

DOCUMENTS OF THE GENERAL FACULTY

PENDING AMENDMENT TO THE AMENDED MOTION TO CHANGE THE DEGREE REQUIREMENTS FOR ALL UNDERGRADUATE STUDENTS AT UT AUSTIN

Following is the pending amendment to the amended motion to change the degree requirements for all undergraduate students at UT Austin (D 5097-5105). The amendment to the amended motion, submitted by David Hillis (professor, integrative biology), proposes deleting the section titled "SCIENCE AND TECHNOLOGY" found on D 5110 and all text relating to that section. The amendment to the amended motion was not acted on during the Faculty Council meeting held October 16, 2006, due to a lack of quorum.

The secretary classified this amendment to the amended motion as *major* legislation. The Faculty Council will act on the amendment at its meeting on November 20, 2006. Major legislation approved by the Council must be submitted to the General Faculty on a no-protest basis, as prescribed in the by-laws of the Council.

Sue Alexander Greninger, Secretary
The Faculty Council and General Faculty

**PENDING AMENDMENT TO THE AMENDED MOTION TO CHANGE THE DEGREE
REQUIREMENTS FOR ALL UNDERGRADUATE STUDENTS AT UT AUSTIN**

RATIONALE FOR AMENDMENT

The wording of the section on the Science and Technology core requirement has caused considerable confusion, and has been interpreted differently by different groups. The purpose of the proposed amendment is to remove this section (on Science and Technology) from the current discussion of the primary motion, so that we may proceed to a vote on the primary motion without further debate on the meaning of the disputed section. If this amendment passes, the Science and Technology section will then be returned to the Educational Policy Committee for additional discussion and clarification, and the clarified section then will be considered separately at a later date by the Faculty Council.

BACKGROUND

In 2004, the Commission of 125 completed a two-year study of the University. In their report, the Commission noted the following about the education received by UT graduates:

The success of UT graduates throughout the disciplines indicates that they have received a generally sound education, and on its face, UT's curriculum would seem to be doing a good job of keeping up with the times... But the Commission believes that while the current system offers students myriad courses of study, it fails to equip undergraduates with a core body of knowledge essential to a well-balanced education. For too many degree plans, the current curriculum resembles little more than a vast a la carte menu.

Soon after the Commission's report was issued, a Task Force on Curricular Reform was appointed jointly by the President, Provost, and the Chair of the Faculty Council. The Task Force's charge was to make a recommendation on how the core curriculum of The University could be changed to improve the overall educational experience of UT undergraduates. The Task Force's report was issued in October of 2005. In short, the Task Force agreed with the following observations made by the Commission on the present core curriculum:

- The core curriculum, last reviewed 25 years ago, needs to be updated.
- Today's graduates require a broader education, particularly in the areas of science, technology, the humanities, the global community, other cultures, and [ethics and] leadership.
- UT students [would] benefit from studying some common academic topics and concepts to add richness to discussions and debates outside the classroom and to create a bond among graduates. The current curriculum lacks sufficient common intellectual experiences shared by all undergraduates, whatever their discipline.

The Educational Policy Committee was asked to review the Task Force recommendations relating to Signature Courses, flags, thematic strands, and the 42-hour core curriculum. The Committee formed a summer working group, which included Marilla Svinicki (Chair), Melva Harbin, Robert Koons, Cale McDowell, Kate Nanney, Martha Smith, Larry Speck, and David Yount. The group met throughout the first half of the summer, considering the Task Force recommendations and input from faculty forums, the Faculty Council, the Senate of College Councils, the Academic Counselors' Association, and the Student Deans Committee. In early July, the working group made its report to the Educational Policy Committee, which worked in plenary sessions throughout the second half of the summer to develop the final motion.

MOTION

The Educational Policy Committee proposes that the Faculty Council approve a set of changes to the degree requirements for all undergraduate students at UT Austin. These changes are to be implemented as quickly as practical, with full implementation expected by the 2010-2012 catalog. A four-point summary of the changes is listed here with details provided in the sections below. (See Appendix A for an explanation of how the new requirements satisfy the state-mandated 42-hour core curriculum.)

- 1) Require all undergraduate students to complete two Signature courses. These courses will be interdisciplinary, be taught by distinguished faculty members, and use the unique resources of the University.

- 2) Require all undergraduate students to complete courses – selected from qualifying ("flagged") courses in the core curriculum and their chosen major – that are approved to provide a certain set of important skills and experiences.
- 3) Identify groups of core curriculum courses that share common thematic strands that can provide students with a coherent experience within the undergraduate core. Students will be strongly encouraged, but not required, to follow a strand appropriate for their individual needs and interests.
- ~~4) Broaden the existing nine hour natural science requirement to allow that three of these nine hours be a science or technology course that examines their effects on society today and in the future.~~

The ~~four~~ three changes above are designed to balance coherence, common experience, and choice. Coherence is achieved via thematic strands. Signature courses and flags will provide a common experience for UT undergraduates. Students will have a choice of courses that satisfy the requirements listed above.

Thus, these changes accomplish the goals of coherence and common experience, while preserving the flexibility needed for students to pursue their individual interests.

SIGNATURE COURSES

Signature Courses will introduce UT undergraduates to academic discussion and analysis of issues from an interdisciplinary perspective. The issues to be discussed in Signature Courses are sufficiently complex that the lens of a single discipline does not create an adequate picture; to view such issues completely, an image created from the lenses of multiple disciplines is required. Appendix B provides a list of possible issues that the Educational Policy Committee feels could be taught in this manner.

Educational Policy recommends that two Signature Courses be required for all UT undergraduates. The first, called the Freshman Signature Course, will be taken by students in their first year at UT; the second, called the Sophomore Signature course, will be taken by students in their second year at UT. All Signature Courses must:

- Be taught from an interdisciplinary perspective.
- Be taught by top UT faculty, regardless of rank, with a distinguished academic record and a history of engaging students through their teaching.
- Introduce the level and type of scholarship expected in college courses.
- Use resources of the whole University, such as guest speakers, research facilities, museums, and fine arts performances, as appropriate to the topic.

The Freshman Signature Course must also:

- Focus on a contemporary issue.
- Be linked to a required University Lecture/Performance series designed to support and enhance the Freshman Signature Course experience.

The Sophomore Signature Course must satisfy one area requirement of the state mandated 42-hour core curriculum. As a result, it may differ from a Freshman Signature course in having a narrower interdisciplinary focus, in order to fit within an existing area requirement. The course may draw (a) equally from multiple related disciplines (e.g., sociology and economics); (b) from two disciplines not usually thought to be closely related (e.g., mathematics and biology); or (c) predominately from a single discipline, using the tools of other disciplines to broaden the course's inquiry into the topic.

The Educational Policy Committee recommends allowing faculty flexibility in the design and implementation of all Signature Courses. Areas where this flexibility should exist are:

- Size of the Class. The number of students in each section should be determined by the nature and circumstances of the course and the preferences of the faculty member teaching that section of the course.
- Interdisciplinarity. The means by which a Freshman Signature Course addresses a contemporary issue in an interdisciplinary manner can vary. The Educational Policy committee recommends that the faculty be

allowed flexibility in deciding how to provide an interdisciplinary view for their course. Examples of how this can be done are (i) courses team-taught by faculty in two or more departments; (ii) courses taught by a single instructor with substantial input in planning from faculty in other departments as well as involvement from members of other departments as guest lecturers; (iii) courses developed by two or more faculty from different departments who teach the course in different semesters or years.

- Improvement of Communication Skills. The Educational Policy committee believes that Freshman Signature Courses should provide students opportunities to improve their communication skills. How this will be done in each section of the course will be left to the faculty members involved, taking into account factors such as topic and class size. Some Signature Courses could qualify for a Writing Flag (more information on the Writing Flag is provided below).

SKILLS AND EXPERIENCES (FLAGS)

The Educational Policy Committee recommends that every UT undergraduate take courses in residence which include a focus on the following skills and experiences needed by citizens and professionals in the 21st Century:

- Writing
- Quantitative Reasoning
- Global Cultures
- Cultural Diversity in the United States
- Ethics and Leadership
- Independent Inquiry

Courses of three or more credit hours that meet the following criteria for any of these skills and experiences will be flagged in the course schedule to help students in course selection. Note that flagged courses need not be devoted entirely to the respective skills and experiences. A course could receive more than one flag.

Writing

Requirement: 3 flagged courses in addition to RHE 306, RHE 306Q, or their equivalent

Courses that carry the writing flag must:

- Require students to write regularly--several times during the semester--and to complete writing projects that are substantial. It is only through the practice of writing that students learn to improve their writing.
- Be structured around the principle that good writing requires rewriting. Students must receive meaningful feedback from the instructor (or teaching assistant) so they can improve successive drafts.
- Include writing assignments that constitute at least one-third of the final grade in the course. These assignments must be graded on writing quality as well as content.
- Provide an opportunity for students to read each other's work in order to offer constructive criticism. Careful reading and analysis of the writing of others is a valuable part of the learning process.

Quantitative Reasoning

Requirement: 1 flagged course

To satisfy the quantitative reasoning flag, at least half of the course grade must be based on the use of quantitative skills (e.g., data analysis and modeling, simulation, statistics, probability, and quantitative decision analysis) to analyze real-world problems.

Global Cultures

Requirement: 1 flagged course

To satisfy the Global Cultures flag, at least one-third of the course grade must be based on content dealing with the cultures and perspectives of a non-U.S. community, country, or coherent regional grouping of countries, past or present.

Cultural Diversity in the United States

Requirement: 1 flagged course

To satisfy the Cultural Diversity in the United States flag, at least one-third of the course grade must be based on content dealing with the culture, perspectives, and history of one or more underrepresented cultural groups in the United States.

Ethics and Leadership

Requirement: 1 flagged course

To satisfy the Ethics and Leadership flag, at least one-third of the courses grade must be based on work in practical ethics, i.e., the study of what is involved in making real-life ethical choices.

Independent Inquiry

Requirement: 1 flagged course

To satisfy the Independent Inquiry flag, at least one-third of the course grade must be based on the students' independent investigation and presentation of their own work. The presentation of their work can take place in many venues including presentations in a capstone course, a performance, independent research or a thesis.

THEMATIC STRANDS

The Educational Policy Committee recommends that sets of classes based upon a common theme be identified to help provide UT students a more coherent core educational experience. These courses should satisfy many of the core curriculum and flag requirements.

[SCIENCE AND TECHNOLOGY COURSE]

~~[Many important advances made at the end of the 20th Century were based upon previous scientific discoveries and technological advances. Future professional and civic leaders must have a firm understanding of science and technology and be able to understand how these topics can be used to solve problems the society will face in the 21st Century. To achieve this, Educational Policy recommends a change in the Natural Science requirement for UT undergraduates. Currently, students are required to take nine hours of science. Six of these hours must be focused on a single discipline; the other three hours are in a different discipline.~~

~~[We recommend that the existing nine hour natural science requirement be broadened to allow that three of these nine hours be a science or technology course that examines their effects on society today and in the future. This change will allow students to see, for example, how chemistry can help us understand issues related to obesity and pharmaceuticals; how physics can help us understand this planet's origins; how biology can help us understand the preservation of our planet; and how engineering can help meet the energy needs of the world.~~

~~[It is important to note that this proposed change to the Natural Science requirement does not mandate that degree plans require their students take a three hour Science and Technology course; degree plans would be free to keep the Natural Science requirement as it is presently constituted or to include such a course within the Natural Science requirement for their students.]~~

FINAL REMARKS

The following discussion is provided by the Educational Policy Committee for the purpose of expanding on the ideas outlined in the preceding motion and is not intended to be considered as part of the motion itself.

Structure

The recommendations outlined in the motion will only be successful if an organization is in place to oversee their implementation. There is an ongoing need for attention to issues such as funding for course development, approval and faculty selection for Signature Courses, designation of flagged courses, development of thematic strands, and evaluation of core courses and requirements. The members of the Educational Policy Committee

recommend that the President – in close consultation with the Provost and the deans of UT’s schools and colleges – create an entity that will serve as a guardian of the core and a catalyst for continuous change and improvement in the core curriculum.

Implementation

Signature Courses, flags, and strands will not be created overnight. They must be phased in over time as resources become available and courses are developed and refined.

The Educational Policy Committee recommends that each department with an undergraduate program begin meeting soon after any core curricular changes are approved to discuss appropriate ways to build the newly revised core into their undergraduate degree plans, identify existing courses that might be designated with a flag, and develop ideas for signature courses and thematic strands in which the department could play a role.

The administrative entity placed in charge of the core will have the task of ensuring that, as new core requirements are built into individual degree plans, the supply of Signature Courses and flagged courses is sufficient such that all students subject to the requirements are able to satisfy them. The entity, in cooperation with the Provost’s Office and the deans of colleges and schools should monitor implementation efforts to ensure that all degree plans incorporate the new core requirements within a reasonable period of time.

Motion Submitted by the Educational Policy Committee

Voting Members:

Archie Holmes, Chair Associate Professor, Electrical and Computer Engineering
 Dean Appling Professor, Chemistry and Biochemistry
 Mary Blockley Professor, English
 Minette Drumwright Associate Professor, Advertising
 Prabhudev Konana Associate Professor, Information, Risk and Operations Management
 Robert Koons Professor, Philosophy
 Anna Maloch Assistant Professor, Curriculum and Instruction
 Cale McDowell Senate of College Councils Representative
 Deborah Morowski Graduate Student Assembly Representative
 Kate Nanney Senate of College Councils Representative
 Gretchen Ritter Associate Professor, Government
 Martha Smith Professor, Mathematics
 Lawrence Speck Professor, Architecture
 Marilla Svinicki Associate Professor, Educational Psychology
 David Yount Senate of College Councils Representative

Administrative Advisors (ex-officio):

Sheldon Ekland-Olson Executive Vice President and Provost
 Charles Gaede Assoc Director, Division of Instructional Innovation and Assessment

Consultants (ex-officio):

Mark Bernstein Student Deans Committee Representative
 Melva Harbin Academic Counselors’ Association Representative

Appendix A: Proposed Mapping of these Changes to the State-Mandated 42-hour Core Curriculum

The requirements above make changes to the common curriculum taken by all UT Undergraduates. Part of this change is in the state-mandated 42-hour core curriculum. The Table below outlines how these changes are mapped to the State's core curriculum.

Core Curriculum Area	Current Requirement	Proposed Change
010 – Communications	RHE 306 or 306Q & 3 hours of SWC.	RHE 306 or 306Q & One course with a writing flag
011 – Additional Communications	3 hours of upper division SWC.	Removed
020 – Mathematics	Course at the level of M 301 or higher	No Change
030 – Natural Sciences	Six hours in one discipline	No Change
031 – Additional Natural Science	3 hours in a different discipline than the one used in 030	[Science and Technology Course[*]] No Change
040 – Humanities	E 316K	No Change
050 – Visual and Performing Arts	Fine Arts/Humanities Elective	No Change
060 – History	6 hours of American History	No Change
070 – Government	6 hours of Government, including 3 hours of Texas Government	No Change
080 – Social and Behavioral Sciences	Social Science Elective	No Change
090 - Institutionally Designated Option	Not Used	Freshman Signature Course

~~[[*] Three of the hours in 030 and 031 could be a science or technology course that examines their effects on society today and in the future.]~~

Appendix B: Examples of Possible Signature Course Topics *Schools and Departments are provided to illustrate the interdisciplinary aspects of these topics.*

1. Sustainability (natural sciences, social sciences, engineering, LBJ, Jackson School)
2. Emerging diseases (biology, sociology, nursing, LBJ)
3. Policies on illicit drugs (pharmacy, sociology, psychology, LBJ, nursing, law)
4. AIDS (biology, sociology, psychology, nursing, LBJ)
5. Affordable housing (architecture, LBJ, sociology, economics, engineering)
6. Urban planning (architecture, LBJ, sociology, psychology, engineering)
7. High stakes testing (LBJ, ed psych, curriculum and instruction, educational administration, sociology)
8. Obesity (nutrition, nursing, pharmacy, LBJ, biology, psychology, kinesiology)
9. Immigration policies (LBJ, economics, sociology, government, Latin American studies, Mexican American studies, Asian studies, law)
10. Genetic engineering (biology, LBJ, economics, pharmacy, law)
11. Population growth (sociology/Pop. Center, LBJ, nursing, pharmacy)
12. CSI: Image and Reality (communications, microbiology, pharmacy, engineering, LBJ, anthropology, Jackson School, law)
13. Medical advances (biology, biomedical engineering, nursing, sociology)
14. Natural disasters (Jackson School, geography, sociology, nursing, psychology, math, law)
15. Energy resources (engineering, Jackson School, physics, LBJ, economics, biology)
16. Effects of the Internet (communications, engineering, CS, psychology, sociology, information, law)
17. Science policies (natural sciences, LBJ, government, engineering, pharmacy, law)
18. Alcoholism (pharmacy, biology, sociology, psychology, nursing, social work)
19. Beyond the *Da Vinci Code*: Art, Religion, and Society in Renaissance Italy (history, art history, religious studies)
20. Global Cultures of Dance and Music (Performing Arts Center, theater and dance, musicology)
21. Nanotechnology and Culture (engineering, molecular Biology, anthropology) – (Note: Elizabeth Keating (anthropology) heads the “Science, Technology, and Society” Program at UT, which has a major Nanotechnology project in place)
22. The Geology and Art of Landscape (Jackson School, Art history)
23. Out of This World: The Science of Astronomy and Astronomy in Science Fiction (astronomy, English, film)
24. Figuring the Universe: Astronomy and Art (astronomy, art history)
25. Exploring the Nature of “Nature” in Science and Art (history of science, art history, various sciences)
26. Dimensionality in Mathematics, Science, and Art (math, physics, art history)
27. Being Digital: Engineering, Computer Science, Art, and Music. (Note: There is already a group in place exploring these connections, and it is the basis of a Connexus BDP)
28. Chaos Theory in Mathematics, Sciences, and Society (math, physics, anthropology, art history, English, and others)
29. Questions of "Representation" in Art, Society, and Science (art history, anthropology, history of science)
30. The Nature of Consciousness (psychology, biology, philosophy)
31. Networks: Neural, Computer, and Cultural (biology, computer science, sociology and other fields)
32. Feedback and Systems Theory Across Disciplines (computer science, engineering, sociology, etc.)
33. The Birth of Democracy: Fifth Century BCE Athens (classics, government, philosophy)
34. The French Revolution and the Birth of the Modern World (history, philosophy, French civilization, government)
35. Politics and Literature (government, English)
36. Justice and the Law in Shakespeare (government, English)
37. Ethics and Human Nature in Austen’s Novels (philosophy, English)
38. Metaphysics & Mythology in 20th Century Literature (philosophy, English)
39. Philosophy in Twentieth Century Literature (philosophy, English)
40. Religion and Politics in American Thought and Letters (English, government, religious studies)
41. Cosmos and Man: Ancient Perspectives (foundational texts of world religions & philosophies) (classics, Middle Eastern studies, Asian studies, philosophy, religious studies)
42. Athens and Jerusalem (interaction between biblical and philosophical traditions in shaping Western

- civilization) (classics, Middle Eastern studies, philosophy, religious studies)
43. Confluence of Cultures and Religions in the Medieval World (interactions between major religious and philosophical movements and thinkers, including Augustine, Maimonides, and Aquinas) (history, philosophy, religious studies, English, French/Italian/German civilization, Middle Eastern studies)
44. Liberty and Tyranny in Renaissance Italy (history, government, Italian civilization)
45. Models of Ethical Leadership from American History (history, philosophy, government, business, American studies)
46. Competing Visions of the Good Life and the Just Society (government, philosophy, religious studies, English)
47. Making Sense of Life: on the variety of religious and philosophical approaches to ethics and the meaning of life (government, philosophy, religious studies, English)
48. Natural Law Tradition in Ethics, Politics and Law (philosophy, government, religious studies, history)
49. The Nature of Evil: Philosophical, Theological and Literary Perspectives (philosophy, English, classics, religious studies)
50. The Intellectual World of the American Founders: reading What the Founders Read (government, philosophy, history, English, classics)
51. Philosophy of Education (philosophy, education)
52. Science and the Modern World (physics, philosophy, biology, history)
53. Culture of Discovery: The Scientific Revolution in its Context (physics, philosophy, history)
54. Ecology, Evolution and Society (biology, sociology, government, psychology, philosophy)
55. Designing Cities for Human Beings (architecture, urban studies, anthropology, art history, government)
56. Culture of Entrepreneurship (economics, business, government, sociology)
57. Markets and Morality (economics, business, government, philosophy)