies, NRDC), textbooks on related topics, etc. It will also include a primer on ethics and logical discourse to inform/improve the regular group discussions.

Goals: The class will introduce nanoscience and nanotechnology with an emphasis on solutions to grand challenges facing society in the 21st century. Case studies in a wide range of topics will provide platforms to discuss proposed nanosolutions, emphasizing societal implications such as health, economics, the environment, and widespread access. Ethical considerations of implementing these technologies, or electing not to, will regularly be discussed.

Style: This course will emphasize discussion, class participation, and group projects to support the readings as well as lectures by the instructor and other guest lecturers.

Laboratories: This course does not have a lab component. Optional visits to area nanofacilities will be offered to better put the course content into perspective.

Assessment: Grading is based on performance on homework (20%), quizzes (20%), group assignments (20%), class participation (10%), and a final exam (30%).

Topics:

What is Nanotechnology?

Why Nanotechnology?

Why Not?

Ethics Primer

Nanoscience and Energy

Nano and Health

Nano and Food and Agriculture

Nanoenhancement (are we playing God?)

Nanotechnology and Risk

Nanotechnology and Privacy

Nanotech for Developing Countries!?

Technology Revolutions in General