LAJ Curricula Agenda  
May 9, 2018

Items 1-11 require vote of LAJ Curricula and vote of AS faculty; items 12-13 require vote of LAJ Curricula only.

Part I

Item 1. NEW COURSE – Biology—BIO 0173  
Item 2. NEW COURSE - Child Study and Human Development—CSHD 0034  
Item 3. NEW COURSE – Classics—CLS 0171  
Item 4. NEW COURSE – Classics—GRK 0140  
Item 5. NEW COURSE - Community Health—CH 0012  
Item 6. NEW COURSE - Community Health—CH 0183  
Item 7. NEW COURSE - Community Health—CH 0184  
Item 8. NEW COURSE - Film and Media Studies Program—FMS 0044  
Item 9. NEW COURSE - Romance Studies—ITAL 0053  
Item 10. NEW PROGRAM—Minor in Applied Computational Science  
Item 11. NEW MAJOR—Applied Environmental Studies—Environmental Studies

Part II

Item 12. DELETE COURSE – Philosophy—PHIL 0010  
Item 13. CHANGE MAJOR— Engineering Psychology/Human Factors Engineering—Psychology

Part I

Item 1. NEW COURSE - Biology  
From: Erik Dopman, 617-627-4890, erik.dopman@tufts.edu  
Department Chair: Sergei Mirkin/Harry Bernheim, 617-627-3187, harry.bernheim@tufts.edu  

Bio 0173 R for Biologists  
Suggested Abbreviation for Title: BioR

Bulletin Description: Introduction to R, the language and environment for statistical computing and graphics. Programming skills in R will be developed through a combination of reading and doing.  

Next Anticipated Offering: Alternating Fall Semesters, beginning 2019

Rationale. R is a valuable quantitative tool for anyone studying biological science. R’s strength stems from its flexibility when applying various statistical and graphical techniques, its cost (free), and its cross-platform functionality; however, as a command line programming language, it can be initially overwhelming. There currently is not an introductory level course focusing on R. The course has been taught twice before (F17 Bio196; & S13 Bio294, both times as "R for Biologists").

Overlap. None.
Resource Requirements/ Curricular Adjustments. There are no new resources needed.

Requirements. It would count towards the Q requirement.

ARB Review Requested: Distribution Credit Mathematical Sciences

Item 2. NEW COURSE - Child Study and Human Development

From: George Scarlett, 617-627-2248, george.scarlett@tufts.edu
Department Chair: George Scarlett, 617-627-2248, george.scarlett@tufts.edu


Bulletin Description: Introduction to the major crises posed by climate change (denigration of land and oceans, extinction of species, increased natural disasters). The challenges and supports needed for nurturing the development of earth stewards, those who will address the crises. Topics include eco-restoration, child-centered approaches to connecting children to nature, and developmental perspectives on wonder, environmental education, and earth stewardship. Cross-listed as ENV 0034. By permission, open to graduate students under the listing of CSHD 234.

Next Anticipated Offering: This course is being taught right now as a 143: Special Topics course -- it will be taught again in the Fall (2018).

Rationale. The rationale for the course is that it meets a need to combine two great issues, namely, climate change and the fact that today's children are apt to be alarmingly disconnected from nature. These issues need to be looked at together since the evidence so far indicates that connection to nature in childhood and adolescence is a necessary precursor to caring for nature and becoming an earth steward.

Overlap. This course has been thoroughly vetted by members of the environmental studies program -- as well as by our own undergraduate programs committee. Neither group has found any overlap or conflicts. And because of its activist focus on the development of earth stewards. It has also received approval to cross-list with Tisch College.

Resource Requirements/ Curricular Adjustments. The course requires no additional staffing and no new resources.

Requirements. The course will be an elective in both the CSHD major and that of Environmental Studies (It would be cross-listed as ENV 34). With the instructor's permission, the course (under the number 234) can also serve as an elective in a CSHD graduate program.

ARB Review: Distribution Credit Social Sciences

Item 3. NEW COURSE - Classics

From: Anne Mahoney, 7-4743, anne.mahoney@tufts.edu
Department Chair: Ioannis Evrigenis, 7-3213, ioannis.evrigenis@tufts.edu

CLS 0171 Advanced Indo-European Linguistics

Suggested Abbreviation for Title: Adv IE Linguistics

Bulletin Description: Topics in syntax, morphology, metrics, or poetics, or an introduction to an ancient Indo-European language not otherwise offered. May be repeated. Pre-requisite CLS 170/LING 170. Cross listed as LING 171.

Next Anticipated Offering: not before spring 2020

Rationale. Intended for students in classics or linguistics who have advanced knowledge of at least one older IE language and want to do further work in IE linguistics. Prior offerings: spring 2007 (as CLS 291-01), on metrics; spring 2017 (as LING 191-01), on syntax. Course is to be 3
SHUs and should have a permanent cross listing, CLS 171 and LING 171. Pre-requisite is an enrollment requirement, not a recommendation. **Overlap.** No overlap; this is part of a set of historical courses (Romance Linguistics, Historical Linguistics, Indo-European) in the linguistics program. Ariel Goldberg and Dilip Ninan of the linguistics minor group have approved the proposal; so have the faculty of the classics department. **Resource Requirements/ Curricular Adjustments.** Will be part of Mahoney's portfolio, offered occasionally according to demand, possibly as a directed study. **Requirements.** Counts as an elective in all classics major tracks and in the linguistics minor. **ARB Review Requested:** Distribution Credit Humanities and Classical Culture Option

---

**Item 4. NEW COURSE - Classics**

*From:* Anne Mahoney, 7-4643, anne.mahoney@tufts.edu  
*Department Chair:* Ioannis Evrigenis, 7-3213, ioannis.evrigenis@tufts.edu

**GRK 0140 Readings in Byzantine Greek**

*Suggested Abbreviation for Title:* Byzantine Greek  
**Bulletin Description:** Introduction to the classicizing literary Greek of the Byzantine period. Readings co-ordinated with Byzantine History class. How scholars, historians, poets, novelists, and rulers construct Byzantine culture; how Byzantine Greek differs from classical Greek. Pre-requisite: Greek 3 and concurrent enrollment in CLS 39 or 110. 1 SHU. May be repeated.  
**Next Anticipated Offering:** probably spring 2019  
**Rationale.** History has a significant series of Byzantine Studies classes, cross-listed with Classics, but those are conducted in English, and we have no classes in which students can read Byzantine literature in the original. Although the largest difference between classical and Byzantine Greek is the pronunciation, there are enough differences in vocabulary (and, to a lesser extent, in morphology and syntax) that it's useful for students to have a systematic introduction. The pre-requisite is a real enrollment requirement, not merely a recommendation. **Overlap.** No other department or program teaches Greek in any form, so there's no overlap; this course has been developed in collaboration with David Proctor in History, the Byzantine specialist.  
**Resource Requirements/ Curricular Adjustments.** Will be taught by Mahoney at first, though other Hellenists may also offer it. The library already acquires the necessary Byzantine resources to support the existing courses in History. **Requirements.** Counts as an elective for all Classics major tracks and graduate tracks. **ARB Review Requested:** Distribution Credit Humanities

---

**Item 5. NEW COURSE - Community Health**

*From:* Jennifer Dacey Allen, 6176270366, jennifer.allen@tufts.edu  
*Department Chair:* Jennifer Dacey Allen, 6176273233, jennifer.allen@tufts.edu

**CH 0012 Community Health Innovation Lecture Series**

*Suggested Abbreviation for Title:* CHILS  
**Bulletin Description:** The community health challenges of the coming century are likely to be significantly different from those that we have faced in the past or in our current day. Paradigm shifts in the approaches and interventions to improve the health of populations will be needed. Seminar bringing together interdisciplinary scientists, practitioners, and stakeholders to explore
new frontiers in community health practice and policy on local, state, national and global levels. Intended to foster and nurture the kind of creativity, innovation, and entrepreneurship that will be needed to solve current and future threats to population health.

**Next Anticipated Offering:** The Community Health Innovation Lecture Series will be offered in Fall 2018 and each semester thereafter.

**Rationale** This seminar will provide students with opportunities to broaden their knowledge beyond what is currently offered in the community health curriculum. Students will have the opportunity to learn from experts and leaders of innovative interventions to improve population health. Over the past five years, senior exits surveys reveal a great demand for a course that addresses innovation and entrepreneurship. We have run a year-long seminar series (no credit) for the past two years. We are now formalizing this offering as a course and requiring work outside of the class.

**Overlap** The course expands existing offerings within the department. There is no identified overlap with existing courses in other departments. This course will likely benefit pre-health students as well as majors.

**Resource Requirements/ Curricular Adjustments.** This course will be taught by our new Assistant Professor of Community Health, Madina Agenor. There are no new resource needs.

**Requirements:** This will be a mid-level course (elective). Pre-reqs will include *Introduction to Community Health* (CH1) and *Healthcare in America* (CH2).

**Objectives** Upon completion of this course, students should be able to:
- Appreciate the role of cross-sector and transdisciplinary collaborations in creating and disseminating new community/public health programs, policies and/or practices.
- Understand differing perspectives on public health issues from a wide variety of stakeholders and articulate how differing perspectives can create opportunity for constructive problem-solving and new solutions for public health problems.
- the creation of innovations and entrepreneurship promoting population health

**Requirements and Student Evaluation:** Students will be required to attend 2.5 hours be assigned articles or other publications related to each lecture and will submit a short-written reflection after the talk. Detailed information about the speakers and full schedule can be found on the Community Health website.

**Course Structure**
Students will earn 1 SHU by attending weekly seminars and completing out-of-class assignments. Before class, students will be required to read research papers, articles from the lay media, and/or case studies and to write reflective papers after each class. The class will be pass/fail only.
nationally, in rural and in urban areas? What role do smaller non-hospital entities, such as ambulatory surgical care centers and community health centers play in providing care? What implications do hospital business decisions have on equity of access across race, class and place?

Next Anticipated Offering: Spring 2018.

Rationale. This course was under our special topics number. It has now been taught consistently since Fall 2016. It fills each semester it is taught. We will continue to offer this course. It is a very relevant topic to our program of study.

Overlap. It is only available to Community Health students. It does not overlap with any other department.

Resource Requirements/ Curricular Adjustments. It won't. It is taught by the same professor who taught as a special topics.

Requirements. Last taught Fall 2017, Spring 2016. It fulfills an upper level elective or upper level with research requirement.

ARB Review: Distribution Credit Social Sciences
social and commercial marketing. Analyzes case studies of how marketing has succeeded in persuading consumers to invest in political and social causes the same way they do in commodities, changing behavior to improve health, the environment, voting, and social justice among others. Team projects applying these theories by partnering with local non-profit organizations, analyzing each organization’s communications and marketing goals, and providing them with a marketing communications plan that includes both new strategies and tactics such as logos, web pages, print materials, or event and outreach concepts.

**Next Anticipated Offering:** This course will be taught every fall or spring as a letter graded, full credit, 3 SHUs course.

**Rationale.** This media practice course has long been offered in the Experimental College for students taking the Communications and Media Studies (CMS) minor, and now that the CMS minor has been replaced by Film and Media Studies, it remains very popular among FMS majors and minors (it is always full). FMS students are required to take a practice course, and this course is a desirable option for those who do not wish to pursue filmmaking. Many FMS graduates, like CMS graduates before them, work in PR and marketing upon graduation, and this course provides them with a liberal arts oriented foundation in the field by teaching them about the history and theory of social marketing in the USA. It also shows them how to use PR and marketing to promote social justice, and it offers them some practical experience by partnering them with local organizations. Prior offerings: Spring 2018: FMS 94-01 Social Marketing Spring 2017: FMS 94-04/EXP 58 Social Marketing Spring 2016: FMS 94-06/EXP 58 Social Marketing Spring 2015: EXP 58 Social Marketing Spring 2014: EXP 58 Social Marketing Spring 2013: EXP 58 Social Marketing Spring 2012: EXP 58 Social Marketing Spring 2011: EXP 58 Social Marketing Spring 2010: EXP 58 Social Marketing

**Overlap.** This course does not overlap with other courses at the university. Although there is a course called Entrepreneurial Marketing in ELS in Engineering, the focus of that course is teaching students how to market small-to-medium sized businesses in the contemporary marketing environment. Our proposed course focuses primarily on the history and theory of using marketing tools and concepts to advance social causes, and students apply this knowledge in partnering with local organizations that promote social justice. I have consulted with Howard Woolf, director of the Ex College, and Dean Bauer about the correct home for this course, and they, in consultation with Dean Glaser, agree it should move into Film and Media Studies now that FMS is a stand-alone program.

**Resource Requirements/ Curricular Adjustments.** This course will continue to be taught by Gail Bambrick, who has taught it for many years in the Experimental College.

**Requirements.** This course fulfills the FMS practice elective requirement.

**ARB Review Requested:** Distribution Credit Social Sciences

**Item 9. NEW COURSE - Romance Studies**

*From: Carmen Merolla, 617 627 2764, carmela.merolla@tufts.edu*

*Department Chair: Pedro Palou, 617 627 5766, Pedro.Palou@tufts.edu*

**ITAL 0053 The Great Seduction: Italy’s Beauty, Genius, and Madness**

*Suggested Abbreviation for Title: Italy's Great Seduction*

**Bulletin Description:** Introduction to Italy’s cuisine, art, design, and organized crime system, and the profound influence they had in defining Italy’s national identity, economy, and social patterns. Emphasis on Italy’s innate love of beauty and food and on the way the country transformed this love into Italian businesses with a global reach. Analysis of the deep
and lasting impact of the Mafia on some of Italy’s world-renowned industries and the country at large. One lecture and one field trip. Taught in English.

**Next Anticipated Offering:** We might start offering the ITA0091 - The Greatest Seduction: Italy’s Beauty, Genius, and Madness course in the Spring semester of 2019.

**Rationale.** This course is part of the plan of the Romance Studies department to start providing a broader variety of subjects in the course offerings of the Italian Studies program. Already offered and very well-received as a CAP seminar for freshmen in the Fall 2016, this course will provide students an introduction to topics on Italian culture that are usually of great interest among students, and that are currently not examined in almost any other course offered at Tufts. In fact, it would be the only course in English to provide an open window on most contemporary issues and trends in Italian culture. Students of Italian would unquestionably benefit from it, in particular those planning to pursue a Major or a Minor in Italian Studies. Its addition to the Bulletin would also represent a considerable enrichment to our program, as well as an opportunity for students to learn something new. Additionally, we trust that having this course in the Bulletin may benefit other departments as well. Students in this course learn bits of Italian and European history and art, for example, which may spark students’ interest and inspire them to further explore those subjects by taking courses in other departments. We envision the course to be taught in English, by one of our full-time lecturers in Italian, every other Spring, or when needed. Previously offered as a CAP seminar for freshmen, Fall 2016, ITA0091, The Greatest Seduction: Italy’s Beauty, Genius, and Madness. 3 SHUS

**Overlap.** We do not anticipate any overlap. Italian art is the only subject covered in this course that is already being offered by another department. However, this course only offers a brief introduction to the general characteristics of some art movements, and the subject of Italian art is limited to a total of only three classes throughout the semester. Another topic that may already be covered in a different course is the Italian Mafia, and its impact on local economy, on which however we were not able to find any information in the school catalogue. This is why, in order to make sure that there are no overlaps or conflicts, we are in the process of contacting the Art department, as well as the department of Political Science and the department of Economics, and ask them directly.

**Resource Requirements/ Curricular Adjustments.** The course will be taught by one of our full-time lecturers. We will not need any extra or new resources.

**Requirements.** The new course will be one of the elective courses in English that students can take to pursue a Major or a Minor in Italian Studies.

**ARB Review Requested:** Distribution Credit Humanities & Italian Culture Option

---

**Item 10. NEW PROGRAM—Minor in Applied Computational Science**

*From: Peter Love, 6262032823, peter.love@tufts.edu*

*Minor Director: Peter Love, 6262032823, peter.love@tufts.edu*

**Bulletin Description:** APPLIED COMPUTATIONAL SCIENCE MINOR

The Minor in Applied Computational Science requires five courses and a capstone experience. To satisfy the minor the classes must be completed with a grade of C or above.

Preparation courses (2 Classes)

Students must take classes from the lists below, or classes in the same discipline that have the listed classes as prerequisites. Pre-matriculation credits may not be used to satisfy these requirements
A) Physical and Natural Science students: Comp 11 AND Comp 15
B) Computer Science Students: Two classes from:
   - Astronomy 31, Astronomy 32
   - EOS 1, EOS 2, EOS 5, EOS 51
   - Physics 11, Physics 12
C) Mathematics Students and all other majors: COMP 15 is required from category A) and at least one course is required from category B).

2. Probability and Statistics: One class from the list below.
   - Bio 132 Biostatistics
   - Bio 133 Ecological Models and Data
   - Math 161 Probability
   - Math 162 Statistics
   - Physics 016 Special Topics: Probability and statistics for Physicists

3. Options: Two classes from the list below:
   - Astronomy 121 Galactic astronomy
   - Astronomy 122 Extragalactic astronomy
   - Astronomy 016 Special Topics: Astrophysics Laboratory (Required Project)
   - Bio 121 (Cross listed with Math 121) Mathematical Neuroscience
   - Comp 126 (Cross listed with Math 126) Numerical Analysis
   - Comp 128 (Cross listed with Math 128) Numerical Linear Algebra
   - Comp 136 Statistical Pattern Recognition
   - EOS 104 Geological Applications of GIS
   - Math 87 Mathematical Modeling (Required project)
   - Math 121 (Cross listed with Bio 121) Mathematical Neuroscience
   - Math 123, Mathematical Aspects of Data Analysis
   - Math 126 (Cross listed with Comp 126) Numerical Analysis
   - Math 128 (Cross listed with Comp 128) Numerical Linear Algebra
   - Math 150, Optimization
   - Physics 016 Special Topics: Computational Physics (Required Project)

4. Capstone: The Capstone requirement can be satisfied by one of the following:
   - Senior thesis: The thesis can satisfy the capstone project requirement, but the senior thesis class cannot count towards the five credits required for the minor.
   - Class project in an approved list of courses from option 2, with a grade of C or above
   - Research evaluated by a presentation.

Rationale. Applied Computational Science is the development and application of computational methods in the Physical, Natural, and Mathematical Sciences. In Computational Science the computer is the tool, and the objects of study cover a wide range of questions. A Computational Science Minor aims to provide an introduction to both the Computer Science and the Natural background, followed by courses in which computational techniques are applied to specific problems. The minor is composed of four sections: Preparation classes, Probability and statistics, Options classes and a Capstone experience. Preparation classes: The purpose of preparation
classes is to provide students with the background in computer science and natural sciences they require. Natural science majors are required to take computer science classes, Computer science students must take natural science classes and mathematics students and other majors must take a combination of both. Probability and Statistics The advanced use of statistics is increasingly important in Applied Computational Science. The computational science minor therefore requires students to take a probability and statistics course from the list below to provide them with the background for such applications. Options classes The defining feature of Applied Computational Science is the application of computational methods to problems in the natural and mathematical sciences. Students are therefore required to take two classes from the list below, which represent classes in which computation is applied to problems in Astronomy, Biology, Chemistry, Mathematics, and Physics. This list can be amended by request. Capstone Computational work is by nature project based. The minor therefore requires a capstone experience involving a significant project.

Overlap. The proposal has been developed in the context of wide ranging discussions concerning several new computationally-oriented programs under development. There has been broad consensus in these meetings that the Applied Computational Science Minor fulfils a curricular need distinct from Digital Humanities and from Data Science. The proposal has been presented to the Departments of Astronomy, Biology, Chemistry, Mathematics, and Physics for discussion and approval. This process began in 2016 and was restarted (due to the time elapsed) in 2017-2018. We provide letters of support from the Departments of Astronomy, Biology, Chemistry, Earth and Ocean Sciences, Mathematics, and Physics.

Resource Requirements/ Curricular Adjustments. The aim of the Minor is to provide a Curricular structure that guides students with interests in both Natural or Social Science and Computation towards a coherent set of courses. The Applied Computational Science Minor draws from courses already offered or planned in the Departments of Astronomy, Biology, Chemistry, Computer Science, Mathematics, and Physics. Computational Physics and Computational Chemistry are new courses, and it would be desirable if these could be offered once every two years. Enrollments in Computer Science and Mathematics courses listed in this Minor are high, and will likely require additional Faculty support irrespective of this minor.

Planning. Members of the Astronomy, Biology, Chemistry, Mathematics, and Physics Faculty met over the course of the Fall 2015 and Spring 2016 semesters, and consulted their home Departments as needed. In Fall 2017 several meetings were convened by Dean Auner to renew these discussions and a broad consensus was reached to proceed with this Minor (in parallel with several other complementary programs in Digital Humanities and data science). Outreach underway to Economics and other departments in Social Sciences.

Item 11. NEW MAJOR—Environmental Studies--Applied Environmental Studies

From: Colin Orians, 617-627-3543, colin.orians@tufts.edu

Program Description. The Applied Environmental Studies major provides theoretical grounding of environmental principles while also providing robust training in quantitative methods, spatial analysis and communication skills required for success in the field. Students are required to complete fifteen classes: five core courses, five skill-based courses, four courses in an area of specialization, and a project-based capstone course. It is recommended that students start with the gateway interdisciplinary course ENV 1 Introduction to Environmental Studies. Students must also complete a pre-approved environmental internship (min. 100hrs).
Students majoring in Applied Environmental Studies may double-count up to five courses with a major and up to two with a minor in another department or program. Students can, upon approval, count up to four classes taken abroad, and may only use one Experimental College class toward this major. These classes, or others not listed in the major’s website, must be petitioned in order to fulfill degree requirements.

A) Five Core classes:
1. ENV1 Introduction to Environmental Studies
2. Two Natural Sciences/Technology courses from the following:
   - BIO 7 Environmental Biology (or Env. Sci. AP score 5)
   - ES 25 Environment and Technology
   - EOS 2 Environmental Geology
   - CHEM 8 Environmental Chemistry
3. One Environmental Policy course from the following:
   - ENV 135 Environmental Policy
   - UEP 94 Environmental Policy, Planning and Politics
4. One Environmental Economics course from the following:
   - EC 8 Principles of Economics with Environmental Applications
   - EC 30 Environmental Economics (pre-req EC 5)

B) Five Skill-based courses:
   - ENV 120 Environmental Fieldwork: from Class to Community
   - ENV 170 Environmental Data, Analysis and Visualization
One Environmental Communication or Critical Writing course from the following:
   - ENV 150 Environment, Communication and Culture
   - ENG/ENV 160 Environmental Justice and World Literature
   - ENG/ENV 176 Earth Matters
   - ANTH 24 Introduction to Environmental Anthropology
One Intro-level (or above) Statistics course from the following:
   - BIO 132 Biostatistics
   - BIO 133 Ecological data and Statistics
   - CEE 156 Principles of Biostatistics
   - MATH 21 Introductory Statistics (AP credit not allowed)
   - EC 13 Statistics
   - PSY 31 Stats for Behavioral Science
One Intro-level (or above) GIS course from the following:
   - ENV 107/GIS 101/INTR 81 Introduction to Geographic Information Systems
   - EOS 104 Geological Applications of Geographic Information Systems
   - CEE 187 Geographic Information Systems

C) Four Courses in Thematic Area
Drawn from elective courses in one of our five existing thematic tracks in the Environmental Science major.

D) Capstone Experience (one of the following):
   - ENV 196 Environmental Capstone
The Environmental Studies program currently offers a co-major in Environmental Studies and two different minors. While we will continue to offer these, and will encourage students to double major, we are excited for several reasons to add a stand-alone major to our offerings. First, most environmental departments and programs across the country, including those at our peer institutions, offer a stand-alone major. A more comprehensive stand-alone major will allow our students to add skill-based courses and the opportunity to apply them in an independent project through a capstone or senior thesis. Second, recognizing Environmental Studies as a primary major will legitimize a field Tufts is very strong in, and, therefore, it will help recruit top students interested in the environmental field. Third, many of our current students and alumni continue to express interest in a stand-alone major.

**Resource Requirements and Curricular Adjustments.** Our current full time Lecturer, Ninian Stein, will be teaching several of the required new courses (ENV 1 Intro to Environmental Studies and the capstone class). In addition, we have received permission to hire additional part-time instructors to teach some of the skill-based courses such as, “Introduction to Geographic Information Systems”, “Environmental Data, Analysis, and Visualization”, and “Introduction to Environmental Fieldwork.”

**Planning Process.** The Environmental Studies Executive Committee voted in favor to create the new major. The committee included faculty from multiple departments including: Ujjayant Chakravorty – Economics; Jonathan Kenny – Chemistry; Michael Reed – Biology; Jack Ridge – Earth and Ocean Sciences; Modhumita Roy – English; John Durant – Civil and Environmental Engineering; Alexander Blanchette – Anthropology; Kelsey Jack – Economics; Andrew Kemp – Earth and Ocean Sciences; Karen Kosinski – Community Health Program; Benjamin Wolfe – Biology; Cathy Stanton – Anthropology; Ann Rappaport – Urban and Environmental Policy and Planning; and Ninian Stein – Environmental Studies. Many of these faculty will serve as advisors to our majors. Furthermore, we have had conversations with numerous program directors and department chairs, including Jennifer Allen in Community Health, Sergei Mirkin in Biology, Hugh Gallagher in Physics, and the proposal has been sent to Chairs and Directors in over 20 departments/programs. It was also announced in a Chairs/Directors meeting in the Fall where it was well-received. We have also held two student focus groups. Students are very excited about the possibility of this major to become a reality.

**Potential Overlap/Conflicts.** The new major doesn’t present any additional overlap or conflict with other departments. If anything, the new proposed courses will relieve current pressure from high demand courses such as “Intro to GIS”. Current GIS instructors were excited about the plans to add new GIS courses and we are working with them to maximize the use of the Data lab without interfering with existing classes. Other new courses such as “Environmental Data, Analysis, and Visualization” will be of interest to students in programs such as Science, Technology and Society, International Relations, Biology, Earth and Ocean Sciences to name a few.

**Dean Approval.**
Part II

Item 12. DELETE COURSE – Philosophy—PHIL 0010
Department Chair: Erin Kelly, 617-627-2849, ekelly@tufts.edu

0010 Death Penalty in America
Bulletin Description: philosophy course on the death penalty
Last Offering: over 15 years ago
Rationale. Was taught by Hugo Bedau, who is no longer a member of the department. This course has not been taught for years.
DARS Impact. Philosophy 0010: The Death Penalty not sure when last taught. Many years ago

Item 13. CHANGE MAJOR— Engineering Psychology/Human Factors Engineering—Psychology
Samuel Sommers, 617-627-5293, samuel.sommers@tufts.edu

Changes and Rationale. We are requesting several changes to the A&S ENP major, and our requested changes are aligned with changes also being requested to the SOE ENP major (which will now be called Human Factors Engineering). The goal of these changes is to facilitate coordination among ENP students and faculty across A&S and SOE. The A&S ENP program will continue to emphasize a multi-disciplinary approach to the field of Engineering Psychology. For example, with the requested changes, there will now be a clearer emphasis on preparing students interested for entry level jobs in applied fields such as user interface (UI) and user experience (UX) design.

The primary modification will be the elimination of three course requirements, and the addition of three new course requirements, as well as additional elective options to allow for more scheduling flexibility. These changes will address a number of frequently expressed complaints regarding scheduling and class availability. Additionally, greater opportunities will be provided to accommodate students who wish to study abroad, another commonly expressed complaint. Students also will be encouraged to electively choose internships and independent study/research experiences for credit as well.

Specific Changes:

Changes to Introductory Concentration Requirements (no course may count twice in this category):
Allow COMP11, COMP15, COMP Elective, or ME1 as option for ES2 [these other options are included because of the overlapping programming focus]

- Allow ME1 as option for ES18 [this is included to be similar with SOE ENP program and because of the overlapping design focus]

- Allow COMP11 as option for COMP15 or MATH32 or MATH61 (and remove MATH 39) [removing MATH39 to be compatible with SOE ENP program and allowing other options so that students can choose either programming or math experience as part of their introductory requirements to the major]

- Changes to Concentration Requirements (no course may count twice in this category):

  - Add ENP64 Fundamentals of Human Factors Engineering [this is added to provide students with an ENP-specific methods course]

  - Add ENP166 Human Factors in HCI or COMP 171 [this is added so that students can learn about HCI, which both options cover]

  - Add EM52 Technical and Managerial Communication [this is added to partially replace PSY17 and because ENP majors from both A&S and SOE have stressed the need for more writing experience]

  - Remove PSY17 [this is removed because it is redundant with EM52]

  - Remove ENP61 [this is removed because it is redundant with PSY53/ENP53]

  - Remove ENP162 [this is removed because it is redundant with ENP161 and ENP166]

  - Add “or ENP core elective” to the PSY elective option [this is added to give students more flexibility in how they customize the major and to encourage them to consider a subset of ENP electives]

New Bulletin Description:
Engineering Psychology/Human Factors Engineering

The Engineering Psychology/Human Factors Engineering program is an interdisciplinary program offered jointly by the departments of mechanical engineering and psychology. Engineering Psychology applies knowledge of human behavior and attributes to the design of products, equipment, machines, and large-scale systems for human use. Areas of application include medical devices and systems design, transportation safety, consumer product design, and computer interface design. Students in the College of Liberal Arts (Engineering Psychology) will receive the bachelor of science degree after meeting the general requirements.

The program prepares students for professional work and further graduate studies in this discipline. It also serves as a preparation for premedical and pre-dental students; and for those
interested in careers in technology design and development, or management.

UNDERGRADUATE CONCENTRATION REQUIREMENTS
The program features courses divided into introductory and core course requirements,

Introductory course requirements:
1) One of the following:
   Engineering Science 2  Introduction to Computing in Engineering
   Computer Science 11 Introduction to Computer Science
   Computer Science 15 Data Structures
   An approved Computer Science Elective or Mechanical Engineering 1 Mechanical Design and Fabrication

   Additional introductory requirements (may not double count with other Introductory requirements):
   2) Psychology 1
   3) Engineering Science 18  Computer-Aided Design with Lab or Mechanical Engineering 1 Mechanical Design And Fabrication
   4) Computer Science 11 or Physics 11 Introduction to Computer Science or General Physics I
   5) Computer Science 11, Computer Science 15, Math 32, or Math 61
      Introduction to Computer Science, Data Structures, Calculus I, or Discrete Math

Core course requirements:
6) Psychology 31 Behavioral Statistics
7) Psychology 32 Experimental Psychology
8) Psychology 53 Engineering Psychology
9) Psychology 130 Advanced Engineering Psychology
10) Engineering Psychology 64 Fundamentals of Human Factors Engineering
11) Engineering Psychology 161 Human Factors in Product Design and Development
12) Engineering Psychology 166 Human Factors in HCI or Computer Science 171 Human Computer Interaction
13) Engineering Management 52 Technical and Managerial Communication
14) Engineering Psychology 120 Project Study in Human Systems (year-long capstone course)
15) In addition to these courses, students in the College of Liberal Arts will take one Psychology elective or one ENP Core Elective.