General Education at SFSU: A Self-Study
Document Prepared by the 2005-06 General Education Council of SFSU

Executive Summary

The Academic Senate requested a review of the current general education program at San Francisco State University (SFSU). The General Education Council of SFSU conducted a review of this program in the spring and summer of 2006. The following items were included in that review:

- Executive Order 595
- Current SFSU policies
- SFSU's General Education Web Site (http://www.sfsu.edu/~ugs/gep.htm)
- Proposed policy changes
- Comparisons with other California State University (CSU) campuses
- Bulletin descriptions of the current program
- Student surveys about GE, Spring 2006 (approximately 1,300 students)
- Exit surveys from graduating seniors from 2002-06 (approximately 12,000 students)
- Pulse surveys (approximately 7,500 students)
- Facilitating Graduation Survey (approximately 16, 500 students)
- Assessment reports on general education at SFSU
- Faculty/staff commentary from an electronic blog (approximately 100 paragraphs)
- Recommendations from the SFSU Library
- Enrollment data
- General education petition data

The current general education program at San Francisco State University (SFSU) is grounded in the following precept: "General education introduces students to a lifetime of learning about themselves and about the world in which they live. Above all, general education should sharpen students' abilities for continued intellectual growth and should develop an awareness of and appreciation for the tentative nature of human knowledge that must constantly be added to, subtracted from, and modified in light of subsequent discoveries." (Academic Senate Policy, #F05-64) For students who complete their entire general education program at SFSU these goals are addressed in three Segments: Segment I: Basic Subjects (12 units); Segment II: Arts and Sciences Core (27 units); and Segment III: Relationships of Knowledge (9 upper division units). This document presents the results of a self-study on each of these segments, as well as general education as a whole at SFSU. At the end of this report, major issues for discussion are identified.

Segment I: Basic Subjects

Principles and Description

Segment I of General Education at San Francisco State University is designed to "develop basic competency in communication, critical thinking, and quantitative reasoning" (Academic Senate Policy, #F05-64). This first principle is predicated on the understanding that an "educated person should be able to communicate with clarity and force, to read with

discrimination and understanding, and to think with precision and creativity. The Segment I GE curriculum develops a disciplined use of language for effective communication, builds disciplined thought processes for sharpened analytical skills, and helps students develop greater ability and confidence to reason and make judgments about mathematically based information. Principle one is achieved in SFSU's GE Segment I – Basic Subjects, which consists of four requirements: Written Communication (214s), Oral Communication, Critical Thinking, and Quantitative Reasoning" (Academic Senate Policy, #F05-64). Each of these requirements is fulfilled by completing one three-unit course for a total of twelve units in Basic Subjects at SFSU. A list of courses that fulfill these basic subjects can be found in Appendix A. GE written communication at SFSU is fulfilled by a second-year composition course. The prerequisite to this course is ENG 114: First Year Written Composition. Given this prerequisite, basic subject requirements are sometimes viewed as requiring fifteen units to complete rather than twelve. Specific learning outcomes for each requirement can be found in the policy governing the general education program, Academic Senate Policy, #F05-64 (see Appendix B)

Program Size

The chart below provides information about the size of Segment I as of the academic year 2005-2006, the year for which the most recent data is available. For a list of specific courses approved for each requirement, see Appendix A.

	# Of Approved Segment I Courses as of Spring 2006	**# Of Segment I Sections Offered in Fall 2005**	**# Of Students Enrolled in Segment I in Fall 2005**	**Average # Students per Segment I Section Fall 2005**
Written Communication	9	66	1636	25
Oral Communication	2	47	1440	31
Critical Thinking	9	46	1594	35
Quantitative Reasoning	8	58	2447	42

Student Assessment

Student Evaluations. In spring 2006, SFSU students completed surveys regarding ENG 114 (prerequisite to written communication), written communication (214), oral communication, critical thinking, and quantitative reasoning. Students were sent an email requesting that they complete a short survey about their experience in GE Segment I courses. The chart below shows the selection criteria, the number of students who were sent the emails, and the number who completed the survey. Students were sent to only one survey:

Survey	Selection criteria	# Of Students Contacted	# Of Responses Received
English 114	Half of those who have 6-29 units and have completed SPCH 150	540	85 (15.7%)
214, Written Communication	One-fifth of all students who have 30-59 units and native students who have 60-89 units and who have completed GE written communication	633	77 (12.2%)
Speech 150, Oral Communication	Half of those who have 6-29 units and have completed SPCH 150	540	39 (7.2%)
Critical Thinking	Half of those who have 6-29 units and have completed critical thinking	539	61 (11.3%)
Quantitative Reasoning	Half of those who have 6-29 units and have completed critical thinking	538	70 (13%)
	Total	**2,790**	**332 (11.9%)**

Completion of SPCH 150 and critical thinking were used as ways to divide up the student population because common advising practices during summer orientation enroll first year students in either SPCH 150 or critical thinking in their first semester. Only 1/5 of the transfer students who had 30-59 units and native students who have 60-89 units and who have completed GE written communication were sent the 214 survey, because the other 4/5 were sent to other surveys described in the section on Segment II.

Each survey asked ten or eleven questions that were answered using a five-point scale where 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, and 1 = strongly disagree. The questions concerned overall experiences, specific learning outcomes, and access. When constructing the questions, GEC members felt that students might not easily understand current policy language, and that it might be worth re-examining for whom the learning outcomes were written and whether the wording in policy is conducive to assessment procedures. Academic Senate policy governs the learning outcomes for the 214s. In our survey we used the same questions for ENG 114 and the 214s. The campus may wish to consider whether the courses should be guided by similar outcomes and what differences there should be. When considering learning outcomes for general education courses, SFSU faculty may also want to look at outcomes that are articulated at other CSU campus for the same requirements.

Responses to all of the questions for these five surveys are reported in Appendix C. The table below features the learning outcomes that received the highest rating for each area surveyed:

Basic Subject	**Statement**	**Mean Score**
First year composition	The 114 I took helped me write essays and paragraphs that are well focused and relevant to a thesis and topic.	4.04
Second year composition	The 214 I took helped me write essays and paragraphs that are well focused and relevant to a thesis and topic.	3.89
Oral Communication	Speech 150 taught me skills in how to listen actively and provide constructive feedback.	4.11
Critical Thinking	The course I took helped me to distinguish arguments from other forms of discourse, and premises from conclusions.	3.82
Quantitative Reasoning	The course I took helped me apply quantitative information and procedures, both inside and outside the classroom.	3.54 (tie)
	The course I took helped me improve my ability to perform mathematical calculations	

The table that follows features the learning outcomes receiving the lowest rating for each of the five areas:

Basic Subject	**Statement**	**Mean Score**
First year composition	The 114 I took helped me understand texts thoroughly and use them as a basis for my writing assignments.	3.63
Second year composition	The 214 I took helped me understand texts thoroughly and use them as a basis for my writing assignments.	3.53
Oral Communication	Speech 150 improved my oral communication skills.	3.67
Critical Thinking	The course I took helped me to use language critically and precisely.	3.62
Quantitative Reasoning	The course I took helped me translate verbal statements into mathematical expressions, and the mathematical expressions into verbal statements.	3.40

It is gratifying that all of the means are above the neutral point of 3.00, thus indicating a generally positive evaluation of Segment I courses. It is interesting that the learning outcome receiving the lowest score was the same one for both 114 and 214, and that this outcome is tied to reading skills (i.e., understanding texts). Experts in the field of composition have demonstrated that strong reading skills are positively correlated with writing skills. In addition, we have been successfully combining reading and writing in our nationally acclaimed developmental writing program. Some faculty members have recommended a university level reading course for all students.

It is a little disconcerting that the overall outcome for Speech 150, the improvement of oral communication skills, received the lowest score for learning outcomes for oral communication. However, the broad wording of this statement may have contributed to the rating. Approximately 2/3 of the instruction in Speech 150 focuses on public speaking. Two learning outcomes related to pubic speaking received more positive evaluations: "Speech 150 provided me with opportunities to demonstrate effective verbal and nonverbal delivery skills" (mean 4.00) and "Speech 150 helped me organize, construct, and deliver prepared and spontaneous presentations" (mean 3.92).

Both the outcome in critical thinking and the one in quantitative reasoning which receive the lowest score were concerned with using language. This finding is consistent with another one we report below. In a faculty assessment of students' writing, faculty expressed concerns about students' facility with language, when demonstrating their critical thinking.

Across the five areas surveyed for Segment I, there were two questions in common. The results of those questions are presented below:

Statement	**Mean Score**
I found that there were sufficient sections offered of 114.	3.54
I found that there were sufficient sections offered of 214.	2.93
I found that there were sufficient sections offered in Speech 150.	3.22
I found that there were sufficient sections offered in critical thinking.	3.75
I found that there were sufficient sections of the GE Quantitative Reasoning courses offered.	3.40
I had difficulty passing 114.	2.27
I had difficulty passing 214.	1.97
I had difficulty passing the GE Oral Communication requirement.	2.08
I had difficulty passing the GE Critical Thinking requirement	2.42
I had difficulty passing the GE Quantitative Reasoning requirement.	2.94

Students rated access to courses lower than they rated the achievement of the learning outcomes. Particularly troubling, is the fact that 214 got the lowest accessibility rating. The skills acquired and reinforced in 214 are useful in subsequent study throughout the university. We need to provide students better access to 214. Recently, the Dean of Undergraduate Studies has coordinated efforts to estimate the number of students needing this and other courses in Segment I, including English 114, and to secure funding to add sections as necessary to accommodate the need.

Students report greater difficulty passing critical thinking and quantitative reasoning than they do for written and oral communication. However, in both cases, the means are beneath the neutral point of 3.00, thus indicating that it was easier to pass than not to pass. It may be worth exploring whether we can increase the success rate while maintaining our standards.

In addition to surveys about specific GE requirements, approximately 700 SFSU students who had completed 105 units or more as of fall 2005 returned a survey about their overall general education experience. Students responding to these surveys were asked to self-identify as primarily completing GE at SFSU ("Mostly" SFSU) or mostly completing it elsewhere ("Mostly" Elsewhere). Students were asked to indicate the degree to which they agreed that the GE course they took in each category was very useful on a four point scale where 4 = strongly agree, 3 = agree, 2 = disagree, and 1 = strongly disagree. The mean responses for those items related to Segment I are presented in the chart below:

GE Segment I Requirement	**Mean for "Mostly" SFSU**	**Mean for "Mostly" Elsewhere**
Written Communication	2.79*	2.64
Oral Communication	2.85*	2.61
Critical Thinking	2.65	2.64
Quantitative Reasoning	2.67	2.62

*Independent t-tests indicated that students who completed most of their courses at SFSU, as compared to those who mostly completed them elsewhere, agreed significantly more with that statement that the course was very useful. "Approximately 32% of students graduating from SFSU complete critical thinking, oral communication, and quantitative reasoning at SFSU; approximately 43% complete second year composition at SFSU. Second year composition fulfills the Segment I written communication requirement. The completion rate at SFSU is higher for written communication because SFSU requires both a first year and a second year composition course while some other CSU campuses require only one year." (Appendix D)

All of the ratings indicate a more positive evaluation of the courses than a negative one, with 2.5 being the middle point on this scale. The chart below shows the percentage of students in both groups who either agreed or strongly agreed the course they took was very useful:

GE Segment I Requirement	**% Responding Strongly Agree or Agree that their Segment I course was Very Useful (2006)**
Written Communication	62.1%
Oral Communication	61.7%
Critical Thinking	56.9%
Quantitative Reasoning	59.0%

A 1995 self-study of general education reported a 15-34% discrepancy between the student evaluations of quantitative reasoning and other basic subjects. We are pleased to see that in 2006, the difference between the ratings for basic subjects was only 2-3%. Following the data collected in 1995, the campus created a Quantitative Reasoning Task Force to make recommendations regarding quantitative reasoning. The current data seem to indicate that students perceive quantitative reasoning to be equally useful to them as the other basic subjects.

Occasionally, "Pulse" surveys, completed by SFSU students when they register for classes, have asked questions related to general education. Typically, more than two thousand students answer each question. In Spring 2001, 65% of students rated their general education as "excellent" or "good" in helping them to develop their written communication. In Spring 2002, 90% indicated that their instructors require them "to make class presentations" and 90% reported that in the last twelve months they have "worked with other students on class projects." In Spring 2003, 77.6% noted that they learn better when their instructors "provide for small group discussions and group projects" and 62.2% reported that they learn better when their instructors provide "opportunities to make oral presentations." These responses indicate our students need effective public speaking and small group communication skills.

Student Outcome Measures.

Across several years, several student outcome studies have been conducted regarding basic subjects. A more complete summary of those that assessment can be found in Appendix E, but representative statements from that report are presented here for each of the four basic subjects.

The essays of 752 students were evaluated using the learning outcomes specified in GE policy regarding written communication. "On the whole, the large majority of students achieved a score of 'adequate,' 'successful,' or 'very successful.' But 20% of students could have been more successful in meeting the outcomes." For one pre-post comparison of students in an ESL class, it was concluded that "Overall, students made significant improvement 'using discipline-specific texts as a basis for their writing,' and in 'substantiating their thesis through appropriate references,' but they did not make much improvement in understanding the texts themselves. Generally, students assessed themselves as being at a higher level of achievement than their teachers did."

In fall 2003, GEC requested that Renee Monte, Associate Registrar, conduct a study regarding 214s and Segment III. The data from this latter study showed that students who had

taken 214, or its equivalent, either before taking their Segment III class or concurrent with it, earned higher grades than students who did not. As a result of the 214 data, GEC created an ad hoc committee to investigate the implications of requiring 214, or its equivalent, as a prerequisite or concurrent enrollment for all Segment III classes. This investigation revealed that currently the campus could not deliver enough 214 sections to make it practical that 214 be a pre- or co-requisite for every class in Segment III. GEC decided to table further work on this potential policy recommendation until after the campus acts upon the recommendations of the Writing Task Force. Because of the demonstrated positive impact of 214 on students' subsequent performance in Segment III classes, GEC urges the campus to find ways to provide sufficient sections of 214 so students can complete this course in a timely manner.

Several assessments of the learning outcomes for oral communication "took place across three different academic years and involved more than 1,500 students and multiple assessment tools: pre-post tests of communication apprehension, pre-post tests of communication competence, survey data from students and faculty, comparisons of first and last speeches, faculty assessments of final speeches, and expert evaluations of speeches, including inter-rater reliability data. The results show a consistent decrease in communication apprehension and an increase in communication competence after taking SPCH 150. . . . In a comparison of first speeches to last speeches, students showed improvement in 21 out of 24 criteria. Greatest gains were found in such areas as reinforcing a central idea, previewing organizational patterns for the speech, and providing an effective summary. The least improvement was found in using credible evidence and the effective use of visual aids."

In a test designed to assess critical thinking "with a focus on recognizing arguments, fallacies, assumptions, and evidence," 74% of the students in PHIL 110, Introduction to Critical Thinking, earned a grade of C or better. Across various methods of assessing student knowledge in PHIL 110: Introduction to Critical Thinking, faculty concluded that students acquired the skills specified in policy, "on average, at about the B- level. Faculty were concerned that the language skills of both native and nonnative students interfered with students' ability to achieve the specified learning outcomes for critical thinking." In another study in which students evaluated an editorial, faculty members concluded that "students were reasonably adept at identifying the main conclusion of the argument. Students were less sure-footed in tracing the support structure of the argument, with some having difficulty identifying even the simple inferences. Students seem to understand the concept of implied premises, but the ability to distinguish trivial from critical assumptions varied from student to student."

In two pilot studies of seniors, faculty concluded that "the following qualities were often absent from the writing and speaking of seniors: 'accurately draws upon a range of credible evidence' and 'provides a critical analysis or application of theory.' The authors of these studies concluded that 'This failure to show competence in information gathering and analysis occurred across the disciplines, suggesting to us [writing and speaking faculty] and to the subject matter faculty that students may need more guided opportunities to develop such competencies in their major coursework."

To date, we know of no studies completed to assess the learning outcomes specified for quantitative reasoning in GE policy. It is our understanding that a committee was working on developing such an assessment in 2004, but we are unaware of any data collection.

The concluding paragraph of the outcomes assessment report for Basic Subjects includes the following observation: "The assessment activities indicate that across various measures we are achieving the learning outcomes specified for critical thinking, oral communication, and

written communication. We also note with interest that across all three subjects, faculty are concerned about students' ability to use evidence and support to develop their ideas. Given this concern, we think it might be productive to bring faculty from Ethnic Studies, Speech, English, and Philosophy together to discuss ways to reinforce the instruction students receive across G.E. classes. In particular, we hope that instructional strategies might be developed to reduce the percentage of students (currently 20-26%) who are not as successful as faculty would like."

CSU Alignment and SFSU Faculty/Staff Commentary

In this section, our Segment I requirements are compared to those on twenty-two CSU campuses, with additional commentary by faculty and staff at SFSU. Opinions of faculty and staff were acquired from a blog created by the General Education Council (GEC) and the Academic Senate and from GEC members as a way of securing faculty and staff comments. The blog was organized around five topics: Segment I, Segment II, Segment III, CUSP II goals, and 48 units of graduation requirements. More than 100 "paragraph" responses were posted on the topics. Representative quotations from the blog, as they related to the Segments (including comments found in the last two topics of the blog), are included in this report under the sections for each Segment. Most of the blog paragraphs were anonymous and therefore could represent the responses of less than one hundred different participants. There are currently around 1,700 faculty members at SFSU. A copy of the full blog can be found in Appendix F. In general, it appears that there is agreement that skills in written and oral communication, critical thinking, and quantitative reasoning are a necessary part of a college education. However, there is not always agreement on what those skills should be or how they should be delivered in the curriculum.

Executive Order (EO) 595 requires "A minimum of nine semester units or twelve quarter units in communication in the English language, to include both oral communication and written communication, and in critical thinking, to include consideration of common fallacies in reasoning." These requirements are referred to as Subsection A (a.k.a. "Area A") in EO 595 and Segment I at SFSU. Subsection B (a.k.a. "Area B") requires instruction in "mathematical concepts and quantitative reasoning and their applications," which we include in Segment I. Some members of GEC think it would be useful to align our program areas and titles with those used in EO 595, as this alignment would make articulation and advising easier. For an example of how the alignment of titles and areas would look without any other changes in SFSU's GE program, see Appendix G.

The general education programs of twenty-two of CSU campuses were compared with the program at SFSU (California Maritime was not included in this comparison, because it has special exceptions). EO 595 does not specify the distribution of units across these basic subjects. At SFSU, we choose to distribute the basic subjects across four independent courses that are three units each and to require a three-unit first-year composition course as a prerequisite to the second-year composition course, which fulfills the general education written communication on this campus. There seems to be wide agreement at SFSU that students should take both a first- and second-year composition course.

Written and Oral Communication

All twenty-two CSU campuses require at least one course in composition (see Appendix D). Thirteen (59%) of the twenty-two require a second semester of composition. On some of these campuses, the course is taken in the first year and on others, including SFSU, it is slated for the second year. In addition to an initial composition course, California State University, San Marcos requires "that every course at the University must have a writing component of at least 2,500 words (approximately 10 pages)" (online Bulletin for CSU, San Marcos).

Several blog respondents emphasized the importance of communication (written and oral) skills in general education classes and the reinforcement of those skills in other courses across campus. One respondent noted: "When asked about 'soft' skills, qualities and characteristics relevant to their decisions about which college job graduates to hire, employers responding to the National Association of Colleges and Employers Job Outlook 2006 report cited communication skills as most important, with honesty/integrity and teamwork skills as very close behind. When asked about candidate 'holes,' most identified communication skills." Although faculty members view communication skills as important, they expressed deep concerns about students' skills in this area, especially for written communication: "Our students at senior level, in sum, are mostly incapable of both verbal and written communications at college level. They all have passed their composition, writing, English, etc courses but what they have learned to carry into the future is not what their grades show."

One of the CUSP II goals states, "San Francisco State University makes writing central to education and ensures that its graduates write proficiently." There was strong support for this goal in the blog. One faculty member who supported CUSP II's goal on writing also stressed the importance of developing students' oral communication skills. Another respondent thought it was important that students develop communication skills adapted to our fast-paced society: "At a time in our world's technological development when (on average) people are overwhelmed and time constrained, it is essential that we develop in our students the ability to communicate effectively and EFFICIENTLY. Reason, logic, and critical thinking make much more sense to students are required to converse (again, written or spoken) in a very short and concise manner. With an environment of ultra-stimulation (neon, glitz, marketing, info delivery, 30-sec sound bite), our society has become a competition for attention. We must teach our students how to compete in this attention deficit environment. We must teach our students to communicate effectively and efficiently."

Some faculty members have argued that the 214s should count as a Humanities and Creative Arts breadth requirement in Segment II. Similar arguments have been advanced for counting and not counting ENG 414: Elements of Writing, the course taken by students who have not passed JEPET (Junior English Proficiency Essay Test), as a Humanities and Creative Arts breadth course in Segment II. An additional argument for counting ENG 414 is that its ESL counterpart, ENG 411: English as a Second Language: Literature and Composition, does count as a Humanities and Creative Arts, Segment II course. If the Writing Task Force's recommendations (http://www. sfsu.edu/~ugs/WTFfinalplan.doc) for the elimination of JEPET and the adoption of a third and fourth semester of writing in the major are affirmed, then the discussion about counting ENG 414 and 411 in Segment II may become meaningless. Some faculty maintain that none of the composition courses should count in Segment II because taking

a composition course is not the same as studying the humanities and creative arts (e.g., art, communication, dance, language, literature, music, philosophy, and so forth).

Based on our experience as the General Education Council and the information we have gathered from students, faculty, and staff, the following questions need to be addressed for written communication:

- In what ways should the learning outcomes for the first year composition course be similar to or different from those for the second year?
- Should one of the learning outcomes deal with efficiency in written communication?
- Should 214 focus on literary analysis, as it does in most sections, or should the type of writing be closer to that required in most other classes?
- If 214 is not required to be literary in focus, should a literature course be required in GE somewhere else?
- The developmental writing program has demonstrated the importance of critical reading skills in effective writing and yet we only require reading instruction for students who fail the EPT (English Placement Test). Should we require in critical reading skills for all students?
- Does 214 need to occur in the second year instead of the second semester?
- Students and faculty are concerned that students cannot get into 214s to acquire the skills they need for more advanced study. Does the university offer enough sections of 214 so students can complete it by their second year? If not, how can more sections be offered?
- Transfer students sometimes assume their first year composition course fills the general education written communication requirement, which it would on other CSU campus, but it does not on our campus.
- Should ENG 114: First Year Written Composition count as fulfilling written communication, while we retain completing a 214 as an additional graduation requirement?
- Should the 214s, 410, and 411 count as a Segment II course?

Twenty-one (95.5%) of the campuses require a course dedicated to acquiring oral communication skills, while one campus requires a course in written and oral analyses, where it is not clear how much attention is given to oral communication skills (see Appendix H). At SFSU, the statewide oral communication requirement is fulfilled by a course, about 2/3 of which are courses in public speaking, but also provides some instruction in other types of communication (e.g., interpersonal, small group, intercultural). This occurs because some faculty members have argued that knowledge of different kinds of communication practices is essential. Some CSU campuses fulfill the requirement with a course that is exclusively pubic speaking and some transfer students fulfill the requirement with a course that has no public speaking.

Faculty and students seem relatively satisfied with how we fulfill this requirement on our campus, but we might consider gathering more specific data about the kind of communication practices expected of students when they take other courses on our campus. As noted above, 90% of students report that their instructors require them to make oral presentations and more than 50% indicated that they give oral presentations in classes either very often or often, but we don't have any details about the requirements of those presentations. Only 10% of these same students indicated that they never worked with other students on class projects. Faculty members

appear to be requiring students to utilize their public speaking and small group communication skills on a regular basis.

Following what one faculty member observed about written communication in the blog, we might also ask whether we should consider efficiency as a criterion for evaluating oral communication. Interestingly, in one assessment study of oral communication that involved both faculty and professional reviewers, efficiency was a criterion applied by professionals in the field and ignored by academics.

Critical Thinking.

On five (22.7%) of the campuses, critical thinking is tied to one or more of the composition courses (see Appendix H); the other 17 (77.3%) campuses have stand-alone critical thinking courses. Although there was strong support for critical thinking skills among blog participants on our campus, respondents disagreed as to where and how those skills should be developed. The following comment is indicative of the concerns: "The critical thinking course requirement could perhaps be integrated with the writing requirement to make it less abstract/de-contextualized and help students to apply critical thinking in their other academic course work." There were also concerns about the quality of critical thinking demonstrated by students: "The level of critical thinking I see in many junior and senior level students in my classes is abysmal. I seriously doubt that the problem is restricted to my teaching area. If this is not confronted then we as a faculty are failing in our responsibility. No amount of course content or new course labels can overcome lack of critical thinking skills. A fundamental change is needed, not a band aid."

Faculty members are consistent in their support for developing student's critical thinking skills, but some of them wonder whether the courses we are currently offering to fulfill this requirement are developing the skills students need for other classes and for life-long learning and decision-making. Some worry that some current courses may be too abstract. As we work on our review of graduation requirements, it might be useful to look at the learning outcomes used by other campus to meet critical thinking requirements. A few faculty members have suggested that critical thinking requirement should be folded into other GE requirements (e.g., 214, Segment II, Segment III). Other faculty members have argued that while other course content and critical thinking should be used to reinforce each other, we should not reduce the number of basic subject courses because to do so would reduce the quality of instruction and the acquisition of appropriate skills.

Quantitative Reasoning.

All twenty-two campuses require a stand-alone course in mathematical concepts or quantitative reasoning. Based on comments in the blog and on anecdotal evidence, some SFSU faculty/staff are concerned that math phobia might be keeping students from getting the quantitative skills they need. No one has suggested combining quantitative reasoning with any other requirement or eliminating it, but many have wondered whether the current set of courses we offer are the best ones for all majors or for life-long or civic decision-making. It is also troubling to GEC that we have had no outcome assessments of quantitative reasoning on our

campus, or at least any such studies that have been reported to general education committees or the Academic Senate. This situation should be corrected.

In considering whether we are offering the right courses for quantitative reasoning, some may take comfort in the fact that general education courses similar to the ones we offer in calculus, statistics, business math, and quantitative reasoning in psychology are also found on other CSU campuses and in fact, are among the most common. Still, others might wonder if we should consider other types of courses like those found at other CSU campuses: math for teachers (Long Beach), biostatistics (San Diego), health statistics (San José), applied statistics for the life sciences (Cal Poly), mathematics and fine arts (Channel Islands), agricultural economics (Fresno), mathematics as a liberal art (Humboldt), quantitative literacy (Monterey), ethnomathematics (Sonoma), mathematics and politics (Sonoma). We appear to be the only campus with a course in geographical measurement fulfilling the quantitative reasoning requirement.

Information Competency.

The importance of information competency, which is currently "addressed" in a limited online test, was also stressed in comments by a blog participant: "Along with writing, we have said we would like to have our students graduate with at least functional abilities to gather information on a given topic. Obviously, the major serves to extend this in a particular discipline, but for life long learning reasons we want our graduates to be able to continue to inform themselves about a variety of issues: know how to look at a senator's voting record when it comes time to vote in an election, locate information on health issues for themselves or family members, use web resources wisely . . ." One recommendation was an additional requirement added to Segment I to cover computer and technology literacy.

In addition to blog comments about the need for information competency and computer literacy, GEC requested and received a report regarding these topics from the Library (see Appendix I for the full report). The document states that "Students should learn basic IC [information competency] skills early (lower division level), more advanced subject-specific skills at the upper division and graduate levels, ensuring students have the opportunity to develop life-long research skills. The Library is interested in exploring a multi-pronged approach to information competence that provides a variety of options geared to different learning styles and disciplines, in order for students to successfully fulfill information competence requirements. These options may include but are not limited to: embedding IC skills into other initiatives that will reach all students, such as a writing across the curriculum program or General Education courses; providing standalone online modules such as OASIS; embedding IC online modules into course content delivered through course management software; targeting in-person sessions to specific courses to ensure that we reach all students in that discipline at the appropriate levels, etc." Fullerton has a one-unit information competency course and Northridge's new GE program, effective fall 2006, requires that students complete two courses in which information competency is an overlay requirement.

Funding and Class Size

The funding for general education classes and class sizes concern faculty. Insufficient funding means that students are not getting the classes they need and programs which provide

such courses are inappropriately caught in a bind between providing courses all students need and those needed by their majors. A respondent from the faculty/staff blog argued that funding for Basic Subjects should come from Academic Affairs with sufficient sections to meet student demand. The same respondent maintained that staffing decisions for those sections should be made by the departments/programs where the courses are housed.

Faculty are concerned that class sizes make it impossible to achieve the learning outcomes: "With smaller class sizes we could give the written comments and even require the revisions that are the best way to quickly develop writing & critical thinking skills. We could encourage the discussion that develops oral communication and critical thinking skills." We note that oral communication was previously limited to 25 students per section and is now averaging 31. Another faculty member wrote: "Of course many of us require written work in our courses, but it is difficult to work effectively to improve student writing in courses that have more than 15 students. I would like to see these goals of GE Segment I more explicitly reinforced in the rest of the curriculum. Maybe one way to do this would be to have smaller classes for some of the other GE courses so the instructors can (and would be required to) continue to work closely with students on the specified basic skills."

Class size and the quality of instruction was one respondent's major concern: "My main concern with GE courses is that they tend to get so large that students are not well taught. Our students need individual attention, esp when it comes to writing and putting an argument together. We need smaller class sizes so we can focus on our students and actually teach them to express their ideas clearly."

GE Segment I and Major

The basic requirements of communication, critical thinking, and quantitative reasoning should be carried through the major as well as other Segments of GE. A student's writing, upon graduation, must clearly illustrate his/her ability to write critically with clear reasoning and demonstrate the ability to use many important components of writing, including organization, accuracy in language, and research. Though good writing is a crucial element in the educational arena, its importance must be extended to areas beyond higher education. The skills and motivation for these skills need to be introduced and developed in Segment I, reinforced in Segments II and III, then further developed, reinforced, and assessed in the major. The campus should develop an action plan to make this happen. The recommendations of the Writing Task Force address how this might happen for written communication.

The importance of reinforcing basic skills throughout the curriculum was a common theme in the faculty/staff blog; nevertheless, there is a broad spectrum of faculty opinions about the meaning and the role of GE. Two examples of these observations are printed below:

"With respect to all the principles of GE, there is an extraordinary disconnect between GE and the undergraduate major. The principles embodied by GE are essential to producing competent, engaged, and productive members of society, presumably something we want for all our graduates. Therefore in articulating the relationship between GE and the major we need to be more diligent about emphasizing that what students learn in GE is integral to its enhancement in the major field of study. … The symbiosis between GE and the major should be an underlying philosophy of our baccalaureate education and a reality."

"We've seen those matrices where a goal is introduced at one point in the major and reinforced at another point, then assessed at a final point. It would be great if the basic skills

were treated this way: Introduce in Segment I, reinforce in Segment II & III, assess in the major." "We should not make the GE program the litmus test for writing skills proficiency. We can suggest that Segment III courses all have a written-English requirement, but beyond that, the teaching of writing in all disciplines should be attended to by a coordinator for writing in disciples, as recommended by the Writing Task Force report."

When SFSU students file for graduation, they complete an electronic exit survey of 52 questions. Four of those questions ask students to evaluate their major program in terms of helping them with the four basic skills we highlight in Segment I: written communication, oral communication, critical thinking, and quantitative reasoning. Specifically they are asked to "rate the degree to which your major program helped you in the following areas" using a four-point scale, where 1 = not at all and 4 = a great deal. Appendix J reports the mean values for these student opinions for 2002-2006. Across these years, almost 12,000 students answered the questions. The means were 3.30 for critical thinking, 3.10 for quantitative reasoning, 3.20 for written communication, and 3.20 for oral communication (see Appendix J). These means portray a more positive assessment than the quotations from the faculty blog.

However, Appendix J also reports a range of means based on ratings of majors within colleges for these skills. The lowest mean value for student opinions regarding these skills is 2.80 and the highest is 3.77. While one would expect differences among majors (e.g. high ratings from math majors regarding quantitative reasoning and English majors regarding written communication), faculty from individual majors may wish to examine the opinions reported by their majors. Programs should ask whether the evaluations of their majors are as they would prefer or whether they suggest that reinforcement of these basic skills within their majors should be strengthened.

In addition, Appendix J reports the means for student opinions regarding the development of leadership skills in one's major. Although the development of leadership skills is not a stated objective of our general education program, one might argue that it should be. The mean rating for the question on leadership skills was 3.01 (lower than any of the basic skills) with a range of 2.75 to 3.71. Faculty may need to consider whether our programs are providing the written and oral communication skills, critical thinking, and quantitative reasoning instruction that contributes to the development of community, civic, and corporate leaders.

Student Issues

As noted above, transfer students often assume erroneously that if they have completed a first year composition course, they have completed written communication in GE. The DARS report has helped to correct that mistaken assumption for some students, but the campus ought to consider other measures that might clarify the requirements for students.

The Pulse Survey (an electronic survey of students taken at the time students register for classes) for fall 2005 included questions about issues related to facilitating graduation. Below is a chart of responses from approximately 3,300 students to the question, "Which of the following classes cause the most problems in meeting you expected graduation date?"

Class Type	% Indicating Caused the Most Problems
GE Segment I	15.7%
GE Segment II	29.4%
GE Segment III	24.8%
Classes in my major	19.9%
No problem	10.2%

Of the options offered to students, classes in GE Segment I were identified least often as causing the most problems. This result is also consistent with GE petition data. According to data provided by the Office of Undergraduate Studies, GE petitions are consistently the lowest for GE Segment I; they constitute about 14% of the total number of GE petitions. However, it is also the case that fewer students complete Segment I on this campus than complete Segment II and III.

General Education Petitions				
Academic Year	**Segment I**	**Segment II**	**Segment III**	**Total**
2002-2003	83	157	246	486
2003-2004	107	236	357	700
2004-2005	71	180	398	649
2005-2006	94	185	424	703
Totals	355	758	1425	2538
% Of Petition Total	14%	30%	56%	100%
Average	89	190	356	635

The petition process is a useful one in special cases that warrant waiving the rules, but at what point should a university be concerned about the number of petitions it is receiving? To what should the number of petitions be compared (e.g., the number of first year students, lower division students, upper division students, total number of undergraduate students, number of students earning an undergraduate degree)? The chart below provides the number of students in each of those categories for the last four years.

Student Groups*	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**Average**
1st year	4,148	4,423	4,626	5,158	4,589
Lower Division	6,521	6,827	6,728	7,343	6,855
Upper Division	14,307	15,065	15,563	15,731	11,404
Total Undergraduate Students	20,828	21,892	22,291	23,074	22,021
Undergraduate Degrees Granted	4,762	4,844	5, 183	5,216	5,001

*Except for degrees, all the data is for the fall semester. For degrees, the number is for the academic year.

The next chart compares the average number of petitions for the academic years from fall 2002 to spring 2006 to each of the average student groups for those same years (data for the student groups taken from University Budget and Planning website). The comparisons are reported in percentages. Since 1st year and lower division students cannot take Segment III classes for GE purposes, the percentages for those students for Segment III and overall GE petitions is not presented:

Student Groups	**Segment I Petitions**	**Segment II Petitions**	**Segment III Petitions**	**Total GE Petitions**
1st year	2%	4%	---	---
Lower Division	1%	3%	---	---
Upper Division	> 1%	2%	3%	6%
Total Undergraduate Students	> 1%	1%	2%	3%
Undergraduate Degrees Granted	2%	4%	7%	13%

There is a difference of opinion in the meaning and interpretation of the petition data. Some GEC members argue that the number of petitions reflects problems in the system, not only for those who petitioned, but also for those who struggled without seeking a remedy through the petition process. Other members concluded that the relatively small percentage of students who

file a petition demonstrates that the system works for most students, and that the petition process itself permits students to graduate in a timely fashion even when they encounter problems in getting exactly the class they want

In considering the petition data, it may also be useful to consider where students typically complete their general education requirements. In a 1995 study of graduation applications where students specified which courses they were counting for which requirements, 67% of the Segment I courses and 75% of the Segment II courses listed were taken elsewhere. In contrast, all students are expected to take all of their Segment III courses at SFSU.

Appendix Q includes more specific information from the Advising Center regarding GE petitions. The most common reasons given on petitions include such factors as taking Segment III courses before achieving upper division status, personal hardships, courses not offered or offered when the student needs to work or take another course, and being misadvised. The latter reason and results of a recent survey conducted by the Task Force on Facilitating Graduation, which reported that staff members were more important than faculty as an advising source, raise questions about the quality of general education advising. Perhaps SFSU should look at its general education advising training and practices.

Governance

The Segment I Committee is supposed to oversee Segment I and make its recommendations to the General Education Council, which in turn reports to the Academic Senate and the Dean of Undergraduate Studies. According to Academic Senate Policy #F05-64, there are six faculty members and one student on the Segment I Committee. The faculty members consist of two members at large, elected at large, and four faculty members representing the following departments: English, Speech, Philosophy, and Mathematics.

To the best of GEC's knowledge, the Segment I Committee meets only when convened by GEC and has not met since 2004 when an assessment report of Segment I was requested, and even then, GEC wrote the report. The lack of a regular meeting time and responsibilities make it difficult for the Segment I Committee to complete the work assigned to it. One of the other problems is that there are overlapping responsibilities between the Segment I Committee and other committees on campus. For example, CWEP (University Committee on Written English Proficiency) and the Writing Task Force share a concern for writing in common with the Segment I Committee and GEC. In fact, in preparing the surveys for this study, a question arose as to whether GEC should collect data on the 214s (courses that fulfill the GE writing requirement) and/or ENG 114. Clearly, writing skills are very important on our campus, but it might be helpful to have clearer guidance on the work of various committees.

Similarly, GEC created an ad hoc Quantitative Reasoning Task Force that did report to GEC and the Segment I Committee. Sometime after that Task Force wrote a report, another group began working on assessing quantitative reasoning, but this group had no formal connection to GEC. Again, greater coordination of efforts might keep the campus better informed.

Segment II: Arts and Sciences Core

Principles and Description

Segment II of General Education at San Francisco State University is designed "to develop an understanding of the contributions and influences of the physical and biological sciences, the behavioral and social sciences, the humanities and creative arts toward the development of civilization and toward the identification, investigation, and resolution of individual and societal problems.

The Arts and Sciences Core helps students develop an understanding of the contributions to and influences on our world the physical and biological sciences, the social sciences, the humanities, and the creative arts. Through study of the arts and sciences, students are introduced to theories and methods of inquiry and assessment particular to these disciplines and the ways in which this knowledge is applicable to an understanding and appreciation of others and oneself. Students are exposed to multiple ways of acquiring knowledge and encouraged to participate actively in creative endeavors. Within Segment II, students gain information that will be useful to their lifelong personal development (Lifelong Development-LLD) and to their development as active and constructive participants in a diverse society (American Ethnic and Racial Minorities-AERM).

Physical and biological sciences curriculum: Students develop skills in applying scientific methods to the search for an understanding of the components and processes that constitute our physical and biological world and an understanding of the connections between scientific developments and contemporary issues that affect our lives.

Behavioral and social sciences curriculum: Students enhance the understanding of themselves and others as psychological and social beings. The curriculum develops skills for analyzing human behavior and for evaluating facts and principles relevant to making social policy. Course work is designed to foster civic and global responsibility as well as an appreciation for diverse values and past and present cultural traditions.

Humanities and arts curriculum: Students are urged to explore the fundamental questions regarding human values, aesthetics, and expression. The curriculum is dedicated to stimulating reflective thinking, imagination, and creativity; to increasing civic and global responsibility; to cultivating moral action; and to building the communication skills needed to express the best of what it means to be human.

At SFSU one of the premises of GE is that students should develop an appreciation for and an understanding of the richness, diversity, and heritage of America's ethnic and racial minorities as well as its cultural, ethnic and social pluralism. This element of SFSU's GE program is achieved in its American Ethnic and Racial Minority (AERM) courses. A general education should also equip students for lifelong understanding and development of themselves as integrated physiological, social, and psychological individuals. This element of SFSU's GE program is achieved through its Lifelong Development (LLD) courses" (Academic Senate Policy, #F05-64).

The principles that guide SFSU's GE Segment II – Arts and Sciences Core are fulfilled through nine units in the Physical and Biological Sciences, nine units in the Humanities and Creative Arts, and nine units in the Behavioral and Social Sciences, for a total of twenty-seven units of breadth requirements in the Arts and Sciences Core. These twenty-seven units represent more than half (56.3%) of the forty-eight required units in general education. The American

Ethnic and Racial Minorities Requirement and the Lifelong Development Requirement are overlay requirements in Segment II, which means that students can complete these requirements while fulfilling another aspect of the Arts and Sciences Core. Specific learning outcomes for each requirement can be found in the policy governing the general education program, Academic Senate Policy, #F05-64 (see Appendix B)

Program Size

The chart below provides information about the size of Segment II in terms of the number of approved courses as of Spring 2006, the number of sections of courses filling Segment II requirements in fall 2005, and the number of students enrolled in these courses in fall 2005 (each of the numbers represents the most recently available data). When looking at this data, one should keep in mind that students take courses approved for Segment II for many reasons (e.g., GE credit, credit in the major, prerequisites, electives). For a list of specific courses approved for each requirement see Appendix A.

Area/Requirement	# Of Approved Courses as of Spring 2006	# Of Sections Offered in Fall 2005	# Of Students Enrolled in Fall 2005
Physical and Biological Sciences	76	146	6,851
Behavior and Social Sciences	81	93	6,276
Humanities and Creative Arts	167*	245	10,858
Lab/Field Requirement	24	96	2,339
Overlay: Life-Long Development	47	69	5,009
Overlay: American Ethnic and Racial Mi	38	50	2,351

*The numbers for Humanities and Creative Arts reflect courses in categories A-D. Students also have an option of taking any foreign language course for which they are qualified. There are 163 foreign language courses.

Student Assessment

Student Evaluations. In spring 2006, SFSU students completed surveys regarding (1) Physical and Biological Sciences Area, (2) Behavioral and Social Sciences Area, (3) Humanities and Creative Arts, (4) American Ethnic and Racial Minorities (AERM), and (5) Life-Long Development (LLD). Students were sent an email requesting them to complete a short survey about their experience in GE Segment II courses. A computer was used to select which survey a student would receive. The chart below shows the selection criteria, the number of students who were sent the emails, and the number who completed the survey. Each student was sent to only one survey:

Survey	Selection Criteria	# Of Students Contacted	# Of Responses Received
Physical and Biological Sciences Area	1/5 of all students who have 30-59 units and native students who have 60-89 units	642	53 (8.26%)
Behavioral and Social Sciences Area	1/5 of all students who have 30-59 units and native students who have 60-89 units	644	50 (7.76%)
Humanities and Creative Arts Area	1/5 of all students who have 30-59 units and native students who have 60-89 units	644	45 (6.99%)
Life-Long Development (LLD)	1/5 of all students who have 30-59 units and native students who have 60-89 units (same students who received the science survey)	642	56 (8.72%)
American Ethnic and Racial Minorities (AERM)	2/5 of all students who have 30-59 units and native students who have 60-89 units (same students who received the social sciences and humanities/arts surveys)	1286	74 (5.75%)

Each survey asked ten or eleven questions that were answered using a five-point scale, where 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, and 1 = strongly disagree. The questions concerned overall experiences, specific learning outcomes, and access. When constructing the questions for Segment II, GEC members felt that students might not easily understand the current policy language and that it might be worth re-examining for whom the learning outcomes were written and whether the wording in policy is conducive to assessment procedures. In addition, in the science and social science areas, students must complete one course in each of three categories, but in the humanities and creative arts they choose one course from three of five categories. The latter possibility made it difficult to construct a questionnaire that would cover the courses students actually completed.

The overall results were quite positive. See Appendix K for the mean scores and frequency data for all questions asked. The mean score for all 52 questions was greater than the midpoint of 3.00. On the next page is a chart that shows the evaluation on one of the overview questions for each area:

Statement	Mean Score
I value the education I received in the GE science course(s) I took.	3.55
I value the education I received in the GE behavior and social science course(s) I took.	3.92
I value the education I received in the GE humanities and/or creative arts course(s) I took.	4.00
I value the education I received in the GE life-long development course(s) I took.	3.62
I value the education I received in the GE American ethnic and racial minorities course(s) I took.	3.77

Students rated the accessibility of classes lower than their value, but still positively, as indicated in the chart below:

Statement	Mean Score
I found it relatively easy to get into GE Science course(s).	3.14
I found it relatively easy to get into GE Behavioral and Social Science course(s).	3.38
I found it relatively easy to get into GE Humanities and Creative Art course(s).	3.56
I found it relatively easy to get into GE Life-Long Development course(s).	3.09
I found it relatively easy to get into GE American Ethnic and Racial Minorities course(s).	3.47

Even though all of the responses about accessibility were above the mean, in the Pulse survey of fall 2005, students identified access to Segment II courses as more problematic than access to courses in the other two segments. This indicates that access to Segment II courses still needs improvement.

In the broad survey of general education requirements in fall 2005, students were asked where they completed most of their GE requirements. They were also asked to indicate the degree to which they agreed that the GE course they took in each category was very useful on a four point scale where 4 = strongly agree, 3 = agree, 2 = disagree, and 1 = strongly disagree. The mean responses for those items related to Segment II are presented in the chart on the next page:

GE Segment II Requirement	Mean for "Mostly" SFSU	Mean for "Mostly" Elsewhere
Physical and Biological Sciences	2.78	2.70
Behavioral and Social Sciences	2.81*	2.66
Humanities and Creative Arts	2.85*	2.64

*Independent t-tests indicated that students who completed most of their courses at SFSU, as compared to those who completed them elsewhere, agreed significantly more with that statement that the course was very useful.

Student Outcome Measures.

We know of no assessment studies that have provided direct measures of learning outcomes for Segment II for GE at SFSU. We had hoped to conduct such a study for each of the areas, one area per year for the next three years, starting with Physical and Biological Sciences in the 2005-06 academic year. However, with the Academic Senate policy #F05-238 calling for a self-study of the entire general education program during the 2005-06, GEC suspended its assessment of learning outcomes in order to focus on this self-study and other work of the Council.

CSU Alignment and SFSU Faculty/Staff Commentary

In this section, our Segment II requirements are compared to similar ones on the seven largest CSU campuses, with additional commentary by faculty and staff at SFSU. Opinions of faculty and staff were acquired from the GE blog and from discussions in the General Education Council. Our Segment II covers three of the areas in the distribution requirements of General Education Breadth Units specified in Executive Order 595:

> **Area B – Physical Universe and Its Life Forms (at SFSU – Physical and Biological Sciences)**: "A minimum of twelve semester units or eighteen quarter units to include inquiry into the physical universe and its life forms, with some immediate participation in laboratory activity, and into mathematical concepts and quantitative reasoning and their applications" (p. 4).
>
> **Area C – Arts, Literature, Philosophy, and Foreign Languages (at SFSU – Humanities and Creative Arts)**: "A minimum of twelve semester units or eighteen quarter units among the arts, literature, philosophy and foreign languages" (p. 4)
>
> **Area D – Social, Political, and Economic Institutions and Behavior; Historical Background (at SFSU – Behavioral and Social Sciences)**: "A minimum of twelve semester units or eighteen quarter units dealing with human social, political, and economic institutions and behavior and their historical background" (p. 5).

Appendix L lists the categories within these areas used by the seven largest CSU campuses, including SFSU. In the paragraphs below, we use the labels from the Segment II program at SFSU.

Physical and Biological Sciences (PBS)

Mathematical concepts and quantitative reasoning are usually placed in Area B on other CSU campuses, rather than with the other basic subjects as we have done in Segment I. Most of the categories in the sciences are fairly similar across the seven campuses. We are the only campus of the seven with an “Integrative Science” category and we do not have an earth sciences category, as three of the seven largest campuses do. However, we cover earth sciences in our physical sciences category. Three campuses explicitly require an upper-division science course. Our students might take an upper-division science course as part of Segment II or in a Segment III cluster, but they are not required to do so.

At SFSU, the Physical and Biological Sciences Area (PBS) consists of three categories: Physical Sciences, Biological Sciences and Integrated Science. These categories reflect major areas of scientific study and their integration. Students must take one class in each category, with ideally the course in the Integrated Science category (Category C) to be taken last. Students must also elect at least one course with a laboratory or field component, reflecting the importance of hands-on experience in learning about science. Consistent with EO 595, all seven of the largest CSU campuses require a lab course in science.

While the goals for students in Categories A and B are fairly clear ("students develop skills in applying scientific methods to the search for understanding of the components and processes that constitute the physical and biological sciences"), the third area of integrated science is more problematic. Some faculty members believe that the courses in this section should be restricted to courses that integrate the two major fields in science: the physical and biological sciences. This integration is an extremely important in the era of interdisciplinarity in the sciences, and addresses the growing realization that only by using multiple perspectives and approaches can we hope to tackle the scientific problems facing our society. Other faculty view Category C as a place to focus on societal applications of scientific research, a place where physical and biological sciences might be integrated with social sciences or questions of values from ethical or philosophical inquiries on scientific research and its applications.

These differing views and interpretations of the learning objective in the SFSU GE policy which states that students should have "an understanding of the connections between scientific developments and contemporary issues that affect our lives," has led to considerable and heated discussions about the appropriateness of specific courses in Category C of the Physical and Biological Sciences. Some faculty believe that particular courses would be better suited for other Areas in Segment II as they are more clearly social science or humanities courses. A course that was recently proposed for Category C prompted a continuation of this discussion without a clear resolution. If Category C is continued in any future GE program, a clear description of the purpose of the courses in Category C and the way in which they should link to the courses in the Physical and Biological Sciences would help in making future decisions about courses proposed for this category.

Humanities and Creative Arts (HCA)

There is greater variety in the categories in the humanities and creative arts across the seven campuses (see Appendix L). Some campuses require specific types of humanities courses (e.g., a course in literature or philosophy), which we do not. Some campuses share the same category labels with each other, but none of them has the same titles as we do in HCA. Two campuses explicitly require an upper-division humanities/creative arts course. Although our students are not required to complete an upper division humanities or creative arts course, it is highly likely they will do so in either Segment II or Segment III.

At SFSU there are five categories in the Humanities and Creative Arts: (1) Humanistic/Artistic Achievements, (2) Disciplines and Interdisciplines, (3) Historical/Social/Ethnic/Cultural Contexts, (4) Active Creative Participation, and (5) Languages Other Than English. The defining characteristics of the first three categories are not immediately transparent. Faculty appreciate the importance of studying the humanities and creative arts in different contexts, but students and faculty sometimes have difficulty understanding why some courses are included in a particular category and others are excluded, or why a course is in one category and not another. Recently, a course was proposed for one category and the Segment II Committee recommended it for another one.

Students must take three of the five categories, which means a single student is not required to master all of the learning outcomes specified for HCA. The category system we have selected is very different from those on other CSU campuses (see Appendix L). In considering this area, it may be time to reconsider whether the subcategories we currently have are ones we want to keep and whether we have the learning outcomes we most want for the Humanities and Creative Arts.

Faculty members differ in their opinions about the last two categories in HCA. Some faculty are unsure if general education should include courses in active creative participation and others are certain this way of knowing is an essential part of a well educated person. Basic on course titles, it appears as if students on all seven campuses have the option to select from courses that evaluate the arts and courses that involve the production of art forms.

A course in languages other than English may be taken to fulfill one of three required courses in the breadth area of Humanities and Creative Arts, but students can graduate without knowledge of languages other than English. Fullerton and Sacramento have a foreign language requirement for graduation for all students, and San Diego has this requirement for all the majors in the liberal arts and sciences and for music majors. All seven campuses count courses in languages other than English as either optional GE courses or graduation requirements. Faculty members differ on whether they think it is acceptable for students to graduate without knowing another language.

It is possible to leave SFSU without ever having a course that focuses on literary texts and some faculty feel students should have such a course. ENG 214, which is one of the options for completing the writing requirement in Segment I, does focus on literary texts. However, not all students take ENG 214 and further, some faculty feel the writing requirement in Segment I should focus on expository writing about topics relevant to a greater variety of disciplines than literary analysis. These differences in opinions need to be addressed.

Behavioral and Social Sciences (BSS)

There is greater commonality in the categories in the behavioral and social sciences across the seven campuses than in the humanities and creative arts (see Appendix L). However, none of the campuses have the same titles as we do in BSS. Two campuses explicitly require an upper-division behavioral and social science arts course. Although our students are not required to complete an upper-division behavioral and social science course, they are very likely to do so in either Segment II or Segment III.

At SFSU, there are three categories in the behavioral and social science area: Individual in Social Context, Decision-Making and Social Policy at the Societal Level, and Historical, Cross-cultural, and Global Contexts. Some faculty members are very pleased with these three categories, particularly with the explicit references to cross-cultural and global contexts. Other faculty members have indicated that they do not find the distinctions among the categories clear, and this confusion is probably compounded by the fact that all three categories are governed by the same learning outcomes.

AERM and LLD

We require two overlay requirements in Segment II: AERM (American Ethnic and Racial Minority) Requirement and LLD (Life-Long Development). The AERM (American Ethnic and Racial Minorities) Requirement is an important overlay requirement in our Segment II program. Several years ago, SFSU asked the Academic Senate CSU to make it a statewide requirement. That request was not endorsed statewide, but as far as we know SFSU faculty members support this requirement. Something like our AERM requirement or a course on international perspectives can be found on all seven of the largest CSU campuses. On some campuses, these courses are an additional requirement and on others it is an overlay requirement like our AERM Requirement in Segment II and our CESD (Cultural Ethnic and Social Diversity) Requirement in Segment III.

The evaluation of the LLD requirement is another matter. This requirement is a part of system policy, though at SFSU we have chosen to make it an overlay rather than a separate course. Some SFSU faculty members would like to see this requirement removed from statewide requirements. Others like the requirement, but feel we have not defined it appropriately on our campus so it is not clear what should nor should not be included. How we have defined it can be found in the GE policy document (see Appendix B). Courses that are approved for fulfilling this requirement on our campus are quite varied (e.g., courses on ethnic identity, health, sexuality, motor development, leisure, racism, music appreciation, dance conditioning, online cultures, arts & crafts). It is not clear that students taking these different options have acquired similar competences. As far as we know, if we are to keep the requirement, SFSU faculty would prefer that it remain an overlay requirement rather than a stand-alone course. On the seven largest CSU campuses, SFSU is the only one that fulfills LLD with an overlay structure. On the rest of the campuses, students take a separate course for this specific requirement.

History and Government

EO 595 notes, "Up to six semester units taken to meet the United States History, Constitution, and American Ideals Requirement (Title 5 of the California Code of Regulations, Section 40404) may be credited toward satisfying General Education-Breadth Requirements at the option of the campus" (p. 5). Currently, we count none these units in GE. On the seven

largest CSU campuses, five count none of them; San Diego permits up to 3 units and San José up to 6 units of these courses to count in general education. SFSU faculty members are divided on the extent to which these courses should be independent of general education requirements.

Some faculty members think we should fully embrace the option to include all 6 units of U.S. History and Government in the GE program. They believe that these subjects are covered in sufficient depth in high school and do not need to be repeated in college. In support of this argument, they point out that a number of CSU and UC campuses have no such requirement outside of their GE program. A participant in the blog asks whether "it's time to question the practice of requiring students to take 6 units of US history or government, but none outside of the US. Consider the CUSP goals of internationalization, for example. Shouldn't we begin to turn students towards global studies or world history AS WELL as US (maybe 3 of each?).

Faculty who have maintained that we should count none of the U.S. History and Government units in GE have argued that these courses fulfill different competences than breadth courses. The learning outcomes for the History and Government requirements are very different than the learning outcomes for the Behavioral and Social Sciences and the learning outcomes for the Humanities and Creative Arts (on some campuses History is in the Humanities rather than the Social Sciences). In addition, these faculty observe that we do not count math in place of science courses nor composition in place of humanities course and that the purpose and function of the American History and Institutions Requirement is analogous to those of the aforementioned courses: instead of mathematical literacy or English literacy, the function is civic literacy. There is ample evidence that the lack of civic literacy is a serious problem in our nation. Still, those students who are adequately educated in these areas can test out of the requirements. (A more complete analysis of the History and Government requirements at SFSU can be found on the report of those graduation requirements.)

Possible New Requirements

Some faculty members think all students should have a course in ethics. For example from the blog: "ALL students should be required to complete a course in ETHICS!!" A requirement in computer literacy was also recommended and other faculty thought that our curriculum should pay more attention to global issues. Others point out that CUSP goals 3 and 4 could be relevant to the way in which we structure graduation requirements and could be incorporated in GE Segment II or elsewhere:

> "Goal 3: San Francisco State University provides its students, faculty, and staff with international experiences, perspectives, and competencies.
>
> Goal 4: San Francisco State University demonstrates commitment to its core values of equity and social justice through the diversity of its students and employees; the content and delivery of its academic programs and support systems; and the opportunities for both campus and external constituencies to engage in meaningful discourse and activity."

Respondents to the GE blog focused more on student writing than CUSP Goals 3 and 4, but there were no negative responses regarding the importance of these goals. Examples of the positive sentiments can be found in the following three examples: (1) "I also agree with the emphases on international experiences/education for our students, and on the focus on social

justice. Read today's news and you will be convinced of the need for college graduates to be well educated in both arenas." (2) "In this age of globalization, if this university is truly serious about providing students with international perspectives and competencies, there should be foreign language requirements in GE for all students to fulfill." (3) "I would like to keep our AERM (American Ethnic and Racial Minorities) overlay requirement and to add an international overlay requirement. We need to prepare members of our community to interact effectively with persons whose experiences, traditions, and values may differ from their own. In our global world, our community would benefit from increasing the number of people who can communicate in languages other than English."

In a Pulse survey conducted in spring 2000, thirty-six percent of the students who were surveyed rated their course work at SFSU as fair or poor "in increasing your understanding of global issues beyond the U.S. borders." Only seventeen percent rated their education as excellent in this regard. In its report, the Task Force on Internationalizing the Curriculum recommended that SFSU "rectify the current situation whereby a student may graduate from SFSU without taking any courses dealing with the world outside of the United States" (p. 6). The same task force recommends multiple options for improving the number of students who study a language other than English with a goal of at least two-thirds of SFSU graduates being "able to communicate in more than one language" (p. 5).

General Comments on Segment II

There is a wide diversity of opinion among faculty regarding Segment II. On the one hand, some faculty see the vast array of courses in Segment II as a self-serving smorgasbord with an overly long list of courses included primarily to serve the enrollment needs of departments and programs rather than the educational needs of students. On the other hand, some faculty value the rich offerings and opportunities from which students may sample various options and discover new possibilities: "I think it is important to push students to take things beyond their comfort zones so that they might become more well-rounded thinkers."

Some faculty recommend fewer and larger classes in Segment II to pay for smaller classes elsewhere (e.g. composition courses, courses in the major), but this approach seems to assume that Segment II courses serve only the purpose of GE and not the multiple purposes that many, in fact, serve. Others prefer to give students a greater variety of options in smaller classes in Segment II, where they could explore a greater range of possible majors and get more individualized attention from instructors. Some worry that "While fewer Segment II options and larger classes might have bureaucratic advantages, that approach would not necessarily be best for students." Some faculty are already concerned that Segment II classes are too large: "I've been a lecturer for nine years, teaching mainly Segment II courses with upwards of 100 or more students enrolled. I believe in the value of this principle [the educational goals of Segment II], but my experience is that the class size seriously compromises its delivery." Some faculty expressed a desire to see more team-teaching and interdisciplinary teaching in Segment II.

<u>Course Level</u>

Currently, there are both lower-division and upper-division courses in General Education Segment II. This gives students more options and might be useful to accommodate both native and transfer students. On the other hand, it can lead to confusion about the appropriate course of study. Further, some faculty view Segment II courses as broad overviews that prepare students for more specific study at the upper-division level. Most members of the current GEC think

Segment II should be restricted to lower division courses only. This would eliminate any course being listed in both Segment II and Segment III, which has led to some confusion among students. GEC has tried to eliminate this practice as much as possible, but current policy does not prohibit it.

Double Counting

The seven largest campuses vary greatly in the extent to which they allow double counting between courses in GE and courses in the major (see Appendix M). On the low end, Long Beach does not allow any double counting with an exception for selected majors, and on the high end, SFSU and San Diego allow twelve units of double counting, and San José only restricts double counting in the upper-division GE requirement. There are several different types of double counting between zero and twelve units. EO 595 states, "Campuses may permit 'double counting' of courses for General Education-Breadth and major requirements and prerequisites only after giving careful consideration to the impact of such actions on General Education-Breadth programs. Decisions *to permit double counting in* General Education-Breadth and a degree major may be made only after an approval is provided through campus wide curricular processes" (p. 5).

Of the twelve units that can be double counted at SFSU, six of them can be in Segment II and six can be in Segment III. The faculty opinions on double counting range all the way from "do not allow any" to "allow unlimited double counting anywhere that it makes sense in the major." Other faculty members think students should be permitted 9 units in Segment II and none in Segment III. This would allow majors in particular breadth areas not take any additional courses in those breadth areas (e.g., Science majors would not have to take any additional science courses in GE). Faculty members who want liberal and conservative double counting rules argue that their stance is better for students' education. For example, faculty alternatively argue that no or little double counting will lead to a broader based education; that unlimited double counting will lead to more electives which will produce broader based education; that unlimited double counting will permit greater specialization and expertise in a one's major field of study. One respondent of the blog argued that the number of courses, not units, should be the standard for double counting: "The basis for double-counting should be courses, not units. i.e., students should be able to double-count four courses, regardless of the number of units associated with those four courses." Other faculty members have recommended allowing students to double counting all GE courses in their minors, which is possible under the current GE policy at SFSU. Clearly, SFSU faculty members are not of one mind on the double counting possibilities.

GE Segment II and Major

Although individual majors may recommend specific Segment II courses to their majors, we do not know of a campus-wide discussion about the content of Segment II courses and their relationship to majors. Such a conversation might prove profitable. Rather than discussing how the content of Segment II might be structured to enhance majors or the students' overall education, the discussions have focused on double counting or how to include more writing in Segment II courses as a reinforcement to Segment I instruction. The latter discussions include arguments that Segment II classes should be small. Given finite resources, faculty will need to consider how to best balance varying class sizes across the curriculum.

Student Issues

In the Pulse survey for fall 2005, a student identified Segment II courses as causing "the most problems in meeting your expected graduation date?" Sophomores have the lowest priority for enrolling in classes and hence find it difficult to get a 214, which is supposed to be completed in the sophomore year, along with Segment II requirements. If Segment II courses were restricted to lower-division courses, juniors and seniors might seek enrollment in those classes less often thus opening spaces for sophomores. Another idea GEC has considered is linking 214s with Segment II classes with guaranteed seats for sophomores. Such combinations might get students properly enrolled earlier and provide a natural link between reading and writing that has been demonstrated to improve composition skills. As noted above in the section on Segment I, however, there have not been enough sections of 214 available. Correcting the problem of insufficient sections of 214 should be a higher campus priority.

Governance

The current governance structure for Segment II involves five committees making recommendations to GEC: (1) Physical and Biological Sciences Committee, (2) Humanities and Creative Arts Committee, (3) Behavioral and Social Science Committee (4) Life-Long Learning Committee and (5) American Ethnic and Racial Minorities Committee. The current committee structure designates thirty-nine members across the five committees. This is in addition to GEC's oversight function.

When the Segment II Committees have met, they have completed significant work. However, the committees have not met on a regular basis and when they do meet it is often difficult to find a time to bring together all of the members selected for the committees. These factors make it difficult for the committees to make recommendations regarding new courses, the assessment of current courses, and policy changes, and for regular communication between the Segment II Committees and GEC. We have even experienced difficulty in getting Segment II Committees to make recommendations electronically.

In contrast, for General Education Segment III, one university-wide committee makes recommendations regarding new courses, assessment, and policy changes and this committee meets every two weeks, with the chair of the committee also attending GEC meetings. These regular meetings result in on-going curricular updates, assessments, and policy evaluations and recommendations.

GEC recommended to the Academic Senate that the five Segment II committees be consolidated into one committee using a structure similar to the one used for the General Education Segment III Committee. The proposed Segment II committee would be comprised of eleven voting members and would be encouraged to meet on a regular basis and to send a representative to GEC meetings. A copy GEC's recommendation can be found in Appendix N. The Academic Senate did not act this recommendation, since a full review of GE was being conducted this year.

Segment III: Relationships of Knowledge

Principles and Description

The CSU system requires that students receiving a baccalaureate degree from a CSU campus complete 9 units of upper-division general education coursework at the campus granting their degree. SFSU fulfills this upper-division requirement through its Segment III program, Relationships of Knowledge. Students cannot begin Segment III coursework until (or after) the semester in which they achieve junior standing. The goal of G.E. Segment III at SFSU is to "to promote an appreciation of the interrelationships among knowledge, values and skills." This goal is grounded in a belief that students "benefit from knowledge about:

- The value and significance of human achievements.
- The experiences and achievements of various cultural, ethnic, or social groups.
- The complexity of personal, cultural, and social problems and issues.
- The impacts and consequences of solutions to existing or newly created problems.
- The problems, issues, or solutions confronted by various social, ethnic, or cultural groups and how they may be experienced in different ways.
- The integration of their abilities, knowledge, and experience in making decisions.
- The prevalence of cultural, social, personal, and/or procedural biases.
- The use of effective procedures for investigating problems and issues.

This component of our GE program consists of three upper-division courses that must be selected from an approved, internally cohesive, interdisciplinary or multidisciplinary, thematic cluster. The clusters are each organized around a central, unifying theme and range in size from very small clusters of only 4 courses to very large ones with 30 or more courses. Many clusters are broken up into 2-3 categories to insure that students are exposed to a range of ideas within the theme.

Program Size

The chart below provides information about the size of Segment III in terms of the number of clusters and number of approved courses as of spring 2006, the number of sections of courses fulfilling Segment III requirements in fall 2005, and the number of students enrolled in these courses in fall 2005 (each of the numbers represents the most recently available data). When looking at this data, one should keep in mind that students take courses approved for Segment III for many reasons (e.g., GE credit, credit in the major, prerequisites, electives). For a list of specific courses approved in each cluster see Appendix O.

# Segment III Clusters as of Spring 2006	# Approved Courses as of Spring 2006	# Sections Offered in Fall 2005	# Students Enrolled in Fall 2005
57	452	340	15,048

Overlay: # Cultural, Ethnic, and Social Diversity (CESD) Courses Approved as of Spring 2006	# Sections Offered in Fall 2005	# Students Enrolled in Fall 2005
250	240	10,604

Student Assessment

SFSU began its most recent assessment of its G.E. Segment III curriculum in the fall of 2001. A previous review of the overall program had been carried out in 1991, but this was the first time individual courses were examined. Given the large number of clusters involved (approximately 60 at the time of the first review), it was decided that the clusters should be broken up into 3 groups and reviewed annually in turn. Due in part to a number of proposals for new clusters, that time period was later expanded to 4 years. A faculty member who acts as cluster coordinator and is responsible for coordinating the submission of the review packet spearheads each cluster. The cluster coordinator is also responsible for submitting annual reports to the General Education Council (GEC) on the status of the cluster to ensure its continued viability.

Currently, 69 clusters have either undergone review by the G.E. Segment III committee or are currently under review (Appendix O). Of these, 13 were new cluster submissions, 7 of which have been approved for inclusion in the G.E. program. Discontinuance has been approved for 5 clusters and 3 previously existing clusters have been merged to form a new cluster. All colleges in the university participate in the Segment III program, and most clusters contain courses from more than one college. There are currently 68 academic disciplines participating in the SFSU G.E. Segment III program.

It is difficult to assess the success of the Segment III program based on current data. No attempt has yet been made to collect data on and assess student outcomes in the program. The latest round of reviews was focused on the structure and organization of the cluster, the appropriateness of the theme, and the viability of the cluster. The University Interdisciplinary Council (UIC) carried out a review of interdisciplinarity in Segment III courses in 2001-02 by asking students to fill out a questionnaire on their knowledge and awareness of interdisciplinary concepts and to write an essay on an interdisciplinary topic. The results seemed to indicate that students who had completed their Segment III courses were more likely to be aware of and use interdisciplinary approaches. The study was hampered, however, by the small number of participants and by the presence of a mix of Segment III and non-Segment III students in the classes used in the study. The mix of students in Segment III courses will continue to complicate any meaningful assessment of Segment III, because students being assessed had completed anywhere from zero to 6 units of Segment III coursework in the cluster.

CSU Alignment

SFSU is unique in its implementation of the upper-division General Education requirement. While two other CSU campuses use a cluster model (Chico and Los Angeles), they are not nearly as large as the program at SFSU, either in terms of the number of clusters or the number of courses within the clusters. Both of these programs are housed on campuses that are almost half as large as SFSU. The rest of the campuses in the system use a less structured approach to the upper division requirement. Several campuses simply ask students to choose

three upper-division courses within their basic subjects and/or disciplinary courses, analogous to SFSU's Segments I and II. An intermediate approach taken by San José, San Diego, Bakersfield, and East Bay, is to have students take a course in each of three categories (typically along the lines of Natural Sciences, Arts and Humanities, and Social and Behavioral Sciences). A summary of some of the larger programs is given below for comparison purposes.

No structure**: (***Fullerton, Long Beach, Northridge and Sacramento***)** These campuses simply require that 3 upper-division GE-approved courses be taken with additional Life Long Development (LLD) and cultural diversity requirements.

Limited structure: **(***Bakersfield, East Bay, San Diego and San José)* These campuses require three upper-division courses chosen from each of three areas: Science, Humanities, and Social Sciences. Each category has approximately 15-25 courses to choose from.

Loosely structured clusters: **(***Chico)* CSU-Chico has an upper-division GE program that most closely resembles that of SFSU. It is composed of thematic clusters that are organized into categories. Students choose a single cluster then choose amongst the offerings from each category. Unlike SFSU however, Chico only offers 18 clusters. Many of the clusters are extremely small (4-5 courses) and the largest has only 12 courses in it. For comparison, SFSU's program has 57 clusters to choose from, the largest containing almost 30 courses (Appendix O).

Highly structured clusters: (*Los Angeles)* Students must elect a cluster as they do at SFSU, but each cluster is composed of the same three categories: Natural Sciences and Mathematics, Social Sciences, and Humanities. The CSULA program is significantly smaller in size than that at SFSU, despite the similarity in the size of the two universities. CSULA's program has 9 themes each of which contains 9-12 classes. CSULA also has a GE honors program for exceptional students.

There is a range of opinions as to whether, and to what extent, the Segment III program should be changed. Some faculty believe that the current Segment III program offers students a variety of cohesive clusters that are appropriate for a large multicultural university and should continue as it is currently structured. Other faculty members believe that the program should be simplified. The CSU programs listed above offer many options for simplification of the program. An intermediate approach would offer a small number of well-organized clusters with large number of sections, ideally supported outside of the normal departmental FTES. This would establish a separate GE curriculum and might further separate courses in majors from courses in GE.

SFSU Faculty/Staff Commentary

The Segment III program appears to have support amongst many members of the faculty, but the practical implementation of it has been problematic. The perceived benefits of the cluster model are that it encourages an inter/multi-disciplinary view of a topic and in many cases requires students to take classes outside their major or department. The clusters are often not truly interdisciplinary however, as the only requirement for such is that courses in the cluster bear multiple prefixes. Given that many courses are cross-listed under more than one prefix, this requirement is often bypassed. Due to double-counting rules students may use two out of the

three courses in the cluster to fulfill requirements for both GE III and their major. Indeed recent data bears out this concern, showing that most students elect a cluster that is closely related to their major (Appendix P).

In 2006 GEC set up a blog to allow faculty to comment on various areas of General Education. A wide range of opinions was voiced, but faculty members agreed on several things. A repeated comment on the blog suggested the need for a separate budget for general education to encourage departments and faculty to develop GE courses. This budget should support small classes that will allow faculty to help students integrate knowledge and information as well as improve their writing. Some respondents felt that the current administrative structure of Segment III is overly complicated and greatly needs revamping. Some feel that there is too much work for a faculty coordinator working without compensation. These opinions tend to reflect the administrative component of the current system not the actual teaching of classes or the cluster model.

Some faculty questioned whether students are actually getting anything out of the interdisciplinary nature of the clusters, especially since they often overlap with the major significantly. Many felt doubtful that students are being taught to integrate knowledge across and among disciplines. Doubts were also raised as to whether there is much (or any) communication amongst faculty teaching in a cluster, the lack of which would certainly greatly compromise the cohesiveness of clusters. All faculty members who commented about writing on the blog felt that many Segment III classes are too large to include significant writing requirements. Most faculty members seem to prefer frequent and small amounts of writing in all classes or one writing-intensive class to the current system.

Many faculty offered ideas on changes within Segment III. Several faculty members felt that the administrative structure of Segment III istoo rigid and overly complicated. Some would prefer to see an open-ended experience with little oversight and staff support to assist cluster faculty. Other faculty felt that the upper-division requirement should be fulfilled by courses chosen by the major department, removing an extra layer of administration from the faculty. Still others felt that the cluster model is worth preserving, but on a much smaller, and more controllable scale. Faculty members mentioned study-abroad programs and culminating experiences as possible ways in which students could complete Segment III requirements

GE Segment III and Major

Currently there is no direct integration of the GE Segment III program into major programs. A total of 12 units of coursework are allowed to be double counted for credit in both GE and major programs at SFSU. Students in all majors other than Liberal Studies are allowed to double count two courses for credit in Segment III and the major. Because of the large number of units in the Liberal Studies major and the intrinsic interdisciplinary nature of the degree, Liberal Studies majors are allowed to double count all three Segment III courses toward their major requirements. Due to the extremely large number of units required for certification (132), Engineering majors take only two Segment III courses, both of which fulfill requirements specified by their accrediting body.

Double counting in GE and the major has both advantages and disadvantages. The advantage is that it effectively lowers the number of units that students have to take for their degree. For majors that are able to double count all 12 units, a student is in effect graduating a semester earlier than he or she otherwise would be able to. There are however, disadvantages to the double counting. These disadvantage are perhaps most apparent in Segment III. Some of the

most popular clusters are elected because they maximize the amount of double counting by students in a highly populated major. This means that those students are not being exposed to different perspectives on a subject. Because many Segment III courses are cross-listed in two different departments, the requirement to take courses with two different prefixes is fulfilled without truly introducing a multidisciplinary perspective. With few exceptions, the courses in Segment III serve dual roles as both GE courses and major courses. This may make integrating a given course with others in the cluster problematic and is likely to mean that in any given semester Segment III courses contain a mix of students who are electing the class for major credit and for GE credit. This complicates assessment of Segment III courses.

Student Issues

When SFSU students file for graduation, they complete an electronic exit survey of 52 questions. Students are asked to rank their agreement with each of eleven statements about the general education (GE) courses they took to complete the upper-division GE Segment III thematic requirement at SFSU. The questions were answered using a four-point scale where 4 = strongly agree, 3 = agree, 2 = disagree, and 1 = strongly disagree. The tables below summarize the results of the 2006 exit survey. Just over 700 students answered the questions, which represents around 15% of the approximately 5000 students receiving undergraduate degrees.

Completion of cluster courses:

It appears that just over half of the students had completed their Segment III requirements when they applied for graduation. This is not surprising given that students cannot begin taking courses for Segment III credit until they have completed 60 units of course work. It is hard to interpret what a strongly disagree answer means, but it is possible that these students still have one or more Segment III courses yet to take.

I have completed all three of the courses in my cluster.		
Response	**Number**	**Percent**
Strongly Disagree	42	5.9
Disagree	114	15.9
Agree	146	20.4
Strongly Agree	413	57.8
Total	715	100.0

Structure of Segment III

The next two questions seem to show that while students are glad that their three Segment III courses were related to each other, they also wish that they could have chosen from a longer list without being restricted to courses that were thematically related. These student responses seem to be directly contradictory, as a large majority (72%) were glad their three courses were related to each other and an equally large majority (71%) would have preferred not being restricted to courses that were thematically related. A program that incorporated both of these desires would have to have some element of the thematic clusters, but perhaps a much smaller number of clusters with more sections of all cluster courses.

	I am glad the three courses are related to each other.		**I would have preferred to have had the option to select three courses from a longer list without being restricted to courses that were thematically related.**	
Response	**Number**	**Percent**	**Number**	**Percent**
Strongly Disagree	54	7.6	48	6.7
Disagree	143	20.1	160	22.4
Agree	283	39.7	230	32.2
Strongly Agree	232	32.6	276	38.7
Total	712	100.0	714	100.0

Meeting Goals of Segment III

The next questions address whether the current program is achieving the goals of Segment III. These include the ability to integrate information around a theme, to integrate diverse disciplinary perspectives and to appreciate cultural, ethnic or social diversity (the CESD overlay). More than two-thirds of the students surveyed agreed that their courses helped them meet the Segment III goals. This result indicates that one-third of the students did not believe that their Segment III courses helped them achieve these learning outcomes. This certainly suggests that there is room for improvement in this area. Since one of the main arguments in favor of the current thematic cluster organization is to achieve two of these goals, we should examine whether our current program is working as it was intended.

	The courses I selected helped me integrate information around a theme.		**The courses I selected helped me integrate diverse perspectives/disciplines in an area of study.**		**At least one of the courses I selected increased my appreciation of various cultural, ethnic or social groups (e.g., gender, sexual orientation, abilities, etc.)**	
Response	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Strongly Disagree	75	10.5	79	11.1	74	10.4
Disagree	149	20.9	160	22.6	121	17.0
Agree	338	47.5	313	44.1	267	37.5
Strongly Agree	150	21.1	157	22.1	250	35.1
Total	712	100.0	709	100.0	712	100.0

Ability to complete requirements

The next two questions address whether students had problems completing their Segment III requirements. It appears from the data that the majority of students did not have their graduation significantly delayed by Segment III problems, but the fact that over 20% experienced delays in their graduation due to Segment III is disturbing to say the least. Even more disturbing was the fact that almost 50% of the students could not take the specific courses they wanted due to scheduling problems. These students would have elected courses that were not their first choice, but only half of them presumably had graduation delays due to the problems. This is an unacceptably large number of students. Many students work and have only limited time slots to take classes at SFSU. Instituting separate funding for GE to allow more sections to be offered might mitigate these problems.

	My graduation was delayed because of an inability to complete the GE Segment III requirements in a timely manner.		**The courses I wanted to take for GE Segment III did not fit into my schedule**	
Response	**Number**	**Percent**	**Number**	**Percent**
Strongly Disagree	296	41.9	144	20.3
Disagree	238	33.7	237	33.4
Agree	83	11.8	192	27.1
Strongly Agree	89	12.6	136	19.2
Total	706	100.0	709	100.0

Double counting

Clearly, being able to double count courses in Segment III and their major was important to students, but they still appeared to select clusters based on their interest in the subject. It is interesting that 35% of respondents did not seem to care whether they could double count or not. This may reflect majors in which few of their courses are in the Segment III program, and therefore double counting is not possible. In many liberal-arts majors, where the major is 45 units or fewer, students could take the entire 48-unit GE program, 3 units of English 114, and 6 units of US history and government, and a 45-unit major, and still have 18 units of free electives in their total of 120 required units.

	Being able to double count courses in GE Segment III and my major was important to me.		**I chose my GE Segment III cluster because the topic seemed interesting to me.**	
Response	**Number**	**Percent**	**Number**	**Percent**
Strongly Disagree	106	15.1	73	10.3
Disagree	140	19.9	76	10.7
Agree	189	26.8	256	36.1
Strongly Agree	269	38.2	305	43.0
Total	704	100.0	710	100.0

Utility of Segment III

The final question on the survey was whether their Segment III courses were “useful”. It is hard to interpret the answer to that question as usefulness can mean many things. But the majority of respondents (69%) rated the usefulness of Segment III above the neutral point.

The courses I selected in GE Segment III were useful.		
Response	**Number**	**Percent**
Strongly Disagree	94	13.2
Disagree	126	17.7
Agree	295	41.5
Strongly Agree	195	27.5
Total	710	100.0

Governance

The Segment III program is primarily governed by a Segment III committee, which reports to the General Education Council (GEC). The committee meets twice a month to review policy recommendations, assessments and proposed changes and additions to the Segment III program. The chair of the Segment III committee also attends the GEC meetings. These regular meetings result in on-going curricular updates, assessments, and policy evaluations and recommendations and a close working relationship between the Segment III committee and GEC. The Segment III committee has also carried out a four-year review of the entire program, which required each of the 60+ clusters to submit materials in support of their cluster. Each cluster has a designated cluster coordinator who is responsible for gathering the materials for the reviews as well as recommending changes to maintain the health and viability of the cluster.

Even faculty members who support the current cluster model believe the selection and review process requires too much from faculty members without compensation. The current review process requires massive amounts of paperwork in the form of syllabi, assessment matrices and other supporting documents. Regardless of the direction that the Segment III program takes in the future, the administrative process needs to be simplified.

Writing

Writing requirements for upper-division GE courses vary widely across the CSU. CSU Northridge's new GE program (effective Fall 2006), requires that all upper-division GE courses also be writing intensive courses. Likewise, CSU Bakersfield requires that all thematic courses (equivalent to Segment III) have a significant writing assignment in addition to classroom examinations. CSU East Bay requires that two of the three upper-division GE courses require significant/advanced writing. CSU Sacramento requires only that one GE course be a writing-intensive course. The other CSU programs examined do not have an explicit writing requirement. SFSU has required all Segment III courses to include 10 pages of writing with adequate time for editing.

The value and feasibility of requiring 214 as a prerequisite to Segment III was discussed by the GEC. As discussed above in the section on Segment I, data on student grades showed that this prerequisite would be advisable. However, the campus is not currently able to offer enough sections of 214 to make this a feasible policy. The even more rigorous recommendation by the Segment I committee to require passage of the JEPET or ENG 414 as a prerequisite is currently impractical. While these are admirable proposals, in practice they may lead to significant delays in graduation.

Curricular/Structural Issues

As noted above, there is a wide-range of opinions on the current structure of Segment III. In addition to differences in opinion regarding the cluster model, faculty members also differ in their views regarding various Segment III rules including double counting and the 60-unit rule. This last requirement is one of the major causes for student petitions in general education (Appendix Q).

Another problem with the current implementation of the upper-division general education requirement is the fact that of the 60-odd clusters on the books, only around 10 bring in more than a couple of percent of graduating students (Appendix R). The most commonly elected cluster, Human Sexuality, was chosen by almost 18% of graduating students in 2005. Combined

with the second most popular cluster, Children in Families and Society, the two top clusters are chosen by around one-third of graduating students. Most clusters are chosen by fewer than 1% of students with some chosen by only one or two students. The academic policy states that such clusters are subject to deletion, but this policy has not been enforced. The current double counting rules allowing students to count classes in their majors for Segment III credit results in clusters containing classes required by highly populated majors appearing to be very successful, when they may not be drawing many students outside the major. This is very likely the case for the 2nd most popular cluster, which overlaps significantly with the major in Child and Adolescent Development.

Many aspects of the current SFSU implementation of the upper-division GE requirement need to be considered. Should students be required to take courses outside the college of their major? A problem with that requirement is that many of the more desirable courses (Art, BECA, ect.) would not be accessible to non-majors. Should Segment III be narrowly focused or provide students with a broad liberal arts experience? Is the current structure worth the cost to the university in terms of faculty and staff effort in reviewing and maintaining the current Segment III program? These are issues that the SFSU faculty must consider when deciding whether to revise the program.

Programmatic Issues in General Education

Executive Order 595 states that a minimum of 48 units of general education coursework is required at all CSU campuses. At least nine of these units must be upper-division and taken no sooner than the term in which upper-division status is achieved. SFSU students must complete between 51-60 units of coursework to fulfill graduation requirements (48 units of GE, 6 units of U.S. History and Government, and 3-6 units of additional composition courses). Students may complete the requirements in 51 units if they pass tests in U.S. History and Government and composition.

Many faculty members commented that we should go back to the minimum CSU requirements and build from there. These faculty feel (correctly or not) that SFSU's program is larger and more complicated than the CSU requires. One blog writer states that the requirements should be made "as flexible, minimal and simple as possible". On the other hand, some faculty members believe that students need these additional units and they value our broad-based liberal arts program.

Some faculty see the complexity of the GE program as a result of "turf protection," in which decisions are made to protect the enrollment in certain programs and departments rather than for the good of the GE program. Having a separate budget for General Education or having it handled through the departments and colleges is seen as a way to mitigate this.

Some graduation requirements are different for first-time freshman and transfer students. For instance, the AERM requirement is waived for transfer students, many transfer students can count U.S. History and Government towards fulfillment of their GE requirements, and math and science requirements are less for transfer students. The campus needs to consider these differences when evaluating the current program.

An "extraordinary disconnect between GE and the major" is a concern for some faculty. A couple of respondents suggested that all courses be potentially used for GE and the individual departments and colleges would decide which were most appropriate for a given student. Others felt that the basic subjects (Segment I) would be best handled by the departments that currently

teach these subjects, but that fulfillment of Segment II and III requirements should be left to the major departments and colleges.

Some respondents mentioned a need to expose students to community service to foster a sense of social responsibility. A semester spent abroad was also mentioned as a way to "prepare members of our community to interact effectively with persons whose experiences, traditions, and values may differ from their own," a suggestion that may be problematic given the economic constraints of many of our students.

Some other ideas brought up were allowing double-counting of a certain number of courses rather than units, eliminating transfer versus native patterns for GE, having students take a larger role in designing their own GE program, focusing more on basic skills (reading, writing and mathematics), requiring students to take courses in a second language, and including computer and technology literacy in the basic requirements for all students.

Regardless of the details, it is clear that there is a wide diversity of opinion and that most students rated the GE program positively. Some members of the faculty are unhappy with the current system, and feel that change is desperately needed. Others believe the system is working well as currently designed. The direction of any change will no doubt be the subject of intense debate over the next few months.

Major General Education Issues for Discussion

Overall, the review indicates that SFSU is achieving many of the educational goals that it has established for general education. The most consistent concern expressed by faculty members was over the writing skills of students. Major areas of disagreement among the faculty seem to center on the following issues:

1. What should be the goal(s) of a college education (career development, contributions to society, liberal education, life-long learning, and personal growth)?

2. Do we have the best structure for achieving the educational goal(s)?

3. What role should the major, general education, and electives play in those goals?

4. How many units in the degree should be devoted to general education?

5. Should differences in transfer and native graduation requirements exist?

6. How should the GE program be funded and staffed?

We hope that during the review process many, if not all, of these issued are addressed with respect to our divergent experiences and perspectives.