COMMITTEE ON EDUCATIONAL POLICY
Amendment to Regulation 10.2 on General Education Requirements

To the Academic Senate, Santa Cruz Division:

CEP is proposing amendments to Santa Cruz Regulation (SCR) 10.2 regarding campus general education requirements. The changes proposed would replace our current general education requirements with new ones, effective fall 2010.

This proposal is the outcome of a two-year conversation among many campus constituencies. We have been guided by feedback from individual departments, from divisional chairs councils, from students, from college provosts, from advisors, from the administration, and from very many individual faculty. Our thinking was significantly shaped by these conversations, by the forum on general education and "brown bag" lunches held last fall, and by the feedback we received to our "pre-proposal" distributed last spring.

A full text of our proposal for general education, which includes proposals that do not require legislation, can be found at http://senate.ucsc.edu/cep/CEPREFORMREV2.pdf.

Higher-level goals of general education

The goals intended for individual requirements are given further below. Here it is worth stating what we take the "high-level" goals of general education to be.

At the highest level, general education should encourage lifelong learning, and prepare people to handle the complex and unexpected problems of the future with wisdom and resourcefulness. Somewhat more concretely, we think general education should…

1) Provide students with a base of knowledge and skills that future learning can build on.
2) Expose students to a broad range of disciplines and methodologies, to better prepare them for a world of complex problems and rapid change.
3) Enhance the abilities of students to approach problems in appropriately analytical ways.
4) Prepare students to function as responsible and informed participants in civic life, considering pressing societal issues (such as the environment, the economy) productively and from a variety of perspectives.

We can also state the more important "design principles" that guided our discussions. We assumed that our requirements should…

- be easy to understand
- be less burdensome than current requirements, if possible
- be interesting (with matters of recruitment and retention in mind)
- reflect faculty and student feedback
- reflect our campus's principles and identity

It is not always easy to optimize based on these principles, which often seem to conflict with each other.

The chart below summarizes the proposed new general education (GE) requirements. It consists of seven required course categories (top rows), one requirement from a "Perspectives" choice category, and one **two-credit** requirement from a "Practice" choice category.

The chart also shows two Composition courses (C1 and C2) and a Disciplinary Communication (DC) requirement. The legislation proposed here does **not** make changes to these writing requirements. We propose to carry over our current C1 and C2 requirements. The Senate voted on legislation for Disciplinary Communication on February 18.

Proposal

		Code	Distinct Courses	Possibly Overlapping
Cross-Cultural Analysis		CC	1	
Ethnicity & Race		ER	1	
Interpreting Arts & Media		IM	1	
Mathematical & Formal Reasoning		MF	1	
Scientific Inquiry		SI	1	
Statistical Reasoning		SR	1	
Textual Analysis & Interpretation		TA	1	
Perspectives (Choose 1)	Environmental Awareness Human Behavior Technology & Society	PE-E PE-H PE-T	1	
Practice (2-credit) (Choose 1)	Creative Process Collaborative Endeavor Service Learning	PR-C PR-E PR-S	+ (2cr)	
Writing	Composition	C1&C2	1	1
	Disciplinary Communication	DC	*	
Total (= 9+ to 10+)			9+	1

*CEP advocates building DC into existing major courses

Descriptions of each of these requirement categories can be found in the Appendix below.

For comparison, below is a chart of our existing GE requirements. (Here we show the Writing-Intensive requirement, instead of the DC requirement.)

Current requirements

	Category	Code	Distinct Courses	Possibly Overlapping
Humanities & Arts	Intro Discip	IH	2	
	Topical	T	1	
Social Sciences	Intro Discip	IS	2	
	Topical	T	1	
Natural Sciences & Engineering	Intro Discip	IN	2	
	Topical	T	1	
Writing	Composition	C1&C2	1	1
	Writing-Int	W		1
Math	Quantitative	Q		1
Other	Ethnic / Non-Western	E		1
	Arts	A		1
Total (= 10-15)			10	5

Major differences from current system

The proposed requirements differ in several important ways from our current requirements.

First, they are smaller, both in the number of courses and the number of credits required. Whether the difference is modest or substantial depends on how successful a student might have been under our current system at "overlapping" requirements, that is, finding courses that satisfied more than one requirement at a time. As the chart above shows, depending on the amount of overlap, a student under our current system will take anything from 10 to 15 five-credit courses. Under the proposed system, the range would be from 9+ to 10+ courses, where "+" refers to a two-credit course in the "Practice" category.

Second, the proposed system allows almost no overlap of GE requirements. The one exception is for the college core courses (which provide satisfaction of either C1 or C2, depending on the student). Current practice is to allow core courses to satisfy a general education requirement apart from C1/C2, and we propose to continue this practice. The main reason for this is to provide "incentivization" for students to enroll in college Interdisciplinary Topical Clusters (ITCs). Our hope is to foster the development of ITCs at several colleges (following a model currently being developed at College 8); we think it will be important to students who sign up for clusters that they receive substantial GE credit for them. (For more information, see the full GE proposal at http://senate.ucsc.edu/cep/CEPGEREFORMREV2.pdf.)

CEP deliberated a great deal over whether to allow overlap of requirements. In the end we were persuaded by two arguments against overlap. The first made by many faculty, is that overlap

leads to a perversion of the educational goals of GE. Because students are under pressure to finish GE requirements, their choices of class can be based not on interests or educational goals but on calculations about which course will "get the most requirements out of the way". In a similar vein, faculty can be tempted to design and offer courses with multiple designations not due to educational convictions but to attract student enrollments.

The second argument against overlap comes from our concern that courses should focus in a deep and sustained way on the educational goals of a given objective, and that when objectives are allowed to combine they will often each be diluted in the meeting. Of course this does not have to be the case, and one could reasonably argue that combining some requirements could lead to an educational synergy. This is a real consideration, but CEP was more persuaded by arguments against overlap.

The third major difference between the proposed requirements and the existing ones is that we have eliminated the distinction between "Topical" and "Introductory" breadth courses. In the view of many faculty, this distinction is not as successful at meeting its intended goals as it might have been. Roughly speaking (and acknowledging possible differences of opinion), Topical courses are meant to i) be organized around a topic or theme of importance to society rather than around a discipline, and ii) be interdisciplinary, if possible. CEP believes that these goals are praiseworthy, and that they can be better met in other ways. For example, we have proposed that the campus try to meet them in part by means of the Interdisciplinary Topical Clusters. (ITCs are not a legislative item, but the reader can find out more about this line of thinking in CEP's full GE proposal.) Furthermore, we will encourage faculty to structure *any* GE course around topical themes if they wish to. Many, if not all, of our GE categories allow for this possibility.

A last general difference between the proposed and existing requirements is possibly the most important: our proposed requirement categories are more specific than our existing ones, and they reflect specific educational goals rather than administrative divisions. There is a tension between specificity on the one hand, and freedom or inclusiveness on the other. In the end we opted for a degree of specificity, because specificity is what makes a set of requirements interesting and distinctive. The trade-off is that we had to make some difficult choices about what to include or not include. We have endeavored to make choices that best reflect our faculty's vision as we have discerned it over our many consultations.

The substance of our proposal is really in the draft descriptions given in the Appendix, which amount to our statement of the goals and expectations for each category. We urge you to read them and give us your comments. It is important to note that these descriptions are not part of legislation; we are not voting on them. Instead they constitute draft policy statements, and as such we expect them to change. In fact, even if this legislation passes these statements could, and probably should, evolve over time, depending on the views of CEP and of faculty who discuss them with CEP. We welcome your input.

Again, for a fuller discussion of GE reform, we refer the reader to
http://senate.ucsc.edu/cep/CEPGEREFORMREV2.pdf.

Current wording	Proposed wording
10.2.2 General Education Requirements.	10.2.2 General Education Requirements **for Students Entering before Fall Quarter 2010**.
10.2.2.1 [Amended by the Senate, February 18, 2009] Students who enter the University of California, Santa Cruz, as candidates for the degree of Bachelor of Arts, Science, or Music are required to fulfill the following campus general education requirements. The courses used to satisfy these requirements must be chosen from the lists of approved courses (SCR 10.2.2.6). Only course work awarded the grade of P, C (2.0) or better may be used to satisfy these requirements.	10.2.2.1 Students who enter the University of California, Santa Cruz, as candidates for the degree of Bachelor of Arts, Science, or Music either: (1) **between** ~~in~~ fall quarter 1986 **and spring quarter 2010** ~~or thereafter~~, or (2) between fall quarter 1984 and spring quarter 1986 with fewer than 45 quarter units of transfer credit, are required to fulfill the following campus general education requirements. The courses used to satisfy these requirements must be chosen from the lists of approved courses (SCR 10.2.2.6). Only course work awarded the grade of P, C (2.0) or better may be used to satisfy these requirements.
a. **Introductions to disciplines**. Two five-credit hour courses or the equivalent are required from different departments or programs of study in each of the three academic areas: Humanities and Arts; Social Sciences; and Natural Sciences. These courses shall introduce the scope, methodology, and content of the discipline or one of its major subdivisions. No more than one course from the Arts may be used to satisfy this requirement. For the purpose of these regulations, all literatures are considered one department; likewise, all languages are considered one department.	a. Unchanged.
b. **Topical courses**. Three five-credit hour courses or the equivalent are required, no more than one from any academic division. Topical courses shall present issues of broad social importance at a level appropriate to non-majors from either a multidisciplinary or disciplinary perspective.	b. Unchanged.
c. **Quantitative course.** One five-credit hour course or the equivalent that entails use of advanced algebra, statistics, or calculus is required. The course may be offered by any	c. Unchanged.

unit but should teach, not just evaluate, mathematical skill.	
d. **Composition courses**. Students who enter the University of California, Santa Cruz, in fall 2005 or thereafter are required, in addition to satisfying the ELWR requirement, to complete a sequence of two five-credit hour courses or the equivalent in composition and rhetoric. These courses shall usually be taken in a student's first year and must be completed before the student enrolls in the 7th quarter. Student admitted prior to fall quarter 2005 are required to complete one five-credit course in English Composition in addition to satisfying the ELWR requirement.	d. Unchanged.
e. **Writing-intensive course**. [Amended by the Senate, February 18, 2009] Students who entered the University of California, Santa Cruz, before fall 2009, are required to complete one five-credit hour course or the equivalent that provides instruction and substantial practice in writing within the context of any academic subject.	e. Unchanged.
f. **Disciplinary communication (DC) requirement.** [Amended by the Senate, February 18, 2009] Students entering the University of California, Santa Cruz, in or after fall 2009, must have instruction and substantial practice in modes of communication appropriate to their major. The largest component of the DC curriculum must involve writing. The requirement must be satisfied either within one five-credit upper-division course or within a combination of up to three upper-division courses totaling at least five credits. Major program requirements must include disciplinary communication curricula that are approved and regularly assessed by the Committee on Educational Policy.	f. Unchanged.
g. **Arts course**. One five-credit hour course or the equivalent is required in the performance, theory, or history of the arts.	g. Unchanged.

h. **Ethnic studies course**. One five-credit course or the equivalent is required which deals with ethnic minorities in the United States or with a non-Western society or culture. This requirement applies only to students entering fall quarter 1986 or thereafter.	h. Unchanged.
i. A given course may apply toward as many as three of the requirements above. However, no single course may satisfy both the disciplinary Introduction and the Topical requirement.	i. Unchanged.
10.2.2.2 [Amended by the Senate, February 18, 2009] Transfer or advanced standing credit may apply toward all of the requirements in SCR 10.2.2.1 except the Writing-intensive/disciplinary communications courses, which must be taken at UCSC. An eligible transferred course of 4.0 quarter units or 3.0 semester units may be considered one course with respect to campus general education requirements. Responsibility for assessment of work completed at other campuses of the University of California or at other institutions is delegated to the Director of Admissions. In making such assessments, the Director consults with the Faculty when appropriate.	10.2.2.2 Unchanged
10.2.2.3 [Amended by the Senate, February 18, 2009] Students admitted with three or more quarters of advanced standing from another campus of the University of California are required to fulfill in their entirety the University of California, Santa Cruz, campus general education requirements (SCR 10.2.2.1). However, students who, at the time they enroll at the University of California, Santa Cruz, campus, have completed the general education requirements of another University of California campus will be deemed to have completed the University of California, Santa Cruz, general education requirements.	10.2.2.3 Unchanged.

10.2.2.4 Petitions for the granting of an exception to the general education requirements must be recommended by the student's preceptor and reviewed for approval by the Committee on Educational Policy.	10.2.2.4 Unchanged.
10.2.2.5 [Amended by the Senate, February 18, 2009] When colleges, departments, and other agencies propose a course, they designate which of the general education requirements (SCR 10.2.2.1), if any, the course is presumed to meet. The Committee on Educational Policy approves or disapproves the designation.	10.2.2.5 Unchanged.
	10.2.3 General Education Requirements for Students Entering Fall Quarter 2010 or Later. **10.2.3.1 Students who enter the University of California, Santa Cruz, in fall quarter 2010 or later, as candidates for a Bachelor's degree, are required to fulfill the campus general education requirements given below. Courses used to satisfy these requirements are subject to the following restrictions: i) they must be chosen from the lists of approved courses (SCR 10.2.3.4); ii) each course may apply toward only one of the requirements, unless a specific exception is granted by the Committee on Educational Policy; iii) only course work awarded the grade of P, C (2.0) or better may be used to satisfy these requirements.**
[*NOTE: 10.2.3.1.a Composition courses remains unchanged from 10.2.2.1.d.]*	a. Unchanged.
[*NOTE: 10.2.3.1.b Disciplinary communication remains unchanged from 10.2.2.1.f]*	b. Unchanged.
	c. Cross-cultural analysis. One five-credit course or equivalent is required that emphasizes understanding of one or more cultures and societies outside the United States.

d. Ethnicity and race. One five-credit course or equivalent is required that focuses on issues of ethnicity and/or race.

e. Interpreting arts and media. One five-credit course or equivalent is required that focuses on the practice, analysis, interpretation, and/or history of one or more artistic or mass media (media in which non-textual materials play primary roles).

f. Mathematical and formal reasoning. One five-credit course or equivalent is required that emphasizes university-level mathematics, computer programming, formal logic, or other material that stresses formal reasoning, formal model building, or application of formal systems.

g. Scientific inquiry. One five-credit course or equivalent is required that focuses on the essential roles of observation, hypothesis, experimentation and measurement in the natural sciences.

h. Statistical reasoning. One five-credit course or equivalent is required that focuses on developing skills in approaching quantitative data and statistical reasoning.

i. Textual analysis and interpretation. One five-credit course or equivalent is required that has as its primary methodology the interpretation or analysis of texts.

j. One additional five-credit course or equivalent is required in one of the following areas.

i) Environmental Awareness. Focuses on humankind's interactions with nature.

ii) Human behavior. Focuses on aspects of individual human behavior or the

	operation of human groups. **iii) Technology and society. Emphasizes issues raised by the prevalence of technology in society.** **k. One additional course or equivalent, awarding a minimum of 2 credits, is required in one of the following areas.** **i) Collaborative endeavor. Provides significant experience with collaboration on a project.** **ii) Creative process. Teaches creative process and techniques in the arts (including creative writing), at an individual or a collaborative level.** **iii) Service learning. Provides the opportunity for supervised campus or community service that contributes to a student's overall education.**
[*NOTE: 10.2.3.2 on transfer credit remains unchanged from 10.2.2.2]*	10.2.3.2 Unchanged
[*NOTE: 10.2.3.3 on petitions for exceptions remains unchanged from 10.2.2.4 Composition.]*	10.2.3.3 unchanged
[*NOTE: 10.2.3.4 on course approvals remains unchanged from 10.2.2.5]*	10.2.3.4 unchanged

Respectfully submitted;
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Appendix: Draft objectives of proposed requirements

Cross-Cultural Analysis
Courses in Cross-Cultural Analysis aim to prepare students for a world that is becoming a global village, with increased interaction and integration among peoples, companies, and governments. These courses aim to encourage a broader and deeper understanding of cultures and societies outside the United States. Such courses might focus on an in-depth examination of one culture, or one aspect of such culture (e.g., art, music, history, language). Alternatively, these courses might aim to help students develop skills of cross-cultural comparison and analysis. A third option is courses that explore topics that are inherently cross-cultural such as international relations or the processes of economic globalization. Whatever the approach, these courses all aim to help students develop the openness and sensitivity necessary for cross-cultural understanding. Although themes of privilege and oppression are centrally relevant to the history and current experience of many cultures, such themes may, but are not required to be, addressed in cross-cultural awareness courses.

Ethnicity and Race
Courses in Ethnicity and Race aim to prepare students for a state and a world which are increasingly multi-ethnic and multi-racial. Beyond familiarizing students with the culture and/or history of one or more ethnic or racial groups, these courses also aim to develop theoretical and practical understanding of questions such as (but not limited to): how categories of ethnicity and race are constructed; the role they can play in identity formation; how ethnicity and race have historically been used to justify forms of enforced inequality; and the contributions of people of various ethnicities to society and to political change. These courses are particularly concerned with how ethnicity and race may intersect with other categories, such as gender, class, or sexual orientation, to shape self-understanding and patterns of human interaction. While such courses may often adopt an historical perspective on the issues they consider, they will address discrimination based on ethnicity or race as an ongoing problem whose resolution remains an unfinished social task.

Interpreting Arts and Media
Contemporary life bombards us with visual and auditory media, often in the form of advertising or advocacy. Interpreting Arts and Media courses explore the complex ways in which information of all kinds is represented by visual, auditory, or kinesthetic means, or through performance. They build in-depth understanding of one or more forms of artistic media: that is, media in which non-textual materials play primary roles. They offer skills in the practice, analysis, interpretation and/or history of one or more of these media, as well as the ability to analyze the means by which they encode and convey information.

Mathematical and Formal Reasoning
Disciplines such as mathematics, logic, and computer programming teach us to think with rigor and precision. In a world in which much thinking and discourse is directed by emotion and association, formal or mathematical models teach the value of dispassionate analysis. Courses in this category emphasize the development of mathematical, logical, and/or formal reasoning skills. Mathematics-based courses presuppose UC-level mathematics preparation, are focused on teaching significant problem solving skills, and are often oriented towards particular application areas. Other courses satisfying this requirement train students in formal reasoning skills and/or in

the construction and use of formal models. Formal reasoning domains include mathematical proof, logic, and applied logic. Some examples of formal models are: computer programming languages, generative grammars (from linguistics), supply and demand models, and formal music theory.

Scientific Inquiry

Courses in Scientific Inquiry teach students about the essential role of observation, hypothesis, experimentation and measurement in the natural sciences. Students should acquire key concepts, facts, and theories relevant to living systems and/or the physical universe; by the end of the course they should also be able to articulate an understanding of the value of scientific thinking in relation to issues of societal importance.

Statistical Reasoning

In today's globalized, media-saturated information society, we are continually presented with – or asked to present – numerical data. With their emphasis on classical mathematics, our schools may not do enough to prepare students to interpret quantitative claims and make judgments in situations of statistical uncertainty. The goal of statistical reasoning courses is to teach skills for effective reasoning about probability and the use of quantitative information. Students acquire an understanding of making informed decisions in the presence of uncertainty. Possible topics also include ways of (mis)representing data; correlation vs. causation; statistical inferences; experimental design and data analysis; understanding orders of magnitude.

Textual Analysis and Interpretation

Even in our current multi-media world, the written word remains a major vehicle of communication. Many fields, from literature and history to law, government, and religion, depend heavily upon the understanding and interpretation of written documents. Textual Analysis and Interpretation courses have as their primary methodology the interpretation or analysis of texts. The aim of these courses is to develop higher-order reading skills and to train students how to read attentively, to think critically and analytically, to produce and evaluate interpretations, to assess evidence, and to deploy it effectively in their own work. These abilities are not only necessary for academic success, but also for full participation in civic life at every level.

Environmental Awareness

The interactions between people and the earth's environments are subtle, complex, and influenced by a variety of natural, scientific, economic, cultural, and political factors. Courses satisfying the Environmental Awareness requirement teach students about the complexity of particular ecosystems and/or people's interactions with nature so that they will better understand the environmental issues and trade-offs that are likely to arise in their lifetimes. Courses deal with one or more of the following topics: the study of particular ecosystems or environments; natural forces, processes, and their effect on ecosystems; climates, climate models, and climate change; evolution and adaptation to the environment; bio-diversity and/or the robustness of nature and its feedback mechanisms; how cultures relate to their natural environments; human efforts to create, preserve, and modify environments; management of natural resources (such as fossil fuels, forests, and fisheries); issues of sustainability (such as sustainable agriculture or renewable energy); pollution and its effect on ecosystems; ecological impacts of non-native species and other ecological disasters.

Human Behavior

Courses in human behavior help students to prepare for a world in which many of the most pressing challenges (such as genocide, environmental degradation, poverty) are impacted by human thoughts, decisions, or practices. As well, they provide a kind of "owner's manual" for students to assist them in understanding themselves, their roles (for example, parent, partner, leader), and their social groups (family, workplace, neighborhood, nation). These courses impart specific knowledge about some aspect of individual human behavior or the operation of human groups. As well, they are likely to provide an introduction to one or more specific methodologies, such as ethnography, longitudinal analysis, or experimentation. A central aim, however, is to help students appreciate that better solutions to problems (whether global or personal) can often be found by incorporating information about how humans think, feel, and act.

Technology and Society

Imparting a basic understanding of the dynamic technological society in which we live is an essential goal of academic institutions. The study of technology helps satisfy the need of society for knowledgeable people able to understand, participate in, and guide the rapid technological advances that play such a vital role in our world. Technology and Society courses focus on understanding technological advances, how they are developed, and their impacts on society.

Collaborative Endeavor

Students learn and practice strategies and techniques for working effectively in pairs or larger groups to produce a finished product. For example, students might learn specialized practical information such as how to use change-management software to monitor and manage changes initiated by multiple group members. Alternatively, they might learn basic information about leadership, teamwork, and group functioning, which they can incorporate into their own group process. What is common to all courses is that some instruction regarding the process of collaboration is provided, in addition to instruction specific to the academic discipline and the products being produced.

Creative Process

Creative Process (CP) courses teach creative process and techniques in a context of individual or collaborative participation in the arts, including creative writing. Courses may combine theory and experiment in the creation of a new artwork, or new interpretation(s) of an existing artwork. CP courses include studies in individual or group creativity or improvisation, and/or ensemble rehearsal and performance. Students who elect to satisfy the CP requirement will take at least two credits of individual or group creative work. CP may be satisfied within courses of greater than two credits. Where appropriate, sponsoring units may require a sequence of two or three 2-credit courses, with the CP designation assigned to the final quarter.

Service Learning

Service learning courses provide students with an opportunity to integrate their academic coursework with community involvement. Such courses provide supervised learning experiences where students reflect on, communicate, and integrate principles and theories from the classroom in real-world settings. Students gain valuable practical skills while giving back to the community.