Executive Summary

In the Fall of 2004, the General Education Committee of the Davis Division of the Academic Senate began working on a proposal and some guiding principles for the revision of the campus General Education (GE) Program. The current GE Program was approved in 1996, but campus experience suggests to many that it has been failing to meet its objectives. The accreditation review by the team from the Western Association of Schools and Colleges also found fault with the current GE Program, especially the very small number of units a student could take in fulfillment of the campus GE graduation requirements.

In the Fall of 2005 the GE Committee asked the Undergraduate Council (UGC) to appoint a joint Senate-Administrative Task Force on General Education. The UGC charged the Task Force with developing a detailed proposal for a revised GE program that would meet the objectives of this campus-wide requirement, working to secure acceptance of the new program, and working with the administration to make sure that campus resources needed to implement the program would be available. This is the report by that Task Force.

The GE Task Force elected to reconceive the GE Requirement rather than tinker with failing pieces of the current program. We asked ourselves a fundamental set of questions: What do we, the faculty at the University of California at Davis, want to be able to say are the qualities of a graduate of our institution? What are the qualities of a “well-educated” person, and how do those qualities prepare the undergraduate to live in a community, state, nation, and world increasingly complicated by scientific and technological change, by shifting demographics of ethnicity, and by the movement of people and ideas across national boundaries? We resolved to take seriously the mission of a public university to educate its students toward becoming thoughtful, civically engaged participants of society, participants who might be asked to consider matters requiring a critical understanding of science, economics, history, social relations, and global forces, among other things. We want our graduates to understand that ideas have consequences, and that as educated people they have a responsibility to consider those consequences. We want our students to emerge with a cosmopolitan (rather than parochial) view of the world. We want them to be able to communicate their ideas effectively.

As well as broad, philosophical “guiding principles,” the Task Force also considered certain logistical principles in designing the new GE Requirement, including the following: the requirement should not extend students’ time to degree; we should be able to provide enough additional seats in classes that students have a reasonable opportunity to meet the requirement; students need more flexibility in using smaller unit courses to meet the requirement, which suggests a unit-based requirement rather than one defined by number of courses; some goals of the program (e.g., some elements of “living with diversity” and of “moral reasoning”) might be met best through a small class (max. 20) aimed at all incoming students; and the requirement must be easily understood by students, advisors, and faculty and should be reasonably easy to administer.
The proposed General Education (GE) requirement reflects the faculty’s image of “the well-educated person.” All students have the opportunity to develop expertise in depth in their majors, minors, or a combination of these. The GE requirement adds to that depth a breadth of knowledge and experiences represented by coursework outside of the area of the student’s major. The GE requirement also trains the student in four core “literacies” that the faculty considers crucial for success in one’s profession but also crucial to a thoughtful, engaged citizenship in the community, nation, and world.

The GE requirement has two components: **Topical Breadth** and **Core Literacies**.

The GE requirement is defined in terms of units, not courses. The units of every course at UCD (with very few exceptions) are assigned to one of the three **Topical Breadth Areas** or are certified as interdisciplinary. *Unless otherwise restricted, every course unit that a student takes, including courses for major and minor requirements, will be counted toward the required minimum number of units in each Topical Breadth Area.*

With the exception of units used to satisfy the English Composition element (1a) of the four **Core Literacies** (see below), units approved for a **Core Literacy** will be accepted toward satisfaction of the appropriate **Topical Breadth** component. *However, units may be counted toward satisfaction of only one Core Literacy.*

Students may take courses P/NP to fulfill their GE requirements, up to the limits set by college and campus regulations. For graduation a student must have earned at least a 2.0 cumulative GPA in the graded courses taken to fulfill the General Education requirement. Students may not present Advanced Placement or International Baccalaureate credit for GE.

**A. Topical Breadth Component ………………………………………… 52 units**

1. Arts and Humanities ......................................................... 12-20
2. Science and Engineering ..................................................... 12-20
3. Social Sciences ................................................................. 12-20

**B. Core Literacies Component …………………………………………. 35 units**

1. **Literacy with Words and Images ………………………………………… 20**
   a. English Composition ....................................................... 8
   b. Writing-intensive coursework in the student’s major ................... 3
   c. Additional writing-intensive coursework in the student’s major or additional writing-intensive (including composition) coursework outside the student’s major ............................................. 3
   d. Oral skills coursework or additional writing-intensive coursework within or outside the student’s major .......................................................... 3
   e. Visual literacy coursework ......................................... 3

2. **Civic and Cultural Literacy …………………………………………. 9**
   a. American Cultures, Governance, and History…6
   b. Global Cultures ............................................................... 3

3. **Quantitative Literacy …………………………………………… 3**

4. **Scientific Literacy …………………………………………… 3**
In the Fall of 2004, the General Education Committee of the Davis Division of the Academic Senate began working on a proposal and some guiding principles for the revision of the campus General Education (GE) Program. The current GE Program was approved in 1996, but the campus experience suggests to many that it has been failing to meet its objectives (see below).

In the Fall of 2005 the GE Committee asked the Undergraduate Council (UGC) to appoint a joint Senate-Administrative Task Force on General Education, recommending that the Task Force not be too large (7-9 members), that there be a representative from each of the undergraduate colleges, a student representative, an Assistant Dean from one of the undergraduate colleges, and the Vice Provost for Undergraduate Studies. The UGC approved this recommendation and the Committee on Committees made its initial appointments to the Task Force in the Winter of 2006 and made subsequent appointments, as the need arose. ¹

The UGC charged the Task Force with developing a detailed proposal for a revised GE program that would meet the objectives of this campus-wide requirement, working to secure acceptance of the new program, and working with the administration to make sure that campus resources needed to implement the program would be available. The UGC asked for a detailed proposal by January of 2007, with the intention of distributing the proposal to various committees and constituencies for comment throughout the winter quarter of 2007. The UGC would then make a formal proposal to the Executive Council by early Spring quarter with the aim of presenting the proposal to the Representative

¹ The initial members included Professors Kiskis (L&S- Physics), Lund (COE - DEPT), Radke (CAES - Animal Science), Rost (CBS-Plant Biology), and Zender (Interim Director of the University Writing Program), along with Dann Trask (L&S- Assistant Dean for Undergraduate Education), student Katie Johnson, and Fred Wood, Interim Vice Provost for Undergraduate Studies. Professors Lund and Radke are the co-chairs of the GE Committee, so they also served as liaisons between the GE Task Force and the Committee. In May of 2006 Professor Mechling (L&S - American Studies) joined the Task Force and agreed to chair the group; shortly thereafter, the Task Force added Professor Werfel (L&S - Art Studio), who brought expertise in the fine arts to the conversation. With the retirement of Professors Rost and Zender in the summer of 2006, the Committee on Committees appointed Professor Bo Liu (CAES - Plant Biology) and Professor Chris Thaiss (Director of the University Writing Program) as their replacements. Student Katie Johnson (undergraduate student) graduated in 2006 and Alfredo Arredondo replaced her as of the fall of 2006. Hayley Steffen, Undergraduate Student Assistant to the Chancellor, also joined the Task Force in the Fall of 2006.
Assembly of the Davis Division of the Academic Senate at its June, 2007, meeting for a discussion and vote.

The GE Task Force met every other week in the Spring and Fall quarters of 2006, agreeing first to a set of principles (explained in the Dateline article of Oct. 13) and then developing a plan that would meet the objectives of a general education requirement at the University of California, Davis. The Task Force shared its draft proposal with the UGC on Nov. 6 for discussion and suggestions and then shared the draft (with UGC comments) at a joint meeting of the Task Force and GE Committee on Nov. 8. The UGC had another look at a revised draft at its Nov. 17 meeting. Consultation of this sort has been a primary strategy of the GE Task Force as we understand how important it is to gain as broad a consensus as possible as we present the plan to broader constituencies on the campus.

I: The Problem

Every undergraduate at UC Davis must satisfy the campus General Education requirement for graduation. The current GE Program, last revised in 1996, has three components: Topical Breadth (6 courses), Social-Cultural Diversity (1 course), and Writing Experience (3 courses). A course may be certified in as many as three of these components. For Topical Breadth, a student must take three courses in each of the two areas (Arts & Humanities, Science and Engineering, Social Sciences) outside the area of the student’s major. There are other details of the program pertaining to transfer students and to those who satisfy the requirements for a second major or a minor (see current catalog copy, pp. 84-86, on GE).

The 2006-08 General Catalog provides laudable statements (pp. 84-85) on the philosophy behind the GE requirement and on more general “Educational Objectives for Students” (p. 17). Nonetheless, it seems fair to say that many students see the GE Requirement as a nuisance they must endure and a distraction from their more important coursework in the major. Those students who do see value in a general education often fault the program for failing to meet its objectives.

Faculty members deeply involved in delivering GE courses often see how the actual practices fail to meet the worthy objectives. For example, many faculty members believe that the “writing experience” requirement has failed to meet its intentions. Faculty understood from the outset that a “writing experience” course was not a composition course, but the most hopeful thought that students would learn in these courses the close relationship between clear thinking and writing. Initially, the courses certified for the “writing experience” component required a substantial amount of writing graded for style and usage, as well as for content. Within a few years the amount of writing required to certify a GE course for writing had dropped considerably, though the GE Committee hoped to keep the intent of the requirement by asking that instructors provide for some drafts and revised writing. Still, those who teach courses certified as “writing experience” for the GE Program often observe that few students actually improve in their writing
across the quarter. The principle that students will write better if they write more is not true without close mentoring of the writing, and that has been absent in most “writing experience” courses. Some instructors assigned to teach “writing experience” courses do not even know of these expectations, and there has been no system for monitoring how much writing and of what sort goes on in the certified courses (perhaps out of fear that a good many courses would have to be decertified).

We have heard from many students and faculty members that the Social and Cultural Diversity component of the present GE Program is not achieving its goals. It was clear in 1996 that, in order to provide enough seats for students to meet the modest requirement of one course in Social-Cultural Diversity, classes certified in this category would have to be large, a condition that interferes with achieving some of the goals of exposing students to issues arising in a multicultural society. A large lecture class might be an apt venue for conveying information about various cultures in the United States and about the ways human particularities like gender, social class, race/ethnicity, and sexual orientation affect individuals’ experiences and worldviews, but the sorts of educational experiences likely to increase a person’s empathy for the life experiences of others must take place in smaller class settings where discussion rather than lecture guides the learning. And more than classroom size has been problematic over the last ten years; several courses have been certified in this area without evidence of substantial attention to the initial goals of the requirement. As some students and faculty see it, this requirement has been “watered down” too much.

Moreover, new imperatives have come along in the past ten years, such as the realization that universities must help create people capable of working and living in a society increasingly international in its scope and character. The Chancellor’s Conference in the fall of 2005 was devoted to “Internationalizing the Curriculum” at UCD, and the Senate’s own Committee on International Studies and Exchanges (CISE) issued a proposal in June of 2006 that a “Global Citizenship” component be added to the campus General Education Program.

Many faculty supportive of general education also noted that the present GE Program lacks a component—quantitative reasoning—that was part of the original plan back in the 1980s but was set aside to ease the adoption and implementation of the original campus-wide GE Program. That an undergraduate at UCD could graduate without taking any college-level course in quantitative reasoning seems to many of us to be a real, lamentable gap in the general education of our graduates.

For all these reasons and more, the GE Committee began its 2004-05 academic year determined to take a fresh look at the GE Requirement to see what might be done to fix what was broken and to revise the program in response to a decade’s worth of social, economic, and cultural change.

In addition to these internal pressures for a revision of the GE Program, pressures from outside the campus made the new deliberations even more urgent. The review team representing the Western Association of Schools and Colleges (WASC), the agency that
accredits University of California campuses, was highly critical of the campus GE Program. In its 2003 report, WASC noted that the UC Davis GE requirement fell far short of the minimum 45 semester credit hours (=67.5 quarter units) WASC recommends in the balance between breadth and depth in a university undergraduate education. Especially troubling to the WASC team was the double-and-triple-counting of single classes certified for more than one GE component. With careful planning, for example, a student could meet the GE requirement by taking only six courses (the Topical Breadth courses), counting on finding in those six courses (24 or fewer quarter units) one course to meet the Social and Cultural Diversity component and three to meet the Writing Experience component. The WASC Report recommended that the campus continue its deliberations about GE, devise a plan to strengthen the program, and work on ways to assess the outcomes of the General Education of undergraduates at UC Davis. The campus must provide to WASC by March of 2008 a progress report on strengthening the GE Requirement.

Clear about the problems facing GE and the expectation by WASC that the campus report some progress on the matter, the Task Force agreed to a set of guiding principles and a plan for a GE Requirement consonant with those principles.

II. Guiding Principles

The GE Task Force elected to reconceive the GE Requirement rather than tinker with failing pieces of the current program. We asked ourselves a fundamental set of questions: What do we, the faculty at the University of California at Davis, want to be able to say are the qualities of a graduate of our institution? What are the qualities of a “well-educated” person, and how do those qualities prepare the undergraduate to live in a community, state, nation, and world increasingly complicated by scientific and technological change, by shifting demographics of ethnicity, and by the movement of people and ideas across national boundaries? We resolved to take seriously the mission of a public university to educate its students toward becoming thoughtful, civically engaged participants of society, participants who might be asked to consider matters requiring a critical understanding of science, economics, history, social relations, and global forces, among other things. We want our graduates to understand that ideas have consequences, and that as educated people they have a responsibility to consider those consequences. We want our students to emerge with a cosmopolitan (rather than parochial) view of the world. We want them to be able to communicate their ideas effectively.

As it worked, the Task Force increasingly began to think in terms of the sorts of core “literacies” we want our students to acquire and hone through their undergraduate education. We want our students to be able to communicate their ideas and to see how inextricably tied are the ideas and their expression—we knew that written and oral

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communication would be crucial literacies in the program. But we also came to understand how much communication in the 21st century is and will be through visual images, so we included that as a communication literacy.

We knew early that quantitative reasoning should be included as one of the core literacies, and that led (eventually) to realizing that we could identify a “scientific reasoning” literacy that was quite distinct from merely taking a natural science or engineering course for breadth.

Most radical in some sense was our decision to take seriously the “American history and institutions” graduation requirement, which has been a UC requirement since the 1890s but which is now usually met by a student’s taking high school American history. This seemed to us inadequate preparation for participating in a complex, multicultural American society in the 21st century, so we vowed to include in the plan what we eventually came to call a “civic and cultural literacy” component that included a requirement for coursework in “American Cultures, Governance, and History.” On our minds have been several studies over the years demonstrating a broad ignorance in the United States about basic concepts regarding American history and institutions.

The Task Force also read and discussed the 2006 report by the Senate Committee on International Studies and Exchanges (CISE) making a strong case for including a “Global Citizenship” requirement to the GE Program.

As the Task Force deliberated in the Winter and Spring quarters of 2006, we were heartened by the discovery that Derek Bok, former President of Harvard University, has provided a parallel rationale for the direction we were headed. His book, Our Underachieving Colleges (Princeton, 2006), urges universities to reconsider the undergraduate educations they are providing and to imagine how they might address this list of objectives: (1) the ability to communicate in writing and orally; (2) critical thinking skills; (3) moral reasoning; (4) preparing citizens; (5) living with diversity; (6) preparing for a global society; (7) developing a breadth of interests; and (8) preparing for a career. His list matched ours surprisingly closely.

As well as broad, philosophical “guiding principles,” the Task Force also considered certain logistical principles in designing the new GE Requirement, including the following:

- the requirement should not extend students’ time to degree
- we should be able to provide enough additional seats in classes that students have a reasonable opportunity to meet the requirement
- students need more flexibility in using smaller unit courses to meet the requirement, which suggests a unit-based requirement rather than one defined by number of courses
- some goals of the program (e.g., some elements of “living with diversity” and of “moral reasoning”) might be met best through a small class (max. 20) aimed at all incoming students
• the requirement must be easily understood by students, advisors, and faculty and should be reasonably easy to administer

Every faculty member has in his or her mind the ideal GE Program, and any program is a necessary compromise among thoughtful, well-intentioned people. The Task Force recognizes that colleagues could agree with our beginning principles and still arrive at a plan different from the one proposed here. A return to a core curriculum, which many of us had as undergraduates, is highly impractical at a large, public university like UC Davis. The Plan that follows strives to identify those elements the faculty can agree upon as essential to creating an “educated person” prepared to live, work, and succeed in the 21st century.

III. A Revised General Education Requirement

The General Education (GE) requirement reflects the faculty’s image of “the well-educated person.” All students have the opportunity to develop expertise in depth in their majors, minors, or a combination of these. The GE requirement adds to that depth a breadth of knowledge and experiences represented by coursework outside of the area of the student’s major. The GE requirement also trains the student in four core “literacies” that the faculty considers crucial for success in one’s profession but also crucial to a thoughtful, engaged citizenship in the community, nation, and world.

The GE requirement has two components: **Topical Breadth**, and **Core Literacies**.

The GE requirement is defined in terms of units, not courses. The units of every course at UCD (with very few exceptions) are assigned to one of the three **Topical Breadth Areas** or are certified as interdisciplinary. **Unless otherwise restricted, every course unit that a student takes, including courses for major and minor requirements, will be counted toward the required minimum number of units in each Topical Breadth Area.** In the case of a course that has been certified as interdisciplinary, a student may count the units of the course in only one of the areas in which it has been certified.

With the exception of units used to satisfy the English Composition element (1a) of the four **Core Literacies** (see below), units approved for a **Core Literacy** will be accepted toward satisfaction of the appropriate **Topical Breadth** component. **However, units may be counted toward satisfaction of only one Core Literacy.**

Students may take courses P/NP to fulfill their GE requirements, up to the limits set by college and campus regulations. For graduation a student must have earned at least a 2.0 cumulative GPA in the courses taken to fulfill the General Education requirement. Students may not present Advanced Placement or International Baccalaureate credit in satisfaction of GE requirements.
A. Topical Breadth Component ........................................... 52

1. Arts and Humanities .............................................. 12-20

2. Science and Engineering ........................................... 12-20

3. Social Sciences ...................................................... 12-20

B. Core Literacies Component ........................................ 35

1. Literacy with Words and Images ................................. 20

   The ability to form, organize, and communicate one’s ideas is at the center of the faculty’s notion of what it means to be an educated person. The objective of this core literacy is to help create graduates who can communicate their ideas in written, oral, and visual forms. The requirement also seeks to enhance students’ critical judgment of oral, written, and visual messages created by others.

   a. English Composition ........................................... 8
      (College of A&ES, College of L&S, College of Biological Sciences, College of Engineering)

   b. Writing-intensive coursework in the student’s major ........................................... 3

      Writing-intensive coursework in the major provides students the opportunity to write in the typical forms appropriate to their field under the guidance and assistance of faculty and graduate students in the field. The opportunity to revise writing after having received careful commentary is crucial to this requirement.

   c. Additional writing-intensive coursework in the student’s major or additional writing-intensive (including composition) coursework outside the student’s major ........................................... 3

   d. Oral skills coursework or additional writing-intensive coursework within or outside the student’s major ........................................... 3
The skills involved in the effective communication of ideas through oral presentation build on and strengthen the critical thinking skills exercised through writing.

e. Visual literacy coursework …………………… 3

The objective of this core literacy is to create citizens who can understand how visual materials both create and communicate knowledge.

NOTE: A student must have completed the Entry Level Writing Requirement (formerly known as the Subject A requirement) before receiving credit for coursework satisfying requirements a, b, c, and d.

2. Civic and Cultural Literacy ………………………………  9

The objective of this core literacy is to prepare people for active participation in civic society. Such graduates think critically about American institutions and social relations, understand the diversity of American cultures, and see the relationships between the national and local cultures and the world.

a. American Cultures, Governance, and History……  6

The objective is to create graduates who have an understanding of the ways diverse communities in Colonial America and in the United States have constructed social and civic institutions. Such educated people are able to bring historical understanding and critical skills to their participation in the civic spheres of society and are able to think critically about the nature of citizenship, government, and social relations in the United States.

b. Global Cultures …………………………………  3

The objective is to create educated people who can live comfortably and productively in a world where communication technologies, economic relationships, and the flow of people across national borders increasingly challenge national identities and create transnational, global cultures.
3. Quantitative Literacy ......................................................... 3

The objective is to create educated people who understand quantitative reasoning and who are capable of evaluating claims and knowledge generated through quantitative methods.

4. Scientific Literacy .............................................................. 3

The objective is to create educated people who understand the fundamental ways scientists approach problems and generate new knowledge, and who understand how scientific findings relate to other disciplines and to public policy.

IV. Some Guidance on the Criteria for Certifying GE Courses under the New Plan

The GE Task Force provides the following expanded narratives about the goals of each element in the proposed new GE Program, with some guidance in how the GE Committee might carry out these objectives in deciding criteria for certifying courses as meeting a requirement. This is a working document presented by the GE Task Force in full recognition of the fact that individual courses might challenge the GE Committee to think about the original intentions of the requirement and to modify these guidelines though their certifying practices.

A. Topical Breadth Component (52 units)

Each course is assigned to a broad topical area (Arts & Humanities, Science & Engineering, or Social Sciences). If a course is sufficiently interdisciplinary, it should be assigned to two topical areas, permitting the student to use the course in whichever area the student needs to satisfy the requirement. In almost all cases, these assignments can be made by the department or program that offers the courses.

The student meets one area (20 units) through the major and takes an additional 32 units from the other two areas, with no fewer than 12 units from an area.

Courses (except for the 8-unit composition requirement) taken to meet the literacies component (below) can be “counted” in these 52 units.

Enrollment impact: The present GE Topical Breadth Component requires 6 courses (typically 24 units), three each in the two areas outside the major. The new Topical Breadth requirement requires 32 units beyond the major, also spread
over two areas outside the major. The new plan would likely encourage more students to take a minor outside of their major area, a trend that would be a good thing for bringing some coherence to the student’s breadth education.

**B. Core Literacies Component (32 units)**

1. **Literacy with Words and Images (20 units)**
   The ability to form, organize, and communicate one’s ideas is at the center of the faculty’s notion of what it means to be an educated person. The objective of this core literacy is to help create citizens who can communicate their ideas in written, oral, and visual forms. The requirement also seeks to enhance students’ critical judgment of oral, written, and visual messages created by others.

   **a. English Composition (8 units)**
   The 4 undergraduate Colleges (CAES, CBS, CLS, COE) have an 8-unit composition requirement that remains unchanged. The campus already has a mechanism for certifying composition courses and that approval process will remain unchanged.

   **Enrollment impact**: No change.

   **b. Writing-intensive coursework in the student’s major (3 units)**
   The subject of the writing-intensive course is the content of the discipline; the assigned writing is relevant to the content goals of the course. Writing-intensive coursework in the major provides students the opportunity to write essays, reports, proposals, and other genres of writing appropriate to their field under the guidance and assistance of faculty and graduate students in the field. The opportunity to revise writing after having received careful commentary from a mentor in the field is crucial to the success of this requirement.

   The "writing intensive" (WI) course complements the teaching of writing that occurs in the composition courses, especially the upper-division courses (101-104) in the University Writing Program (UWP). Writing is the subject of the composition courses and students learn how to construct, revise, and edit a range of documents pertinent to writing in disciplines and professions; the instructor also gives close attention to style, usage, and grammar.

   What a “writing intensive” (WI) course looks like (these are typical features of WI courses from universities around the U.S.):

   **Basic features:**
1. the instructor/student ratio should be roughly 1/25 (in a class or in a section of a large class) to allow a teacher to give detailed feedback on at least one substantial piece of writing by each student, and to read a revised version of that writing;

2. clear, detailed written assignments;

3. some class time given to careful instruction in how to complete assigned writing tasks;

4. either a series of graded writing assignments or one substantial written project divided into several stages;

5. a total of 12 to 30 pages of graded writing (total length is less important than items 1-4);

6. a substantial proportion of the final grade based on performance of writing assignments;

7. (optional but recommended) a mix of informal writing exercises to help students learn course content and ways of thinking, in addition to more formal writing tasks.

Several scenarios (among many) of WI courses within the major:

a. an introductory methods course, taught partially with small sections, in which students do several laboratory reports or research reviews or another type of writing essential to the methods of the discipline; each report/review receives comments and a grade and at least one of those assignments is revised after careful feedback;

b. a large lecture course with enough small discussion sections to ensure an appropriate student/teacher ratio: in this course, students do regular informal writing exercises (e.g. in a class blog) and at least two “papers,” at least one of which is a substantial project that receives feedback in draft and that must be revised;

c. a fieldwork-based course in which students, sometimes in teams, create ethnographic projects (appropriate to the discipline) that consist of several smaller parts; students must do enough individual writing for the teacher to assess individual growth;

d. a readings-based course in which students write several critical analyses; at least one of these must be given careful feedback and students required to revise;
e. a capstone course that requires lengthy individual research projects appropriate to the field and written in stages, each of which receives teacher feedback;

f. a senior engineering design project course in which students work in teams on parts of the project and write frequently to measure and record progress; this course will produce in stages a formal written report and perhaps other documents (e.g., posters, brochures) for different stakeholders;

g. a senior capstone course in the arts in which students create a portfolio of their work with a substantial amount of writing supplementing the visual or aural content of the portfolio; this would be a portfolio suitable for job interviews or grad school applications;

h. an internship course, for which students write regular brief reports and build a portfolio of reports done or other documents created for the internship site.

Departments and programs are encouraged to create these WI courses at the upper-division wherever possible to maximize the message that the faculty takes writing seriously and is willing to mentor the students in the sorts of writing the faculty knows the graduate will be doing for decades to come.

A department or program may wish to use its graduate students as key instructors in the WI courses designated by a major. The University Writing Program (UWP) and the Teaching Resources Center (TRC) will create models for training and using graduate students as part of a larger scheme by which students come to understand that the professors, instructors, and other mentors in the major consider clear writing to be a necessary element in clear thinking. The GE Committee should reward creativity by departments and programs as they design WI courses, recognizing that no model fits all disciplines.

c. **Additional writing-intensive coursework in the student’s major or additional writing-intensive (including composition) coursework outside the student’s major (3 units)**

It is not the goal of a WI requirement to isolate writing in the one or two courses so designated. Ideally, the attention to writing improvement in the WI course(s) and in the required composition courses will encourage more faculty to give students appropriate assignments in a range of courses. Becoming a proficient writer in a discipline demands appropriate writing in a range of situations in a major curriculum. Thus,
we expect that many departments and programs will have more than one WI course.

One possibility for these three units is that a department or program might petition the General Education Committee to designate a completed cluster of courses in the major (typically three) as together amounting to 3 units’ worth of WI experience. The department or program must show, of course, that a unit’s worth of intensive writing (closely mentored) is required in each of the courses in the cluster.

For those students in majors that provide only one WI course (see B.1.b, above), these additional three units can come from additional composition courses or from WI courses in other departments and programs. With careful planning, a student could pick up this additional WI through a minor or second major.

d. Oral skills coursework or additional writing-intensive coursework within or outside the student’s major (3 units)

The skills involved in the effective communication of ideas through oral presentation build on and strengthen the critical thinking skills exercised through writing. Courses certified as meeting this oral communication component should give students ample opportunity to prepare and deliver speeches and other sorts of presentations to audiences. Simple informative or persuasive speeches can be prepared and delivered with or without visual materials (as in a slide presentation), but students should be required to do at least two of these assignments in the course.

Courses certified for “oral literacy” should include some instruction in public speaking. The instruction should pay attention to the elements of good speaking, which would include preparation, delivery, organization, clarity, and similar elements in persuasion. The Teaching Resources Center should develop training programs to help instructors create the minimal instructional strategies for helping students with oral presentations.

A composition course or a WI course could be designed to have a substantial oral skills dimension, but such a course could be presented by the student to meet only one Core Literacy Component.

A third course in composition or WI course can be substituted in this category.

**Enrollment impact:** The Communications Department has oral performance courses in public speaking (CMC 1) and in small group work (CMN 3), and a good number of students pass through these two courses each year. Engineering students already are required to take a
course in oral proficiency. Some small classes (e.g., Frosh Seminars and courses in majors) could be workable settings for having students prepare and deliver enough speeches to meet this requirement. Sections 1c and 1d will require more sections of composition courses than are currently offered, if departments do not meet 1c and 1d through additional WI courses or oral skills courses in the major.

e. Visual literacy coursework (3 units)

The objective of this core literacy is to prepare graduates who can understand how visual materials both generate and communicate knowledge.

Given how much information is communicated visually in the 21st century, it is imperative that we know how to analyze the components and structure of visual images. Just as the arrangement of words and structure of sentences can enhance the effectiveness of content, so, too, may choices in visual components affect the message in visual communication.

Some courses will focus on training students how to communicate their ideas through visual messages. Other courses will focus more on the critical reading of visual culture, providing the student with critical skills for understanding the persuasive power of images. In any case, the aim is to make the students more thoughtful consumers of ideas presented in visual form.

There are many disciplines and courses where students learn how images and other visual materials communicate ideas, persuade audiences, and sometimes create meanings more clearly than do words. Some of these are in the expected places, like art, art history, design, and film studies. Other disciplines and courses already pay substantial attention to visual culture as part of the study of popular, mass-mediated culture (advertising, electronic media, etc.). Engineering and science courses sometimes pay substantial attention to the ways ideas are generated and presented through illustration, graphs, and other visual genres.

Enrollment impact: Students in art, design, film studies, and several other courses already satisfy this requirement. Similarly, many science and engineering students already take design courses and other courses for their majors that pay attention to visual representations of knowledge. Departments and programs could be encouraged to revise courses required for the major so that each discipline exposes its students to the ways that discipline uses visual evidence to generate and test knowledge.
2. Civic and Cultural Literacy (9 units)

The objective of this core literacy is to create informed graduates who can think critically about American institutions and social relations, understand the diversity of American cultures, and see the relationships between the national and local cultures and the world.

a. American Cultures, Governance, and History (6 units)

The objective is to create graduates who have an understanding of the history of Colonial American and of the United States, its governance, and the contributions of people from the variety of cultures that constitute the nation. Such people are able to critically evaluate public policy debates against the background of history and social relations.

Some courses that will meet this requirement will take a broad look at American history, politics, and social structures. Other courses will focus on specific cultures within the nation, asking what differences gender, race/ethnicity, social class, sexuality, and other human particularities make in the ways people fashion experiences and ideas in the United States. To meet this requirement, a course should aim to get at the dynamic relationship between parts and wholes in the society; ideally it should convey the nature of cultural diversity and the impact of diversity on American institutions and experience; and it should prepare graduates to participate effectively in civic society.

Enrollment impact: A large number of appropriate courses already are being taught and have been certified as meeting the current “social and cultural diversity” requirement. The new scheme should increase the number of appropriate courses.

b. Global Cultures (3 units)

The objective is to create citizens who can live comfortably and productively in a world where communication technologies, economic relationships, and the flow of people across national borders increasingly challenge national identities and create transnational, global cultures.

The faculty affirms that an educated person has a cosmopolitan, rather than a parochial, perspective on the world. An educated person can work and socialize with people from other cultures in ways that convey to the other person an informed, respectful understanding of the other person’s worldview.

There are many ways to acquire the cosmopolitan outlook, the mature sense of world citizenship that the faculty wants to see in graduates. Many
courses on campus, such as those from several disciplines serving the International Relations major, will give students that perspective.

Learning a foreign language is another way to acquire this global sensibility. Even the introductory foreign language courses bear a significant amount of cultural knowledge, so these courses should count as meeting the requirement. If a student is ready to take a more advanced foreign language class, having met the prerequisites through high school courses or through examination, then the student can meet this requirement with an advanced conversation course or a course in literature and culture taught in that foreign language. Students earning a BS should be reminded that one of the requirements for election to Phi Beta Kappa is a college level foreign language course (see http://hector.ucdavis.edu/pbk/Criteria.htm), a sure sign that the classic liberal arts education should include this cosmopolitan skill.

Study abroad for a year, a quarter, or even a summer term is another way a student can acquire knowledge of cultures beyond our borders. Some distance-learning opportunities at Davis can provide this education short of going abroad.

Some courses in the natural sciences could meet this requirement if there is sufficient attention in the course to globalization issues (for example, in environmental issues or world agriculture).

**Enrollment impact:** Many majors—Anthropology, Economics, History, IR, Political Science, and Sociology—require courses that can fulfill this requirement. Students earning a BA already meet a foreign language requirement (though some meet this with AP courses and exam credits that cannot be used for GE). A substantial number of students study abroad for a summer, an academic quarter, or longer.

### 3. Quantitative Literacy (3 units)

The objective of this core literacy is to create graduates capable of evaluating claims and knowledge generated through quantitative methods.

All graduates will function at a higher level in their careers and in their roles as informed and critical citizens if they are familiar with the application of quantitative reasoning to natural, social, and political systems. The ability to do quick quantitative estimates to test one’s own ideas and those produced by others is essential to evaluating the many numerical and statistical claims that are carried in the media with the intent of influencing thinking and behavior.
A course used to satisfy the quantitative reasoning requirement addresses the relationships between phenomena observed in nature or in human social systems, measurements made or data collected to study those phenomena, the analysis of data, and its implications for our understanding of the phenomena.

Most courses in the physical sciences and engineering and a substantial and growing portion of courses in the biological sciences already make heavy use of quantitative reasoning and could be used to satisfy this requirement.

**Enrollment impact:**
We estimate that about 80% of graduates are already satisfying the proposed quantitative reasoning requirement through courses required by the major.

Many HArCS majors do not fall into that category, though with advising they could be directed into courses that would meet the goals of this requirement. Statistics 10 or Statistics 13 would be ideal for preparing graduates who do not use quantitative methods in their own work but who should be informed readers of materials that use statistics in their arguments. Or a HArCS major might elect to take an introductory economics course or a quantitative methods course in a social science or education. Some HArCS students will have stronger math backgrounds and would be willing to take Math 17, for example. Not all humanities and arts students will welcome this requirement, but it should be noted that one of the requirements for election to Phi Beta Kappa is a college level math or statistics course (see [http://hector.ucdavis.edu/pbk/Criteria.htm](http://hector.ucdavis.edu/pbk/Criteria.htm)) -- a sure sign that the classic liberal arts education should include quantitative reasoning.

Since the fraction of students not already satisfying the requirement is small and since there are so many paths by which it can be satisfied, we believe that the system can handle this additional GE element without significant difficulty. Additionally, the majors with very heavy course requirements are already getting plenty of quantitative reasoning in those courses, so this GE requirement will not add units to those majors.

An added benefit of this requirement is that it may encourage the addition of quantitative reasoning to some courses where it would fit naturally but is not yet included.

4. Scientific Literacy (3 units)
The objective is to create educated people who understand the fundamental ways scientists approach problems, pose questions, gather data, make conclusions, and then generate new hypotheses for testing. A course certified for this requirement should show students how scientific findings relate to other disciplines and to public policy.

Students in majors outside of natural science and engineering will take 12-20 units in this area, but not all courses will get at the “reasoning” element specified by this literacy. Fortunately, the “10” courses in the sciences—the traditional number for courses designed for students outside the field—almost always get at the elements we want these courses to have, though the explicit requirement may help the teachers of the “10” courses revise their courses to be sure they get at these larger questions and worry less about the quantity of material “covered.” People teaching other science and engineering courses, likewise, may incorporate these goals into their courses, especially if they know that large numbers of students are taking the course for GE credit.

Enrollment impact:
While we do not assume that every course in the natural sciences and engineering features scientific reasoning as an explicit topic of the course, we feel sure that majors in those areas will meet this requirement through the major. Social Science majors and HArCS majors can actually double count some courses if they choose a Topical Breadth course also certified for scientific literacy.

V. Creative Responses to the New General Education Program

The new General Education Program will accomplish its mission with the help of a broad array of supplemental programs and initiatives. The Task Force believes that the faculty will want to respond creatively to some new possibilities.

• FRS 2: The University as a Community (1 or 2 units)

This course was piloted in the late 1980s, dropped, and then revived a few years ago as an experiment to see what a “freshman orientation” course of a sort different from the “University 101” courses elsewhere might look like here. Interim Vice Provost Wood and Diane Russell (Assoc. Director of Student Housing) have been teaching this sort of seminar for a while (11 sections over 6 quarters in seminars with 15 students each) as a pilot project with intentions to expand the number of sections to include large numbers of first-year students and transfer students.
This seminar provides the ideal setting for meeting two of the goals often mentioned in manifestoes about undergraduate education (e.g., Derek Bok’s *Our Underachieving Colleges*, 2006) – namely, the goal of preparing a student to live in a multicultural society and the goal of helping a student develop moral reasoning skills. Both of these features of “the educated person” touch sensitive issues and should be approached in a small class where the teacher and students have created a safe, open space for discussing frankly issues of morality and character.

The ultimate goal would be to have every student take this seminar. This would take some creative design, making use of staff and experienced students as instructors along with faculty. The Teaching Resources Center and the Vice provost for Undergraduate Studies will work on developing and testing some models that would expand the number of students experiencing this seminar.

• The Fine Arts in Performance

The Task Force recognizes that many of our students, including high achievers, have never visited an art museum or attended a live performance of theatre, dance, or high art music. Students can take courses in these areas in the Topical Breadth component of the new program, and sometimes these courses expose students to live performances and exhibitions, but we would like to encourage all students to attend cultural events as part of their breadth education.

Thus, we propose that several departments and programs institute 1-unit (or perhaps 0.5 unit) courses to be taken by students who will attend arts events and reflect briefly on their experiences. One unit needs to represent 30 hours’ worth of work in the quarter (0.5 units would represent 15 hours), so the logistics of these courses would have to be worked out. Other schools have had some success with such schemes.

A particular advantage of this category of 1-unit courses is that some students can add these courses to meet the quarterly progress standard of 13 units.

• Large Area Courses

Faculty should collaborate to create large lecture courses introducing students to a broad area, a sort of “10-course” for the Topical Breadth Area. Thus, one could imagine a large “Performing and Fine Arts” course with sections dedicated to practical labs in the arts, or a large “Humanities” course. This might be a good venue for the “scientific literacy” requirement to be met—a large, interdisciplinary science course that takes a broad look at how scientists reason and generate knowledge. We could imagine a large “Global Citizenship” course designed particularly for the educational objectives of that requirement. These are
just examples of the sorts of initiatives the faculty might launch in creative response to the new program.

• **A University Writing Center**

While it was not the charge of this Task Force to consider the mandate of the University Writing Program, putting the University Writing Program and the tutoring in writing provided by the Learning Skills Center under one administrative head—perhaps as a University Writing Center—makes great sense to us.

A Committee on Writing Across the Curriculum might be created to work with the University Writing Program and the Center with the charge to monitor the delivery of “Writing Intensive” courses and to help departments and programs develop their WI curricula.

**VI. Conclusion**

One of the most important responsibilities of a university faculty is the creation of a General Education curriculum that embodies the faculty’s view of what constitutes an educated person, someone who combines expertise in a chosen field with a breadth of knowledge and experience that will serve the person well as an active, thoughtful, productive member of society. These are old ideals for the university, but they must be reaffirmed by every generation of faculty and they must be articulated as a concrete set of expected courses and experiences.

The General Education Task Force presents here a plan that we think represents a broad consensus among the faculty of the University of California, Davis, about what are the critical thinking and communication skills we want our graduates to carry away from their UC education. We believe that we can be proud of Davis graduates who have gone through this General Education Program, who have added breadth to the specialized depth of their studies, who have taken seriously the challenge of communicating ideas well in writing and in speaking, who are equipped with critical skills for evaluating claims made through visual or quantitative means, who understand how science is done, who understand the fundamental dynamics of American civic culture, who appreciate the blessing of diverse backgrounds and experiences in our society, and who have stepped outside of their own cultural assumptions to see how people in other societies see the world.

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