

# Forum on General Education Reform



Committee on Educational Policy

October 29, 2008

# Background

*What is general education for? CEP's view:*

To prepare students for lifelong learning by

- giving them a base of knowledge and skills;
- providing them with the flexibility and breadth they will need in a shifting global society where career change is frequent;
- preparing them to engage in important and complex problems from a variety of perspectives and in appropriately analytical ways.

# Background

*Also:*

- Our general education program should reflect our university's unique qualities and identity.
- It should help attract and retain the strongest students representing California's diverse population.

# Background

*Why revisit our current general education program?*

- Our current General education (GE) requirements date from 1984. They do not reflect today's world.
- They feel complex and do not inspire students.
- Their rationale is unclear.

For more background and current reform, see sources at

<http://senate.ucsc.edu/cep/GenEdReformIndex.html>

# Background

*Something to keep in mind*

GE goal/requirement  $\neq$  GE course

Overlap of GE goals/requirements

GE in the major (e.g. disciplinary communication)

# Background

## *What CEP has done*

- Beginning in 2006-7: regular reports to Senate on the need for GE reform, initial ideas.
- Winter 2007: presented resolution (passed unanimously) urging “Central and Divisional administration to work with departments and with Senate committees to find a solution to the [Writing-Intensive] crisis and to allocate the resources needed for it.”

# Background

## *What CEP has done*

- 2007-8: Visited every department on campus; met with students, provosts, preceptors, and other campus constituencies; online student survey; consulted with other senate committees, administration.
- Spring: pre-proposal.

## Goals for Today

- Discuss pre-proposal, with special attention to goals and requirements of
  - Breadth
  - Perspectives and Proficiencies
  - Disciplinary Communications
- Inform on feedback from departments and divisions



## **This work is in progress**

We are grateful for all the responses received so far, from departments, divisions, and individuals. They are continually shaping the proposal.

We anticipate that more discussion will be needed in some areas.

We plan upcoming brown-bag lunches

## Format

- Initial presentation (20 min)
- Discussion of *Breadth* goals and requirements (20 min)
- Discussion of *Perspectives and Proficiencies* goals and requirements (35 min)
- Discussion of *Disciplinary Communication* (20 min)
- Discussion of *Interdisciplinary topical clusters* (15 min)
- Next steps (10 min)

# Desiderata

Our GE requirements should

- be easy for students, faculty, and advisors to understand;
- have a clear vision and rationale;
- burden students and constrain their choices as little as possible while meeting UCSC's educational goals;
- reflect what we have learned about best practices in general education since our last major reform.

*Breadth*

## Current breadth categories and number of courses required

Arts	Humanities & Arts	Natural Sciences & Engineering	Social Sciences	Total
1	2 (Intro) 1 (Topical)	2 (Intro) 1 (Topical)	2 (Intro) 1 (Topical)	9-10*

\*Art can overlap with other categories

Note: Subject Areas are defined by intellectual content, not by administrative home.

Hallmark of a distributional GE system: it's generic

- Subject areas are too broad
- Expectations for GE courses are not well developed

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1	2 (Intro) 1 (Topical)	2 (Intro) 1 (Topical)	2 (Intro) 1 (Topical)	9-10*

\*Art can overlap with other categories

## Pre-proposal

Arts	Humanities	Natural Sciences & Engineering	Social Sciences	Total
1	2	2	2	5-6*

\*Breadth courses not required in subject area of major

☞ Eliminates Introductory/Topical distinction; fewer courses

## **Arts; Humanities**

### Feedback from Arts:

“[Arts] courses ... will focus primarily on the creation, analysis, interpretation, and history of artistic media: media in which non-textual materials play primary roles.”

### From Humanities:

“The work of the Humanities is primarily interpretive, analytical, and text-based; while the Arts offer students a more experiential and creative task typically grounded in performance or work on material.”

## **Engineering; Science**

From School of Engineering:

“[Engineering GE courses] are to enable students to understand the impact of technology on their personal lives, on their chosen area of study, and on society as a whole. They can provide students with the knowledge they need in order to apply engineering tools and technologies in their lives and careers.”

From Physical & Biological Sciences:

“[Science courses] teach key concepts, facts, and theories relevant to living systems and the physical universe”

“The combination of Engineering and Natural Science into a single general education category is a historical artifact without obvious intellectual justification.”



## **Arts**

These courses focus on the creative practice of, or the analysis, interpretation and/or history of, one or more artistic media – media in which non-textual materials play primary roles.

## **Humanities**

These courses involve methods of textual interpretation, cross-cultural (or comparative) analysis, formal logic/reasoning, or historical inquiry.

They help students understand the major accomplishments and limitations of distinctive cultural traditions, present and past; or help them negotiate their culturally diverse contemporary world in knowledgeable and responsible ways; or foster their abilities to adjudicate important and enduring questions of value and ethics.

## **Science**

These courses explore key concepts, facts, and theories relevant to living systems and the physical universe, and the value of scientific thinking in relation to issues of societal importance. Students learn about the essential role of observation, experimentation and measurement.

# Engineering

These courses address one of the following:

- 1) How is some modern technological artifact created (e.g. software artifacts - programs, hardware artifacts - computer circuits and systems)?
- 2) What tools are used in the creation of such artifacts and how do those tools work?
- 3) How does some human created technological artifact impact society? If the impacts are negative, how are they being addressed? If the impacts are positive how is that changing society?

## **Social Sciences**

CEP's placeholder pending input from Social Sciences:

These courses explore a substantive area of social science knowledge (e.g., cognitive psychology, linguistic anthropology), and address at least one of the methods of research commonly used in the social sciences (e.g., experimental inquiry, ethnographic study, longitudinal inquiry).

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# *Perspectives and Proficiencies*

## Current P&P categories and number of courses required

C1&C2 (Frosh composition)	W (Writing- intensive)	Q (Quantitative)	E (Ethnic)	Total
2	1	1	1	5*

\*W, Q, E, and one C can overlap with other categories

Total number of courses required by current GE: 10-15

P&P categories we are considering...



## **Quantitative/formal reasoning**

These courses incorporate university-level mathematics (at the level of advanced algebra or higher); **or** computer programming, formal logic, or other material that similarly stresses formal model building and application of formal systems (e.g., music theory, formal linguistics).

## **Statistical reasoning**

These courses explore statistical concepts and statistical reasoning. Students acquire an understanding of making informed decisions in the presence of uncertainty; of statistical terms and ways of representing data; and of basic inferential statistical techniques.

## **Cross-cultural analysis**

These courses aim to encourage a broader and deeper understanding of cultures and societies outside the United States. They strive to develop skills of cross-cultural analysis or to explore the complex issues raised by international relations and the processes of globalization.

Courses should

- a) include emphases on one or more cultures or societies outside of the United States;
- b) provide a comparative or analytic perspective, i.e., systematically explore differences across groups;
- c) develop skills to analyze culture-based differences in perception and behavior;
- d) expose students to culture-rooted issues that arise as a result of international relations or globalization.

## **Race, ethnicity, gender, sexuality**

These courses explore issues related to race, ethnicity, gender, and/or sexuality. They seek to develop the analytical skills needed to understand how these categories are constructed, or the role they play in identity formation/maintenance, social stratification, or social/political movements.

Courses should

- a) include emphases on one or more groups defined by race, ethnicity, gender, or sexuality;
- b) explore how identities are constructed or maintained; or
- c) explore the role that race, ethnicity, gender, and/or sexuality play in identity formation/maintenance, social stratification, or social/political movements.

## **Environmental understanding**

These courses focus on the topics, concepts and analytical methods related to the Earth's environments and ecosystems, and human-nature relations, in historical or contemporary contexts. In these courses students acquire both a sense of ecological complexity and an understanding of human impacts on the environment.

Courses should

- a) impart a significant depth of understanding of some ecological issue(s) and of human impacts on the environment;
- b) teach concepts related to the Earth's environments and ecosystems, and human-nature relations, in historical or contemporary contexts;
- c) expose students to ways of analyzing environmental issues.

## **Visual fluencies**

These courses explore the complex ways in which information of all kinds (cultural meanings, numerical data, molecular structure, etc.) is represented in images.

Courses should teach specific techniques by means of which

a) viewers make meaning of images in art and popular media, or

b) relationships in complex data sets can be effectively clarified or obscured by visualizations and information design, or

c) images are used to represent non-visual processes (time-variant data, music & dance notations, etc.).

# The Matrix

*Perspectives and Proficiencies*

		Quantitative	Cross-cultural	....	....	...	# Required
<i>Breadth</i>	Arts						1-2
	Engineering/Tech						1-2
	Humanities						1-2
	Science/Engineering						1-2
	Social Sciences						1-2

Pre-proposal: every Breadth course must (can?) simultaneously satisfy a Perspectives and Proficiencies requirement.

Seemingly likely combinations with these categories

	Arts	Engin	Hum	Science	Soc Sci
Quant		x		x	x
Statistics		x		x	x
Cross-Cult	x		x		x
Race ...	x		x		x
Environ	x	x	x	x	x
Visual	x	x	x	x	x

Assume students need not satisfy GE within same Breadth area as their major

Scenario 1:

Require 2 of each Breadth and 1 of each P&P

= 8 courses minimum

(cf. current minimum of 9)



## Seemingly likely combinations with these categories

	Arts	Engin	Hum	Science	Soc Sci
Quant		X		X	X
Statistics		X		X	X
Cross-Cult	X		X		X
Race ...	X		X		X
Environ	X	X	X	X	X
Visual	X	X	X	X	X

Assume students need not satisfy GE within same Breadth area as their major

Scenario 2:

Require 1 of each Breadth and 1 of each P&P

= 6 courses minimum

## Alternative

Eliminate or further limit overlap. Require x courses from set.

E.g. 1 each of following

Arts

Quantitative

Engineering

Statistics

Humanities

Cross-cultural analysis

Science

Race, ethnicity, gender, sexuality

Social Science

Environmental understanding

Visual fluencies

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# *Disciplinary Communication*

## Writing requirements at UCSC

Requirement	When taken	How taken
C1 (Composition)	1 <sup>st</sup> year	Usually college core course
C2 (Composition)	Before 7 <sup>th</sup> quarter	Usually Writing 2; sometimes core
W (Writing-intensive)	After C2; usually upper division	A course in some discipline

## C1 & C2

A requirement of two quarters of frosh writing is sound, and no change to GE is proposed here.

(Relevant legislation was put in place only 5 years ago.)

It is important that C1/C2 do the best possible job imparting writing skills.

This is not a matter of requirements but of *assessment*.

CEP pledges to work with colleges and the Writing Program to assess results of frosh writing and improve it where possible.

## **The problem of W (Writing-intensive requirement)**

- Originally meant to provide practice in writing in a student's major.
- But our regulations don't require this, and some departments don't offer W courses for their majors.
- Students "crash" W courses outside their majors.
- Affected departments react by curtailing W offerings.
- Even more students struggle to find W.
- CEP sees hundreds of petitions a year from students.
- This is educationally unsound.

## CEP's Disciplinary Communications (DC) initiative

- Proposes to make explicit that it is a requirement of *majors*.
- Gives departments more freedom to interpret and implement the requirement as best suits their majors.
  - Can be in one course or across several.
  - Writing-focused, but recognizes other forms of disciplinary communication: oral, poster, etc.
  - Departments determine the educational objectives for their own majors.



## CEP's Disciplinary Communications (DC) initiative

- Faculty are concerned about having the resources and support to do this well.
- CEP has called for
  - re-establishment of a strong peer tutoring program
  - the hire of a faculty member dedicated to Writing in the Disciplines
- To understand the resource implications of DC for departments and divisions, *departments must tell us what their educational objectives are and how they could be met.*

## **CEP's request to departments**

- Lay out your educational priorities for your majors in the area of disciplinary communication. What should students be learning to do?
- Tell us how these goals are, or could be, met through your curriculum.

## **Departmental responses**

So far: responses from 24 departments for 34 majors.

- Most departments laid out clear goals and ways of achieving them
- A common thread: need for support
  - Student-instructor ratio
  - TA training
  - Peer tutoring
- Tension between goals of DC and interdisciplinarity

We encourage faculty to read responses

## **Next steps for DC**

- Feedback from CEP to departments
- Clarification of resource issues: departments, deans, EVC, and Senate must work together

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*Interdisciplinary Topical  
Clusters*

## Distributional vs. Core GE

Antithesis of distributional GE: a *core* GE program

All students take the *same* set of courses

- By design: coherence and vision
- Community of learning
- Good for retention and student success
- Creates sense of institutional identity

## Topical courses

Important goals of current Topical courses:

- Focus on a topic of broad import (“big questions”)
- Approach that topic from more than one disciplinary perspective.

T courses have not succeeded really well in these goals.



# Proposal 1

## Encourage Interdisciplinary Topical Clusters (ITCs)

ITC: A group of two or more courses, drawn from *different departments* (or divisions), organized around *one theme*.

Students who sign up for a cluster take *all* of the courses in that cluster.

## Example

Sustainability cluster

Courses	Possibly satisfies (?)
Environmental Inequality (College 8)	Social Science Science
Concepts in Environmentalism (EE Biology / Earth Sciences)	Engineering/Technology Environmental Understanding
Electrical Engineering & Environmentalism (Electrical Engineering)	Quantitative

Inherently interdisciplinary

Focused on important theme

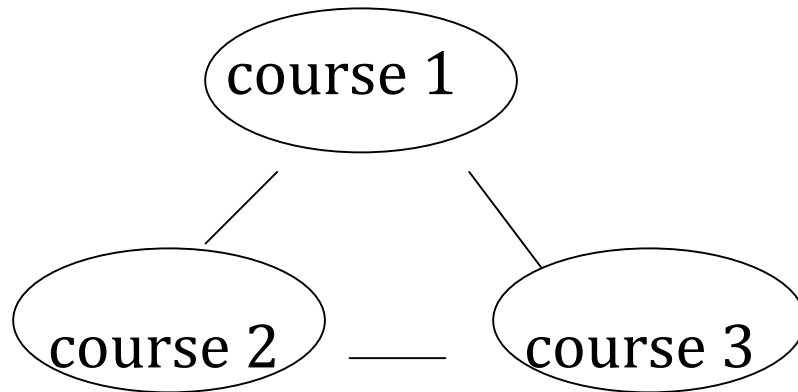
## Proposal 2

Link a cluster to a specific college

*Sustainability ITC*



College 8



Synergy: academic *and* residential community

Deepens academic identity of college

Links regular faculty to students of a particular college

## Proposal 2

Even link to C1/C2: Core, and possibly Writing 2

Under consideration by College 8

Quarter	Course	Paired with
Fall	Environmental Inequality (College 8)	Core
Winter	Concepts in Environmentalism (EE Biology / Earth Sciences)	Writing 2
Spring	Electrical Engineering & Environmentalism (Electrical Engineering)	

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*Next Steps*

## Goals for the year

1. A complete proposal for GE reform by Winter break
2. Legislation to the Senate Winter quarter

### Legislation vs. Policy

Legislation: minimalistic statement naming

Breadth & PP categories

DC requirement for majors

Policy on interpretation of these things: always evolving

# **Brown bag workshops in coming weeks**

## Possible topics

1. Re-envisioning the “E” requirement
2. Other Perspectives and Proficiencies requirements
3. ITCs



# Help

Opinions are strong and diverse

Any consensus will require compromise

What everyone agrees on: current system needs to change

Please help shape the final proposal

*Thanks*