GENERAL EDUCATION PROGRAM REVIEW

Sonoma State University

Spring 2009

TABLE OF CONTENTS

Chapter 1 - Administration of GE Curriculum

A. Introduction to GE Curriculum

1. The Program

In 1990, SSU adopted its current General Education Program format, which includes three curricular programs: a University-Wide Option, a Hutchins School Interdisciplinary Option, and a Transfer Student Pattern. In 2003, SSU adopted its current General Education Mission and an integrated set of Teaching Goals and Learning Objectives for its program as a whole (MGOs) (see Appendix 1). The University-Wide Option is a 51-unit program that meets all of CSU's various requirements, including 9 units of upper division, ethnic studies, U.S. History, U.S. Constitution, California State and Local Government, and a laboratory course (Appendix 2a). About 65% of students follow this pattern.

The Hutchins School Interdisciplinary Option is a 60-unit program where students take four interdisciplinary lower-division 12-unit seminars for 48 units, and then take an additional 9 units of upper division and 3 units of math to meet CSU requirements (Appendix 2b.) About 3% of students choose this option.

The Transfer Student Pattern is designed for students entering SSU with at least 30 units. They follow a 48-unit pattern, which requires one less Social Science class than the University-Wide Option, but meets all CSU requirements (Appendix 2c). About 32% of students follow this pattern.

2. The Distinctive SSU Experience

While the CSU System sets out a comprehensive general education framework, as currently articulated in the General Education Breadth Requirements of Executive Order 1033 (Appendix 3), there is latitude to create a distinct experience at each campus. The SSU experience is unique in four major ways.

First, the Hutchins Interdisciplinary Option integrates several GE Subject Areas within each 12-unit seminar (Appendix 2b). Seminars combine large weekly symposiums with small discussion groups of 12-14 students. Students receive a CR/NC grade in addition to a lengthy written evaluation that assesses their cognitive skills, participation, understanding of course content, writing skills, and course assignments. Second, SSU recently developed a First Year Experience (FYE) course within the University-Wide Option. FYE is a year long 9-unit course that fulfills two Subject Areas: Critical Thinking (A3), and Oral & Written Communication (A1). Similar to the Hutchins model, students attend weekly lectures delivered by SSU faculty or visiting scholars, and they meet twice weekly in small groups of 17. In addition, peer mentors work with the groups both in and out of the classroom to help establish a sense of community. This course is available to about 180 students, or 11% of students within the University-wide Option.

Third, the structure of SSU's Area B departs significantly from the CSU norm. SSU offers courses in four areas: B1 (Physical Science), B2 (Life Science), B3 (Specific Emphasis) and B4 (Math), with laboratory activities integrated into many courses in areas B1-B3 (Appendix 2a). In the CSU more generally, courses are offered in three areas B1, B2 and B4, and students choose an additional laboratory activity (B3) associated with courses in areas B1 or B2 (Appendix 3, Article 4). Fourth, SSU expects its Ethnic Studies curriculum to incorporate the voices of the groups being studied from a first-person perspective (Appendix 4).

3. Course Formats and Scheduling

SSU offers GE courses in formats ranging from large lectures that meet once or twice a week to small discussion sections that meet three times a week. Most courses require 3 or 4 units. This variety allows departments to choose the unit load that meets course needs, under the proviso that students should not take significantly more units than required in the GE curriculum.

Table 1- CS Code Distribution of SSU General Education courses

			Area				
CS Code	CS description	Examples	A	B	C	D	E
1	Large Lecture	Lecture courses with > 50 enrollment		24	4	1	1
2	Lecture discussion	Lecture courses in which class participation is a planned portion of the instructional method	2	5	40	27	14
3	Lecture-composition, counseling, or case study	Business, education, English and psychology courses in which students write, are counseled or study law cases	1			1	
4	Discussion	Courses in which student participation is the primary instructional method	9	75	27	6	2
5	Seminar	Courses using seminar methods of instruction	2		15	1	
7	Fine arts & science activities	Art, anthropology and science activities			2		
12	Speech, drama & journalism activities	Classwork in debate, acting, and publication; no public performance involved			1		
13	Technical activities & laboratories	Courses involving business and other machines; accounting, geography, foreign languages, home economics, psychology, library science, photography, engineering, industrial arts, agriculture, mathematics and statistics		1			
16	Science laboratories	Laboratories in natural science, life science, psychology, natural resources, agriculture, engineering, meteorology, photography		27			
36	Independent study, field work, studio instruction, supervised activities	Undergraduate - all disciplines. Requires instructor to spend an average of 1 hr per week with each student.			1		

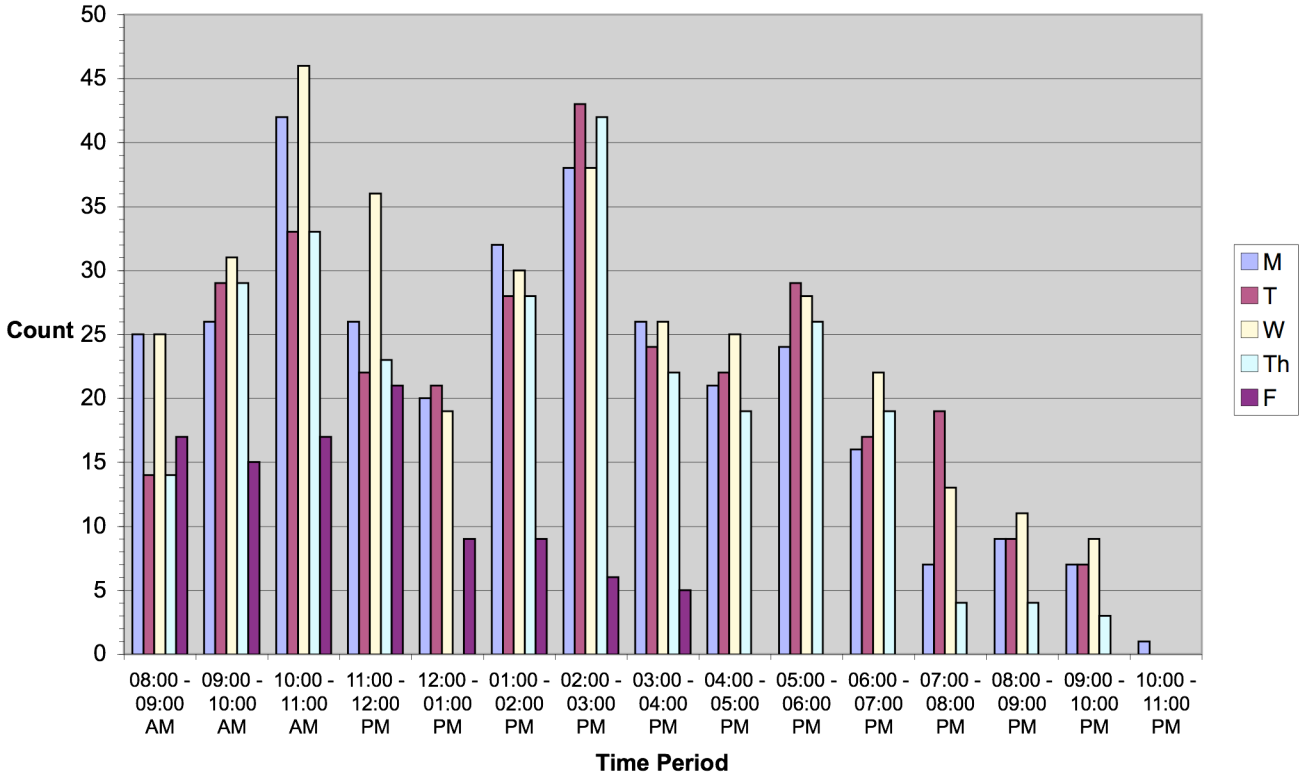
Table 1 shows the distribution of CS Codes for courses in the SSU GE curriculum, based on GE area. The table shows that participation and discussion-based courses predominate throughout the curriculum, though a closer examination of enrollments may reveal that many of these actually deserve CS Code 1 status. In the sciences (Area B) large lecture courses are much more common and closer student faculty contact occurs in the laboratory (CS Code 16) component of the courses, where enrollment per section is usually capped at 24 students.

SSU has a decentralized process for scheduling GE classes. Schools are given an overall FTES allocation, and the School Deans decide how to meet the demand for GE within their Schools with that allocation. The Dean of the School of Social Sciences, for example, distributes classrooms as well as "major FTES" and "GE FTES" targets amongst Departments. Departments decide what classes to offer in which classrooms, as long as they meet their "GE target" within their FTES allocation.

Figure 1 shows a weekly schedule of GE courses for Fall 2008. Any course that officially meets during the time shown is indicated in the table (e.g., a course that runs from 8:00 a.m. to 9:15 a.m. is counted in both time slots). GE courses were taught throughout the day Monday through Thursday, and relatively few courses were taught in the afternoon on Friday. The greatest 'clumping' of courses

occurs at late morning on Monday-Wednesday and in mid-afternoon on Tuesday-Thursday. When students register for courses in the people-soft registration system, they are blocked from registering for any courses that conflict with their scheduled choices.

Figure 1- GE Weekly Scheduling



The average time per class session depends partly on course format and partly on unit number. Discussion sections for GE courses typically last 50 minutes, while laboratories last 170 minutes. Lecture times also vary. Some three-unit lecture courses are taught three times a week at 50 minutes each, but more are taught twice per week at 75 minutes per session, and several are taught once a week at 150 minutes. Four unit lecture courses are also taught 1-4 times per week, but the average duration per session is longer than for three unit courses (Table 2, data from Fall 2008 and Spring 2009).

Two patterns become apparent from these summaries. First, there is significant conflict among GE courses, especially at 'peak' times. This conflict is not systematically addressed in our scheduling planning, aside from informal discussions among individual departments. If anything, the table above tends to minimize the conflicts because it shows schedules by individual hours but many courses overlap if they last one more than an hour. Second, many lecture courses are taught over extended periods of 2-3 hours in single sessions. In some cases, this may be pedagogically necessary, but in others it might occur because instructors are maximizing their scheduling flexibility. It looks like the length of lectures grows with unit number. This trend should be considered when discussing the costs and benefits of changing the default unit number from three to four units.

Table 2- Session number and duration of GE courses at SSU.

		Units				
# sessions per week	duration	1	2	3	4	5
1	< 1 hr	--	--	1	10	--
2	< 1 hr	--	2	10	--	--
3	< 1 hr	--	--	69	11	8
4	< 1 hr	--	--	--	2	--
1	1-1.5 hr	--	--	3	--	--
2	1-1.5 hr	--	--	212	14	--
1	1.5-2 hr	--	--	3	1	--
2	1.5-2 hr	--	--	--	130	--
1	2.5-3 hr	--	--	164	1	--
1	> 3 hr	13	--	3	21	--

4. GE Advising

Students at Sonoma State University obtain information about GE courses in several ways:

1. First year students receive initial GE advising at summer orientation through the Educational Mentoring Team Program (EMT. Students who choose to take University 102 (First Year Experience), a 3-unit freshman seminar, receive advising through the EMT program during their first year at the university.
2. Undeclared students are advised by the Advising, Career and EOP Center (ACE).
3. Declared students may receive GE advising through their department. They may be assigned to a particular faculty member, or they simply drop in and consult with an available faculty member.
4. In the School of Business and Economics, a departmental staff member advises Pre-business majors. Once they have completed pre-major courses, they are assigned to a faculty member for major and GE advising.
5. Experienced students informally advise newer students about GE courses and the program.
6. Students use the on-line degree audit and the GE Pattern checklists.

None of these sources of information is perfect. ACE staff provide professional advising, but is generally acknowledged that the advising staff has an overload of students. GE advising by departmental faculty is recognized to be of uneven quality. Some faculty members have broad knowledge, especially those with experience in the EMT Program and those who have served on faculty governance committees that deal with General Education and advising issues. A few faculty

members are recognized as particularly GE knowledgeable by departments, and questions about GE are often referred to them. Other faculty members, even some with many years at SSU, regard GE advising as "too hard" or confusing. They tend to send students with GE questions to other advisors, tell them to consult the SSU catalog, or they send them to ACE. The pre-business staff advisor in the School of Business and Economics provides a valuable function, as she is conscientious and thorough in student orientations and individual advising.

SSU has implemented the Degree Audit Report in Peoplesoft. The general education patterns described above (i.e., resident SSU pattern, the transfer pattern, and the Hutchins pattern) have all been built into the Degree Audit Report. Student and faculty can access this information to assist in the advising process. A Degree Audit Task Force has been charged to make the degree progress report fully functional in the 2008-2009 AY. Among the issues the task force is confronting are two that will improve the advising process for General Education: (1) developing a business process that allows course substitutions to be entered into the student's degree progress report, and (2) developing a process that will allow for timely input of transfer credit information, including GE course equivalents.

In March 2009, a GE Subcommittee member met with a small focus group of five students to discuss their GE advising experience. Points raised in this discussion reflected issues that emerged from a 2005 survey of student advising, conducted by the Student Affairs Committee and based on a sample of 1100 students. Specifically, the focus group of students mentioned five major issues:

1. Initial advising at Freshman orientation focuses on the structure of the entire four-year GE program, and this is overwhelming to new students. The focus group students suggested that it would be better receive materials regarding recommended courses for the first year alone at the beginning of their studies.
2. A major concern driving student selection of GE courses is scheduling. This is more important than course content or instructor. Students look for GE courses that do not conflict with each other and fit around major requirements (declared students) or electives (undeclared students).
3. Most students obtain GE advising in their first year from other students. A pitfall of this approach is that false information is sometimes communicated. One of the focus group students 'wasted' units on a class that she took on incorrect advice from another student.
4. Some faculty members are reluctant to provide advice regarding the GE program, because it is outside their disciplines, and they do not understand it. Faculty members sometimes propose that GE advising be conducted in ACE. When students go there, they are sometimes told that they should be advised in their major departments, creating a 'ping-pong' effect that discourages them from seeking advising from campus employees and encourages them to seek it from other students.
5. Incorrect GE advising by faculty members can result in students 'wasting' units. A faculty member advised one focus group student to take a GE course taught by the faculty member that they did not need, which slowed progress towards graduation.

All students agreed that the student services staff members in ACE were especially effective at GE advising. Some students in the focus group were part of the Educational Opportunity Program, which mandates regular advising sessions. These students felt like the quality of GE advising they received was outstanding.

Some students experience a problem when majors have limits in the number of courses that can double count in the major and GE. Students who declare a major late in their careers, or students who get

advice from students from a different major, may have to retake a class in a sub-area if the course they have already taken counts towards their major. The SSU catalog includes a 4-year course pattern for each major, including GE courses, to preempt this problem, but students rarely consult this source. According to the four upper division students in the focus group, difficulties in obtaining access to GE courses were severe enough that each of them took courses during intersession (winter or summer) and took overloads (> 18 units per semester) in order to graduate within 10 semesters.

B. Current Curriculum Oversight Process

1. Executive Order Framework

SSU is responsible for meeting all provisions from the Chancellor's Office regarding GE. In 2008, the CSU issued Executive Order 1033 which contains the current General Education Breadth Requirements (Appendix 3). The GE subcommittee is particularly attentive to two broad provisions. First, EO 1033 specifies subject areas (A-E), subareas, minimum units within each area and sometimes subarea, and broad learning goals for each area (Appendix 3, Article 4).

Second, EO 1033 mandates that students are able to transfer to SSU from other regionally accredited non-CSU institutions without unreasonable loss of credit or time (Appendix 3, Article 5). In accordance, SSU adopted a 3-Unit Policy in 1989 stipulating that a reasonable number of 3-unit courses be offered in each GE sub-category (Appendix 5) in order to facilitate transfers from institutions with predominantly 3-unit curricula.

2. Communication between SSU and the CSU regarding GE

Two formal communication channels exist between the CSU and SSU. First, a representative from the Provost's Office is SSU's administrative liaison with the Academic Affairs Division of the Chancellor's Office. Currently, that representative is also a member of SSU's GE subcommittee. SSU's representative on the Academic Senate CSU is a second conduit of information to the GE sub-committee.

More informally, SSU participates in a GE Affinity Group. This group includes faculty and administrators from every CSU campus. Members share GE practices and ideas during conferences and through a website. The current GE subcommittee Chair and the SSU-CSU administrative liaison participated in one of these conferences last year.

3. The GE Sub-committee within the SSU Faculty Governance Structure

The GE subcommittee is a subcommittee of the Educational Policies Committee (Appendix 6). Its charge from EPC encompasses all issues pertaining to the GE curriculum (Appendix 7).

Voting members of the GE subcommittee include elected representatives from each of the seven Schools in the University and the student representative (selected by the ASI). Non-voting members include the Provost's administrative liaison, an EPC liaison, a Student Services Professional from Student Affairs & Enrollment Management, and a representative from Admissions and Records. These representatives are the primary conduit for communicating actions of the GE subcommittee throughout the Schools and University, and this often occurs through attendance at meetings of the School Council of Department Chairs.

4. Information and Routing Processes for GE issues

The GE subcommittee spends much of its time attending to three main duties: articulations with other campuses, GE Petitions, and moderate to minor changes to the GE curriculum. It follows procedures

set out in the Curriculum Guide (Appendix 8). Over the past several years, it has improved and formalized the processes by which it handles most duties. These new procedures will be codified in the SSU Curriculum Guide, which is currently being revised by EPC. The intent of these efforts has been to increase communication within the University concerning GE issues. Most importantly, the GE subcommittee has modified or created new forms that stipulate routing procedures and requisite information for articulation approvals, petitions and curriculum changes. These procedures reveal how information concerning GE issues is communicated throughout the University.

i. Articulations The GE subcommittee considers articulations for courses from other campuses to count towards SSU's GE. The form elicits the following information and approvals (Appendix 9):

Information	Routing
a. Course Syllabus (content and texts)	1. SSU Articulations Officer in Admissions and Records
b. Learning Objectives	2. GE Subcommittee

ii. GE Petitions GE Petitions allow students to request that non-GE courses they have already taken count towards their GE curriculum. These are particularly common for transfer students and for students who have studied abroad. The GE Petitions require the following (Appendix 10):

Information	Routing
a. Description of SSU course to be substituted	1. Student advisor
	2. Dept. Chair for SSU course to be substituted
b. Syllabus of new course	3. Evaluator in Admissions and Records
	4. Chair, GE Subcommittee
	- Optional consultation with GE subcommittee

iii. Minor Changes Minor changes include changes to a title, and temporary changes to units or content. Faculty initiating minor changes in their GE courses fill out a Master Catalog Course Change Form, and check the box indicating that the change will impact GE (Appendix 11). The form then takes the following route:

Information	Routing
a. Description of the change	1. Department Chair
	2. School Dean
	3. Associate Vice Provost, Academic Programs
	- In consultation with Chair, GE Subcommittee
	- Optional consultation with GE subcommittee
	4. Chair of EPC
	- Optional consultation with EPC

iv. Major Changes Major changes entail alterations to course content and a permanent change in units. Faculty fill out an Application to Modify at GE Course (Appendix 12). New GE Courses follow a Guide for GE Course Proposal (Appendix 13), which requires similar information and routing process:

Information	Routing
a. Master Catalog Change Form	1. School Curriculum Committee
b. Course Syllabus (content and texts)	2. School Dean
c. Learning objectives	3. EPC
d. Assessment protocols	- Optional review by GE subcommittee
e. Description of how the course will be structured and staffed, and projected enrollment	
f. Description of relationship and impact on existing GE courses	

v. New Courses Faculty fill out a Guide for GE Course Proposal (Appendix 13), which requires similar information but slightly different routing process:

Information	Routing
a. Proposed Catalog Copy	1. School Curriculum Committee
b. Course Syllabus (content and texts)	2. School Dean
c. Learning objectives	3. GE sub committee
d. Assessment protocols	4. EPC
e. Description of how the course will be structured and staffed, and projected enrollment	
f. Description of relationship and impact on existing GE courses	

The routing process is currently ambiguous when a new course is proposed in a GE area where more than one school teaches courses. The GE subcommittee considered this issue and decided to leave it up to proposers whether they would seek approval from more than one school curriculum committee before forwarding a proposal to the GE Subcommittee. The current new course proposal form emphasizes the importance of widespread consultation to facilitate curricular change, but the Subcommittee decided in 2007 to refrain from constructing the routing in such a manner as to give schools veto power over proposals originating in other schools.

5. Structural Change in the GE Curriculum

Initial development of the GE curriculum occurred in a 'bottom-up' manner. Departments proposed to teach courses following the general template provided by relevant CSU executive orders. Courses have been added and modified through faculty governance processes.

Responding to the national consensus that instruction in General Education, especially foundational courses, should be integrative and synthetic, the SSU campus community has expended considerable effort to develop improved models for instruction in General Education. In 2000, a group of faculty members and administrators attended an American Association of Colleges and Universities (AACU) workshop in Asheville, North Carolina to begin the process of GE integration and renewal. In 2002, an all faculty retreat on General Education was convened. These events stimulated the production of a statement of Mission, Goals and Objectives of General Education, which were approved by the SSU Academic Senate in 2003 and are currently integrated into the university degree requirements in the SSU catalog.

In addition in 2003, a joint EPC/GE Task force was created. After consultation with school curriculum committees, this task force submitted the Academic Planning Committee developed a document titled "A New Path for GE Reform" (http://www.sonoma.edu/ge_initiative/anewpath.shtml). The Path document outlined a plan for GE structural reform for 100 level foundational courses and called for an integrative first year experience course that emphasized skills building in critical thinking and composition. This course would incorporate co-curricular activities and student advising into its structure. In addition, the path called for restructuring of the mid-level GE curriculum by inclusion of additional courses, the development of a capstone experience, integration of 'writing across the curriculum' components throughout the curriculum, faculty training and mentoring, and establishment of a permanent structure for assessing GE course goals and learning outcomes. The Academic Senate approved the principles outlined in the Path document in 2004.

During the 2004-2005 year, the GE Subcommittee developed a preliminary structure for the integrative first year course, and faculty members were appointed by the Provost to spearhead syllabus

development and organize the course during the 2005-2006 academic year. After necessary approvals were obtained through faculty governance channels in spring 2006, the pilot course was taught for two years. During this period, an Assessment Coordinator was appointed to collect data on faculty and student satisfaction and student achievement of learning goals through participation in the pilot first year experience course. The first year course consisted of multiple sections where students met in small groups (17 students) for two hours per week a lecture component where all students and faculty attend a one-hour lecture from an expert in an area that related closely to the readings under discussion. Faculty members from multiple schools participated in development of the curriculum and instruction of the course, and regular outside-class meetings were held to align teaching goals and methods for all sections of the course. Two faculty members from two different schools served as Coordinator during the first year experience pilot.

During the 2007-2008 academic year, the pilot course applied for, and received, inclusion into the GE curriculum as a regular catalog course that counts for GE credit in area A. The GE Subcommittee supported the proposal unanimously, but it proposed that the course count for areas A1 and A3, which emphasize oral expression and critical thinking, rather than area A2, which focuses on writing skills. This recommendation was based on the argument that all students should continue to enroll in the A2 course that emphasizes composition and writing. The Education Policies Committee and Academic Senate agreed with this assessment and the course was approved for inclusion into the catalog as a regular course in spring 2008.

On yet another front, the CSU has formally adopted the AAC&U LEAP learning outcomes as the basis for its general education curriculum in 2008 (*CSU Executive Order 1033*, http://www.calstate.edu/eo/EO-1033.html) providing new impetus for renewal and reform of the GE program. At the CSU system level, the Trustees have given high priority to initiatives designed to facilitate graduation and reducing the number of units students take in pursuit of the baccalaureate.

In recent years, faculty members and administrators have engaged in a dialogue about whether to convert the GE curriculum to a 4-unit model for instruction. Extensive discussions have occurred in schools and departments about how their offerings would be affected by this change. At present, a mixture of 3 and 4 unit courses is found in most schools (Table 4). The School of Arts and Humanities favors a transition from their current structure of mostly 3 unit lecture/discussion courses to mostly four unit courses with the same format. In Science and Technology and Social Sciences, lecture and laboratory courses tend to require 4 units, and lecture-only courses require 3 units. There is less interest to make the transition to a 4-unit model in these schools.

The GE Subcommittee plans to address proposals for curricular reform as they emerge from the schools, while emphasizing the role of the curriculum to serve all students. Faculty members in schools are best qualified to address pedagogical issues. The GE subcommittee will focus on the coherence of the curriculum as a whole and the goal of improving student learning through specification of learning outcomes and assessment of student performance towards those outcomes, regardless of course structure.

Table 3- Unit numbers of GE courses taught at SSU, by academic unit.

School	Units	*Number of courses*	% of courses in school
Arts and Humanities	1	*2*	2%
	3	*67*	69%
	4	*28*	29%
Business and Economics	4	*2*	100%
Education	3	*2*	100%
Science and Technology	1	*3*	5%
	2	*1*	2%
	3	*33*	59%
	4	*16*	29%
	5	*3*	5%
Social Sciences	3	*29*	67%
	4	*14*	33%
University	3	*2*	50%
	4	*2*	50%

6. Assessment

Notably missing from the GE subcommittee's regular duties has been a formal and systematic assessment of the GE curriculum, despite the fact that this duty is in its charge. The GE subcommittee intends to develop such a process and make it one of the subcommittee's primary duties in the future. Details are discussed in this Review's Action Plan.

6. Summary

The General Education program at Sonoma State University is structured and administered in a fashion typical of a medium-enrollment comprehensive university. The overall curriculum is structured based on guidelines established by the California State University in its executive orders. These have evolved to emphasize student learning outcomes and increased integration, and SSU has made progress towards achieving these goals through its Mission, Goals, and Objectives statement and by revising its standards and processes for evaluation of new course proposals. However, scheduling of GE courses and advising of students who have selected their majors has occurred within departments. Faculty members in departments often pay more attention to discipline-based courses and this may have led to problems in advising and coordination of scheduling. Proposals to reform the curriculum should include proposals to improve in the area of learning outcomes assessment, integration of scheduling and articulation, and in some cases also with advising (especially since students will be operating under different catalog requirements during the transitional period).

7. Draft proposed action plan items

In the area of administration, the GE Subcommittee recommends the following:

1. The SSU administration should provide staff support for curricular oversight. Tasks include 1) collection and analysis of syllabi for GE courses for adherence to course outline policy and integration of course content to GE learning objectives, 2) further analysis of scheduling conflicts and difficulties, and 3) maintenance of an inventory of documents related to the GE curriculum and its implementation.
2. The GE Subcommittee should work with administrative staff to develop and maintain statistical summaries of enrollments, scheduling and staffing of GE courses, and summaries of the relationships between CS numbers and GE course format and expectations.
3. The GE Subcommittee should work with other campus entities to improve advising in GE. This includes development of new documents to introduce students to the curriculum, especially in the first year, and working with student affairs personnel to properly train staff involved in summer orientation in how to use them. In addition, the Subcommittee should work with the Professional Development coordinator to provide GE orientations to new faculty members and improve their abilities to advise students about GE requirements.
4. The Subcommittee should work with administrators and faculty governance to consider models for oversight and review of GE instruction and administration. One possibility is to provide the support described above to a Subcommittee of similar structure as the current one, and another one would be to appoint a 'GE Coordinator,' with a significantly reduced teaching load, to oversee scheduling, oversight, and assessment.
5. The Subcommittee should work with faculty members teaching in GE to develop 1) a definition for a laboratory experience that conforms to CSU Executive Order 1033, and 2) a mechanism for revision of GE area learning outcomes as needed. In addition, the Subcommittee should examine the current SSU definition of the Ethnic Studies Requirement for possible revisions that would reduce difficulties in articulating with other CSU campuses and community colleges that define ethnic studies differently.

Chapter 2 - Quantitative Analysis

Data analysis

As the General Education program was developed and modified at Sonoma State University, a series of recurring motifs has emerged. They can be summarized as follows: some departments have too many courses in GE; some departments have "too much" GE; some departments teach large, low quality GE courses in order to support their majors; some departments don't even have a defined major, just a collection of GE courses with a few specialized major courses; students are forced to take "too many" GE units; GE detracts from student experience in the major. Although a few faculty seem firmly convinced of one or more of these assertions, which has driven past attempts to "reform" GE, there has never been a systematic test of any of them.

In order to evaluate some of these motifs, as part of this program review, the GE subcommittee has developed a number of questions which can best be addressed through analysis of campus and system GE data. The principal questions are:

- What is the role of GE in generating FTES to support departments?
- What are the relative shares of GE across departments?
- What is the overlap of GE and major courses?
- Are GE courses taught differently than major courses?
- What is the role of lecturers in teaching GE courses?
- What is the average number of units native SSU students take to meet their GE requirements?

In pursuing answers to these questions, several other areas were investigated, including the actual GE enrollment in upper division foreign language courses and the impact of cross-listing courses on class size.

Data used in this analysis are derived from three sources. The first is the SSU course-by-course GE enrollment report, which is a subset of the campus course-by-course enrollment report covering all courses. These reports were analyzed for each semester, beginning Fall 2005 and including census date data from Fall 2008. The second source is a report generated by the SSU CMS. The third report is the CSU APDB (Academic Planning Data Base), which is compiled for all CSU campuses based on reports generated by each campus office of institutional research. This report is annual, including Fall semester data so there are only three items available for each department's enrollments.

What is the role of GE in generating FTES to support departments?

The best way to answer this question is to compare the percentage of FTES in GE courses to the department's FTES in that semester. Numbers may differ slightly from semester to semester, since budget constraints force some departments to schedule courses only once per year, and large lecture sizes may vary with the capacity of the rooms available, but overall patterns are relatively consistent. The data below show averages over seven semesters (Fall 2005-Fall 2008) for 26 'departments' with fifty or more percent of their FTES derived from GE.

Table 1 – Percentages of FTES in General Education for 26 departments

Department	%GE FTES	Rank	Department	%GE FTES	Rank
FLIE	100%	1	Art History	69%	14
Astronomy	99%	2	Gerontology	68%	15
NAMS	95%	3	Spanish	67%	16
Linguistics	88%	4	Political Science	66%	17
CALS	86%	5	Chemistry	65%	18
Philosophy	85%	6	History	64%	18
Geology	85%	7	Computer Science	64%	20
French	80%	8	WGS	61%	21
Biology	77%	9	Anthropology	57%	22
AMCS	76%	10	Mathematics	56%	23
Physics	76%	10	German	55%	24
Geography	75%	12	Music	52%	25
Global Studies	74%	13	Theatre Arts	51%	26

Some of these "departments" are subsets of other departments. For example, Astronomy and Physics are in a single department, Gerontology is a sub-set of Sociology, Global Studies is currently administered by Geography and Anthropology, and Linguistics is one branch of Anthropology. FLIE (Foreign Literatures in English) can be staffed from any department in Modern Languages. Finally, students enrolled in any upper-division Modern Language course (French, German and Spanish) could technically receive upper-division GE credit, but very few do so because only the first course can count as for GE credit (in area C4).

Most departments have courses in only one GE area, although they may be in two or more sub-areas. 17 have courses listed in only one area, and of these, FLIE, Global Studies, Chemistry, Computer Science and Math teach in only one sub-area. Twelve departments have courses in two or more sub-areas. Astronomy/Physics, Biology and Geology teach in two sub-areas in Area B, while French, German and Spanish, Art History, Music and Theatre Arts teach in multiple sub-areas within Area C and History and Politics each teach in two sub-areas of Area D (the statutory areas and one additional sub-area).

The remainder of departments spread courses across two or more GE areas. Philosophy, for example, teaches in Areas A and C,and Geography and Anthropology teach in Areas B, D and E. Among the ten departments deriving the highest percentage of their FTES from GE, NAMS has four courses in three different areas, CALS has nine courses in three areas, and AMCS has ten courses in four different GE areas. Appendix B contains five spreadsheets with the lower division (LD) and upper division (UD) GE FTES for each department in the respective GE area for each semester. Therefore, while a number of departments do derive a substantial amount of their FTES from GE courses, there is no consistent pattern indicating that departments pursue GE courses in order to justify their existence.

What are the relative shares of GE across departments?

Percentages of SSU GE are not uniformly distributed across campus departments. Business, the department with the highest FTES, teaches no GE courses, although it requires Economics and Mathematics courses in its pre-major. AMCS, the eighteenth ranking in FTES, derives most of its enrollment from GE courses. Below is a comparison of FTES and GE shares based on Fall 2007 data. The data vary somewhat among semesters, since some departments may only teach a GE course in one semester, while other departments, such as Economics, vary the number of seats they offer each semester in order to meet demand for the GE course as a major prerequisite. Data for Fall 2005-Fall 2008 are in Appendix 15.

Table 2 - Largest Departments at SSU in FTES

Department	Rank	FTES	GE FTES	GE rank	% GE
Business	1	696.2	0	--	--
Mathematics	2	561.5	299.6	2	53%
Psychology	3	538.1	237.8	3	44%
English	4	462.7	177.6	5	38%
Biology	5	395.2	319.6	1	81%
History	6	316.9	213.2	4	67%
Kinesiology	7	303	22.6	>20	8%
Sociology	8	269.9	100.5	11	37%
Hutchins	9	266.3	125.9	8	47%[§]
Political Science	10	237	167.4	6	71%
Economics	11	235.8	82.4	16	35%
EDMS	12	216.1	32.4	>20	15%
Philosophy	13	197.5	147.8	7	75%
Nursing	14	197.1	42.2	>20	21%
ENSP	15	182.3	62.4	>20	34%
Chemistry	16	161.1	117.2	9	73%
Music	17	154.5	62.2	>20	40%
AMCS	18	148.7	114.9	10	77%
Anthropology	19	139.1	81.8	17	59%
Art History	20	133.7	96.3	12	72%

[§]Only Hutchins majors

The Hutchins program integrates GE across its curriculum, and therefore should not be reported in same manner as departments which designate specific GE courses.

As can be observed, while many of the larger FTES departments derive much of their FTES from GE courses, GE accounts for a much smaller percentage of FTES in other large departments. The same is true for smaller FTES departments. Fall 2008 data for ENSP show a substantial increase in the GE percentage of FTES compared to prior semesters, but it is not known whether this will continue in future semesters. Two of these departments, EDMS and Nursing, are primarily professional degree programs, although they offer GE courses. It is difficult to support any assertion that a particular department has more than its "share" of GE FTES.

What is the overlap of GE and major courses?

In most departments which teach GE courses, the courses can be counted as part of the major. There are some exceptions to this policy. Some departments, such as English, specify that some English GE courses may not count in the major. According to the 2008-2010 SSU catalog, eleven departments either have separate GE courses for prospective majors or require specific GE courses in the major. In some cases catalog copy specifies that GE courses are designed for non-majors; in other cases, listed prerequisites limit access. Other departments, History, for example, require majors to take two GE courses in the same area, such as U.S. history, and to take them for a letter grade, rather than credit/no credit. Neither of these pose a problem for freshmen who enter with a declared major, receive appropriate advising and remain in that major until graduation. Transfer students and native students who change their majors, however, may have to "back up" and repeat part of their GE coursework in order to meet the major expectations. Departments vary in the number of their GE courses which are required of their majors. These expectations are generally communicated in their catalog copy and major advising sheets.

What is less clear is the number of a department's GE courses which are accepted to complete the major. Philosophy requires that students take four of its GE courses, Phil 101, 102, 120 and 302, but then specifies that two of them may not be used to satisfy their GE area. Particularly in the Modern Languages, where all upper division courses could potentially satisfy GE for a student in another major, the apparent overlap is enormous, yet misleading. Another complication arises when a major, such as CALS, accepts some number of courses from another major, in this case, Spanish, to satisfy the major.

Our analysis is derived from the SSU 2008-2010 catalog, and includes only those GE courses taught in that department which are specified as required for that major, or are listed as pre-requisites for required courses in the major.

It appears that the "double counting" which is asserted to be a "problem" may occur to some extent in a few small departments, but the way in which each department's GE courses are distributed across the curriculum prevents students in most majors from substantial use of that department's GE courses to satisfy their major requirements.

Are GE courses taught differently than major courses?

In order to answer this question completely, department chairs, and perhaps tenure track faculty teaching both GE and major courses, need to be surveyed, preferably anonymously, in order to get honest answers. There are two ways to determine department attitudes toward GE students indirectly. One is through comparison of average GE class sizes with the sizes of other department courses. The other is through observation of the staffing of GE courses compared to

the other courses. One committee member also suggests that the scheduling of instructors in GE courses be considered; is an instructor teaching three sections of the same GE course in three successive schedule modules likely to be more effective, through repetition (practice, new insights) of the same course material, less effective, through repetition (boredom, fatigue) of the same course material, or is there no difference?

The first determination can be made by comparing average class sizes. Based upon a comparison of Fall 2005, 2006 and 2007 average lower division and upper division class sizes for each major to the sizes of the lower division and upper division GE courses taught in that major, it appears that, in general, GE courses are taught at larger sizes than are major courses. It is important to recognize that, particularly in the lower division, that average section size will be strongly influenced by the greater percentage of GE courses. Some departments, such as History, teach only GE courses in the lower division. In others, there may be substantial non-GE enrollment. Economics, for example, teaches only two lower division courses, introductory macroeconomics and introductory microeconomics. The introductory macroeconomics is in GE Area D5. Introductory microeconomics is not, but is primarily a service course, required in pre-business. Both courses are taught in large lecture format, and typically the average class sizes are comparable. Another department, such as English, may teach a greater number of lower division courses. Here the presence of the larger GE sections raises the lower division average class size, but the discrepancy still remains. At the upper division, where departments teach the bulk of their curriculum for their majors, the greater size of GE enrollments will have less impact on the course size average.

The overall conclusion is that departments often teach GE courses larger than their non-GE courses. This is particularly true of the upper division major courses compared to GE courses. Whether this reflects department attitudes toward the importance of the GE students or differences in perceptions of appropriate pedagogy cannot be determined from comparing section sizes.

What is the role of lecturers in teaching GE courses?

Is it possible to determine the relative status of GE courses to a department's major courses by examining who is scheduled to teach the GE course? Departments differ in the way tenure-track faculty and lecturers are assigned to courses. Some departments expect tenure track faculty to divide their time between GE and major courses, supplementing with lecturers to cover additional GE sections. In other departments the GE sections are almost entirely taught by lecturers. Courses in GE Areas A2 and A3 are each taught by a single department. As can be seen, the ratio of tenure track faculty taught sections to sections taught by long-term or relatively new lecturers is very small. This is a distinct pattern compared to many of the other GE sub-areas, where the teaching assignments are more evenly divided between tenure track faculty and lecturers.

All GE sections taught in Fall 2007 were evaluated to determine whether they were taught by tenure-track faculty, lecturers who were entitled to course assignments as the result of a minimum of six semesters continuous employment (long-term) or lecturers with a shorter (non-entitled) term of employment (other). Results are reported below.

Table 2 - Distribution of sections taught by tenure track faculty, and both short and long term adjunct faculty

Number of sections taught by: GE Area	Tenure Track	Long-term	Short
A1	3	8	0
A2	3	16	4
A3	3	12	8
B1	10	11	2
B2	1	3	3
B3	13	3	2
B4	20	12	8
C1	14	3	3
C2	3	2	2
C3	6	8	0
C4	27	2	3
D1	17	17	7
D2	7	3	1
D3	5	7	0
D4	3	6	3
D5	8	5	0
E	10	14	5

Note: GE Area B1, B2 and B3 courses with multiple sections scheduled on the same day were counted as a single workload assignment for the faculty member. So was CS 101, even though "sections" were scheduled on four days. 1 unit lab sections were each counted separately.

A third possible means of determining a department's attitude toward its GE students is by examining the hours instructors are assigned to teach. In Philosophy, during Fall 2008, one lecturer is scheduled to teach five MWF sections of Philosophy 101, Critical Thinking. Whether this is the choice of the lecturer or of the department, there is a valid question of whether this will produce the best outcome for the students in these sections.

What is the average number of units native SSU students take to meet their GE requirements?

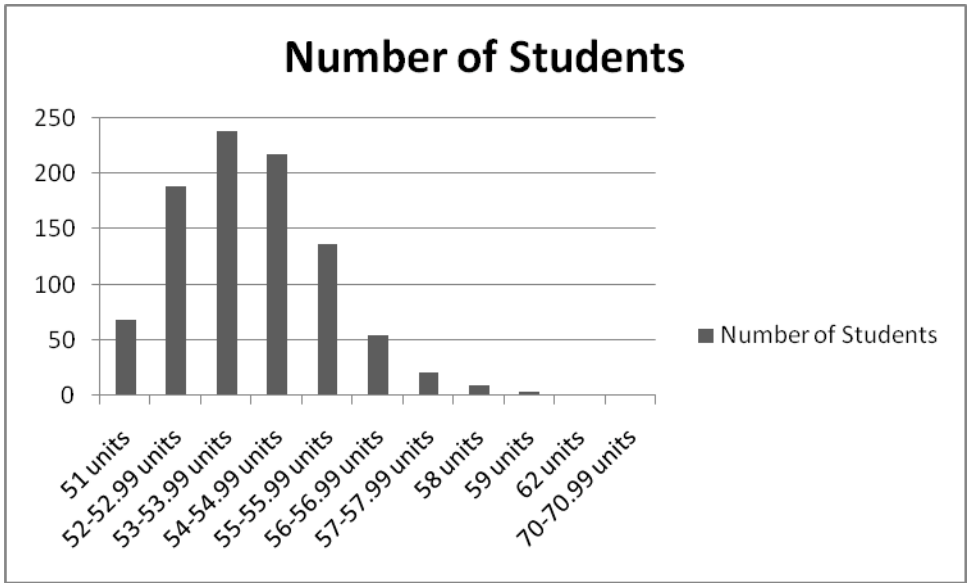
The question of the hardship created for students by the size of the GE program and the number of units they need to take to meet all the GE requirements is periodically raised at SSU. At some times the "problem" of excessive GE units has been cited in pushing departments to cut the unit value of their GE courses, in order to minimize the overall GE to 51 units. At present, some departments are moving to increase the unit value of their GE courses from three to four, with some curriculum committee members in Arts and Humanities proposing that the number of Area C sub-areas be reduced from four to three, presumably implying the reassignment of C4 courses among the other three areas, or alternatively the removal of these courses from GE. The logic

they cite is that presently a student can satisfy Area C with four three unit courses (12 units), whereas, if courses are raised to four units each, the student would be burdened with sixteen units (4x4) unless one subarea were eliminated.

Most faculty who advise students have not heard students describe the number of units they take in GE as a "problem". Their choices of GE courses tend to be based on their schedule or on information from friends about particular instructors, rather than the number of units. There are two exceptions. Sometimes students need to select courses which will permit them to pay partial tuition; in these cases, lower unit courses are needed. For example, the 2008-9 undergraduate tuition for 1-6 units is $1,497; taking only 7 units would cost the student $2,136. The marginal cost of the additional unit is $637. In the other case, students who need a minimum number of units to be eligible for campus housing, financial aid or athletic eligibility may prefer higher unit GE courses, in order to fill their schedule with a smaller number of courses. This author was repeatedly reminded of this concern during the first Spring 2009 registration session during Fall 2008 by students who were frantically looking for additional courses in order to qualify for Spring housing.

A greater problem for students may be created by their GE advising. In a 2005 survey of student perceptions of advising effectiveness conducted by the Academic Senate Student Affairs Committee, a number of written student responses mentioned advisors' lack of knowledge of the GE program or even advising errors. A small focus group of upper division students in March 2009 reported similar issues. Only a survey of SSU upper division students to determine their attitudes toward their GE experience can provide reliable information about student perceptions.

To determine the impact of the present unit distribution of GE courses on students, it would be useful to know exactly how many units a typical native SSU student completes in order to satisfy all the GE requirements. Amanda McGowan from CMS has reviewed 958 transcripts of currently enrolled students who have completed the 51-unit SSU GE pattern in order to calculate the GE units taken to satisfy the requirement.



Of the 958 transcripts analyzed, 67 students completed the GE requirements with the minimum 51 units, 187 completed 52 units, 255 completed 53 units, and 214 completed 54 units. Thus, 729 of 958 students (76 percent) completed the lower and upper division GE requirements, with the ethnic studies and statutory requirements, with no more than three units above the minimum. 136 more completed the requirement with 55 units. Of the transcripts analyzed, 865 students (90.3 percent) required no more than four units beyond the minimum possible to completely satisfy their GE requirements.

In addition, there are presently over 700 undergraduates who have taken at least 51 units in GE but have not yet completed their GE requirements.

It would still be necessary to interview these students to determine whether they took the particular courses (and associated unit total) by choice or because they had no options. Whether this exercise would yield information adequate to clarify whether a "problem" exists is questionable.

Draft Proposed Action Items:

1. Interview or survey departments in which 75% or more of GE students are taught by lecturers, either short-term or long-term to determine the department rationale for this staffing.

2. Interview current junior and senior students to determine their perceptions of the effectiveness of GE advising.

3. Interview undergraduate students who have already taken 51 or more GE units but have not yet completed their GE requirements to determine the reason for this.

Chapter 3 - GE Alignment

ALIGNMENT OF LEARNING OBJECTIVES

As stated in previous sections of this self-study, SSU has a layered system of various learning objectives, goals, and requirements that guide the development of the GE program. This section aims to examine the alignment between these various layers.

In addition to the campus' GE Mission, Goals & Objectives and the CSU-wide Executive Order 1033 (as described earlier), SSU has also recently (Spring/Fall 2008) developed learning objectives for each of the Areas (Area A, Area B, Area C, etc.) and all the Sub-Areas (A1, A2, A3, B1, B2, etc.).

For each Sub-Area, faculty teaching (or interested in teaching) in the Sub-Area met for two one-hour meetings and wrote the objectives. In some cases, there were follow-up meetings to finalize the objectives. Using this process, objectives were written for each of the 17 Sub-Areas and the 5 overall Areas. The meetings were facilitated by one member from the GE committee and a scribe from the GE committee was also at each of the meetings. The Chair of the GE committee was responsible for all of the formal communication between the faculty during the process, including many follow-up emails during the writing of the objectives.

Once a group of faculty finished, their objectives were reviewed by two members of the GE committee. Comments and suggestions were then forwarded back to the faculty for review. In some cases, the suggestions were implemented by the faculty, in some cases they were not. The objectives were also posted on a blog, so that anyone from campus could contribute their input on the objectives being developed.

Generally, meetings were very positive, with involved faculty fully engaged in writing objectives for their area. The GE committee feels that it was very important that the objectives were written "from the ground up", by the faculty teaching the courses. The faculty involved appreciated the process and the opportunity for input.

All of the GE Area objectives were approved by the GE Subcommittee, the Educational Policy Committee (EPC), and the Academic Senate. The GE committee anticipates that some of objectives may be revised in the future.

POTENTIAL ACTION ITEMS

These potential action items are based on an analysis of the following supporting documents included in this section of the self-study:

- Supporting Document 1: Alignment of the GE Mission, Goals, & Objectives with AAC&U's LEAP Outcomes
- Supporting Document 2: Alignment of the LEAP Outcomes with the GE Area Objectives.
- Supporting Document 3: Alignment of the GE Area Objectives with Executive Order 1033 Outcomes
- Supporting Document 4: Alignment of the GE Area Objectives with the GE Mission, Goals, & Objectives.

General Potential Action Items

1. Both the LEAP Outcomes and the GE MGOs call for integrative learning experiences. The current GE curriculum is weak in this area. Considering integrative learning is called for in both of our major frameworks, this is a large gap in the current curriculum.
2. Overall, the GE Area Objectives are much narrower than what is outlined in the Executive Order (EO) Outcomes. While this is to be expected, the campus may want to ensure that some areas are not unnecessarily narrow, as to prevent a broad selection of courses for students or to prevent curricular revisions.
3. The following areas do not get adequately covered by the GE Area Objectives: 1) Develop skill in the use of information technology, 2) prepare for active engagement in the community, 3) evaluate alternative career choices, 4) recognize the importance of lifelong learning, 5) integrate general education experiences, 6) cultivate ways to empower the learning of others, and 7) engage in responsible citizenship. If these are truly priorities of the GE Program, as indicated by their inclusion in the GE MGOs, then these outcomes need to be addressed somewhere in the curriculum.
4. There are now many levels of objectives written for the GE program. A program with a strong assessment strategy will need to decide which objectives apply at which level. For example, are individual courses only responsible for meeting the objectives written for their sub-area or do they need to explicitly meet/assess some of the broader items from the GE Mission, Goals, & Objectives (GE MGOs)? In addition, where do the objectives written for the Overall Areas fit into the picture?
5. A process for revision of the GE Area Objectives needs to be established in tandem with the assessment process.

Area Specific Potential Action Items

1. The EO Outcomes for Area A are far more extensive than the other areas. The campus may want to consider whether the current course structure for these areas is adequate to address all of the EO Outcomes. Specifically, there is very light coverage (only one GE Area Objective that meets) in the areas of "elementary and deductive processes" and "understanding formal and informal fallacies of language and thought." For perspective, many of the other EO Outcomes have between 4 -10+ GE Area Objectives that fulfill the EO outcome.
2. There is inconsistency of broadness and narrowness in Area B. For example, the objectives for sub-area B3 seems to be very broad, while those for sub-area B2 are narrower. The campus may consider ways to redefine the four sub-areas in Area B, then redistribute all of the Area B courses within the newly defined areas. One way to do this may be to re-examine the objectives written for sub-areas B1, B2 & B4 to ensure that they are not unnecessarily narrow as to prevent courses now housed in the eclectic sub-area B3, or new courses, to be included. Area B3 could be given a tighter focus as a result, instead of being the "catch all" category.

3. When redefining the categories within area B, the campus may want to consider the Executive Order outline for this Area: B1: Physical Science; B2: Life Science; B3: Laboratory Activity; B4: Mathematics/Quantitative Reasoning.
4. Areas C1, C2, and C4 contain a lot of overlap. An examination of these areas may yield ways to either make the sub-areas more unique or ways to collapse categories. Based on the objectives, C1 deals with fine arts, while C2 deals with literature. C4 is a far less defined category, and in some cases seems parallel to the objectives developed for D1. C4 in particular should be examined closer because of its very broad and mixed nature (it includes both foreign language courses and comparative perspective courses). Also of concern for Area C is the EO Outcome that asks for "participation in individual and aesthetic, creative experiences" which only has one GE Area Objective that meets it at a stretch.
5. The objectives for sub-areas D1 and D5 contain many similarities. These areas should be examined closer to avoid unnecessary duplication in the curriculum. It is also interesting to note that the EO provides no framework for how to distribute Area D courses (unlike the other Areas). It only requires that the coursework "include a reasonable distribution amongst sub-areas." The campus may want to consider if there are any advantages to reworking the current D1-D5 framework.
6. Some of the Area E objectives overlap strongly with Area D1. The campus may consider how to redefine Area E so that it meets some of the GE MGOs that are not being addressed by the other areas of the curriculum, such as preparing for active engagement in the community, evaluating alternative career choices, recognizing the importance of lifelong learning, integrating general education experiences, cultivating ways to empower the learning of others, and engaging in responsible citizenship (highlighted above in the General Recommendations).

Supporting Document 1

Alignment of the GE Mission, Goals, & Objectives with AAC&U's LEAP Outcomes

Article 3.2 of Executive Order 1033 states that General Education student learning outcomes defined by each CSU campus should "fit within the framework of the four 'Essential Learning Outcomes' drawn from the Liberal Education and American Promise (LEAP) campaign" initiated by the Association of American Colleges and Universities (AAC&U) in 2007. These four essential learning outcome categories as described in the AAC&U's *College Learning for the New Global Century* (2007) are:

I. Knowledge of human cultures and the physical and natural world through study in the sciences and mathematics, social sciences, humanities, histories, languages and the arts

II. Intellectual and practical skills, including inquiry and analysis, critical thinking, written and oral communication, quantitative literacy, information literacy, and teamwork and problem solving

III. Personal and social responsibility, including civic knowledge and engagement at local and global levels, intercultural knowledge and competence, ethical reasoning and action, and foundations and skills for lifelong learning

IV. Integrative learning, including synthesis and advanced accomplishment across general and specialized studies, and demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems.

Within the framework of these LEAP Essential Learning Outcomes, campuses may identify more specific outcomes for their General Education programs, something the faculty at Sonoma State University has done.

General Education Program Learning Objectives

Currently (2008-2010 SSU catalog), the General Education program at Sonoma State University lists twenty-three student learning objectives grouped into four categories as follows:

1. Acquire a foundation of intellectual skills and capacities
    a. Develop intellectual curiosity
    b. Develop research skills
    c. Write and speak effectively to various audiences
    d. Evaluate everyday experiences critically
    e. Develop capacity to reason quantitatively
    f. Work collaboratively to achieve defined goals and objectives
    g. Develop skill in the use of information technology
    h. Imagine, design, and execute scholarly and creative projects
    i. Translate problems into common language

2. Develop social and global knowledge
    a. Understand and appreciate human diversity and multicultural perspectives
    b. Understand and be sensitive to the global environment
    c. Understand social justice issues
    d. Engage with challenging moral and ethical human dilemmas
3. Understand and use multiple methods of inquiry and approaches to knowledge
    a. Understand and appreciate mathematics and science
    b. Understand and appreciate fine and performing arts
    c. Understand and appreciate historical and social phenomena
    d. Recognize and use perspectives of diverse disciplines
4. Develop capacities for integration and lifelong learning
    a. Evaluate alternative career choices
    b. Recognize the importance of lifelong learning
    c. Integrate general education experiences
    d. Cultivate ways to empower the learning of others
    e. Engage in responsible citizenship

These four categories roughly correspond to those in the LEAP Essential Learning Outcomes. The learning objectives in the first category address intellectual and practical skills (LEAP II), while those listed in the "Develop social and global knowledge" category correlate with LEAP category III. The learning objectives in the "Understand and use multiple methods of inquiry and approaches to knowledge" category are consistent with those needed to develop knowledge of human cultures and the physical and natural world (LEAP I) and those in the fourth, designed to develop capacities for integration and lifelong learning, focus on integrative learning (LEAP IV).

Comparing the specific learning objectives to the LEAP categories further highlights the correlation between the two, as illustrated by the table below:

LEAP Essential Learning Outcomes	**Corresponding SSU General Education Learning Objectives**
Knowledge of Human Cultures and the Physical and Natural World	3a, 3b, 3c, 3d
Intellectual and Practical Skills	1a, 1b, 1c, 1d, 1e, 1f, 1g, 1h, 1i
Personal and Social Responsibility	2a, 2b, 2c, 2d, 2e, 4a, 4b, 4d, 4e
Integrative Learning	4c

The current learning objectives for General Education at Sonoma State University align with the LEAP Essential Learning Outcomes. The weakest correlation is in the area of integrative learning, currently addressed by one learning objective (4c).

The LEAP framework calls for integrative learning that is "demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems" (*College Learning for the New Global Century*, p. 13). The AAC&U recommends implementing this outcome by providing students with "multiple opportunities to work, independently and collaboratively, on projects that require the integration of knowledge with skills in analysis, discovery, problem solving, and communication" (*College Learning for the New Global Century*, p. 34) throughout the General Education curriculum. It is unclear whether the "integration of general education experiences" called for in objective 4c refers to project-based learning or to a capstone experience. It is worth noting, however, that the current structure of the General Education program at Sonoma State University does not contain a capstone course.

Supporting Document 2

Alignment of the LEAP Outcomes with the GE Area Objectives

Article 3.2 of Executive Order 1033 states that General Education student learning outcomes defined by each CSU campus should "fit within the framework of the four 'Essential Learning Outcomes' drawn from the Liberal Education and American Promise (LEAP) campaign" initiated by the Association of American Colleges and Universities (AAC&U) in 2007. These four essential learning outcome categories as described in the AAC&U's *College Learning for the New Global Century* (2007) are:

V. Knowledge of human cultures and the physical and natural world through study in the sciences and mathematics, social sciences, humanities, histories, languages and the arts

VI. Intellectual and practical skills, including inquiry and analysis, critical thinking, written and oral communication, quantitative literacy, information literacy, and teamwork and problem solving

VII. Personal and social responsibility, including civic knowledge and engagement at local and global levels, intercultural knowledge and competence, ethical reasoning and action, and foundations and skills for lifelong learning

VIII. Integrative learning, including synthesis and advanced accomplishment across general and specialized studies, and demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems.

Within the framework of these LEAP Essential Learning Outcomes, campuses may identify more specific outcomes for their General Education programs, something the faculty at Sonoma State University has done.

Area Specific General Education Learning Objectives

In addition to overall learning objectives for General Education, the campus has recently learning objectives for each of the five areas (A-E) that comprise its General Education Program. This section offers an overview of how the learning objectives for each of these areas compare to those in the LEAP framework.

Area A

Courses in this area are designed to provide students with foundational oral, written and analytical skills. Courses in this area are distributed among three categories: Written and oral analysis (Area A1), fundamentals of communication (Area A2), and critical thinking (Area A3).

Overall Area A Learning Objectives	**LEAP I**	**LEAP II**	**LEAP III**	**LEAP IV**
Appreciate and critically analyze cultural works, ideas and arguments from a variety of communities in an variety of media		✓	✓	
Confront various philosophical ideas and traditions in order to grow intellectually		✓		
Learn how exercise their social responsibilities as communicators of ideas within various discourse communities			✓	
Practice oral and written expression of clear, eloquent arguments that engage with opposing views		✓		
Develop an intellectual practice that values language, philosophical rigor, and communication in the widest sense		✓		
Develop their abilities to find, evaluate, synthesize, and present information ethically		✓	✓	

The emphasis on developing communication and analytical skills in this area courses corresponds to LEAP essential learning outcome II (Intellectual and Practical Skills). Four of the six overall objectives pertain to the development of critical thinking, information literacy and communication. In addition, three of the learning objectives address the concerns of another LEAP outcome (Personal and Social Responsibility).

Area B

Courses in this category examine important theories, methods and models in natural sciences and mathematics across four distinct areas. The courses in physical sciences (Area B1), biological sciences (Area B2), and mathematical concepts and quantitative reasoning (Area B4) focus on foundational concepts for each specific discipline while Area B3 provides science courses with a more specific emphasis.

Overall Area B Learning Objectives	**LEAP I**	**LEAP II**	**LEAP III**	**LEAP IV**
Develop knowledge of scientific theories, concepts and data about living and non-living systems	✓			
Understand how the scientific method is used to develop scientific principles and interpret evidence	✓	✓		
Appreciate the value systems and ethics associated with scientific inquiry, and the potential limits of scientific endeavors			✓	
Demonstrate understanding of the scientific method through laboratory exercises		✓		
Read and understand mathematical arguments and data, and use mathematics effectively to analyze and solve problems that arise in ordinary and professional life	✓	✓		✓

The student learning objectives for this area emphasize fundamental scientific and mathematical skills (Intellectual and Practical Skills), knowledge in mathematics and science (Knowlegde of Human Cultures and the Physical and Natural World), and application of concepts to real world situations (Integrative Learning), meeting three of the four LEAP framework objectives.

Area C

Courses in this area emphasize the study of significant works of the human imagination across a variety of artistic fields and seek to promote a greater understanding of the interrelationship among the creative arts, the humanities and the self across a variety of cultural contexts. The area is comprises of four interdisciplinary categories, each with a specific emphasis: History of the fine arts, theater, dance and music (Area C1), world literature (Area C2), philosophy and values (Area C3), and comparative perspectives and foreign languages (Area C4).

Overall Area C Learning Objectives	**LEAP I**	**LEAP II**	**LEAP III**	**LEAP IV**
Develop literacy in and a broad knowledge of the arts (including but not limited to the fine arts, music, drama, dance and cinema) and an awareness of the social and historical contexts in which they are created	✓			
Develop an awareness, appreciation and understanding of literary genres and philosophical traditions in their global, historical and cultural contexts	✓			
Engage in cross-cultural analyses of languages, literatures, philosophies and artistic expressions and practices of European and non-European origin	✓			
Develop critical self awareness and an understanding of alternative viewpoints by analyzing products of the human imagination			✓	

Learning objectives for Area C courses focus on knowledge of philosophy, literature, languages and the arts (Knowledge of Human Cultures and the Physical and Natural World) while providing a cross-cultural perspective on these endeavors in order to increase students' appreciation of diversity (Personal and Social Responsibility).

Because this area is organized into thematic blocs, the learning objectives vary from section to section. Objectives for Area A1 (History of the fine arts, theater, dance and music), for example, are primarily concerned with the acquisition of knowledge of and appreciation for the arts (Knowledge of Human Cultures and the Physical and Natural World).

Area C1 Learning Objectives	**LEAP I**	**LEAP II**	**LEAP III**	**LEAP IV**
Develop literacy in artistic fields such as the visual arts, music, drama, dance and cinema	✓			
Understand the significance of works of art, and develop a language and appropriate vocabulary to communicate about them	✓			
Understand the historical, cultural, and social contexts of works of art	✓			
Assess qualities of inspiration, imagination and creativity in works of art	✓			
Actively respond to, interpret, and communicate about works of art	✓			

Meanwhile those for area A4 (Comparative perspectives and foreign languages) emphasize intercultural knowledge and competence (Personal and Social Responsibility).

Area C4 Learning Objectives	**LEAP I**	**LEAP II**	**LEAP III**	**LEAP IV**
Demonstrate greater understanding of diverse cultures through their languages, literature, art, or other cultural expressions			✓	
Demonstrate cultural and/or linguistic competency through the study of diverse cultures and ethnicities, including those of non-European origin	✓		✓	
Engage in critical cross-cultural analysis in order to better understand their own culture in relation to other cultures			✓	

Area D

This area of the General Education program concentrates on the description and explanation of organization, variation and change in social practices and institutions. Courses in this area examine the diversity, variety and complexity of human life at every scale from the individual to the global and are organized into five categories: Individual and society (Area D1), world history and civilization (Area D2), United States history (Area D3), U.S. Constitution and California state and local government (Area D4), and contemporary international perspectives (Area D5).

Overall Area D Learning Objectives	**LEAP I**	**LEAP II**	**LEAP III**	**LEAP IV**
Apply the principles, methodologies, value systems and ethics employed in social scientific inquiry to construct evidence-based arguments and to express them in writing	✓	✓		✓
Develop knowledge of discipline-based methods of reasoning and research in the social sciences	✓			
Examine social, political, economic, and environmental issues in temporal and spatial settings and in a variety of cultural contexts	✓			
Understand how cultural diversity and complexity influences individuals, institutions, and societies			✓	
Gain an understanding of United States and California history and government	✓			

The learning objectives for this area emphasize the acquisition discipline-based knowledge (Knowledge of Human Cultures and the Physical and Natural World). Some emphasis is also placed on further development of communication skills (Intellectual and Practical Knowledge) and on cultural diversity (Personal and Social Responsibility).

This section of the General Education program is organized thematically and, as is the case for Area C, the learning objectives differ between categories. For example, the learning objectives for Area D1 (Individual and society) highlight issues of social inequality and cultural diversity (Personal and Social Responsibility). (*Table follows*)

Area D1 Learning Objectives	**LEAP I**	**LEAP II**	**LEAP III**	**LEAP IV**
Demonstrate understanding of how cultural diversity and social factors influence the individual, society and social institutions			✓	
Demonstrate understanding of the interchange among individuals and social systems and institutions, and how these develop	✓			
Apply social science perspectives to social issues and problems as manifested in individuals, groups, societies, and/or internationally			✓	✓
Demonstrate understanding of the factors influencing inequality and social justice among individuals, groups, societies, and/or across nations			✓	

However, those for Area D3 courses (United States history) primarily address discipline-specific content (Knowledge of Human Cultures and the Physical and Natural World).

Area D3 Learning Objectives	**LEAP I**	**LEAP II**	**LEAP III**	**LEAP IV**
Gain an understanding of significant historical events and their contexts, including both domestic events and foreign relations, in the history of the entire area now included in the United States of America over a period of at least 100 years	✓			
Explore the role of major ethnic and social groups in the history of the United States for the period covered by this course	✓		✓	
Develop an appreciation for both the continuity of the American experience and its connections with other cultures in the areas of economics, society, culture, politics, and geography	✓			
Gain a greater understanding of, and appreciation for, historical debate and controversy and will learn to analyze and use primary and secondary sources to develop historical arguments	✓			

Area E

Courses in this area study both processes affecting the individual, such as psychological, sexual or physiological changes throughout the human life cycle, and the interactions between the individual and society with a focus on the integration of disciplinary knowledge and personal experience on developing an appreciation of the duties and rights of a citizen.

Overall Area E Learning Objectives	**LEAP I**	**LEAP II**	**LEAP III**	**LEAP IV**
Develop knowledge of themselves as psychological, social and physiological beings as they experience life			✓	
Understand the dynamic interactions and reciprocal relationships between individuals and social systems	✓		✓	
Use pertinent disciplinary knowledge to understand how their own actions affect the world			✓	
Learn the importance of active engagement in their communities for the betterment of personal and public life			✓	

Learning objectives in this area focus on developing lifelong learning integrating intellectual knowledge into personal and public life and address the third outcome (Personal and Social Responsibility) in the LEAP framework.

Summary of Findings

The newly developed learning objectives for individual areas in SSU's General Education program align with three of the four LEAP essential learning outcomes. Each GE area provides students multiple opportunities to gain knowledge of human cultures and the physical and natural world through study in the sciences and mathematics, intellectual and practical skills, and personal and social responsibility. However, work remains to be done in the area of integrative learning. Only two areas (B, D) have learning objectives calling for the application of knowledge or skills to either new settings or complex problems.

Supporting Document 3

Alignment of the GE Area Objectives with Executive Order 1033 Outcomes

In this section, each Executive Order 1033 Area outcome (Area A, Area B,etc.) is aligned with the GE Area Objectives developed for each Sub-Area, to ensure that EO 1033 is being met.

EO 1033 Area A Outcomes	Area A	Area B	Area C	Area D	Area E
a. Develop knowledge and understanding of the form, content, context, and effectiveness of communication	A1.1, A1.2, A2.2, A3.3	B4.5	C1.5, C2.3		
b. Develop proficiency in oral and written communication in English	A2.2, A2.5, A2.6	B4.5			
c. Examine communication from the rhetorical perspective	A1.1, A2.2, A3.4, A2.1				
d. Practicing reasoning and advocacy, organization, and accuracy	A1.2, A2.2, A2.5, A3.2	B4.5	C2.3		
e. Practice the discovery, critical evaluation, and reporting of information	A2.1, A2.3, A2.4, A3.5			D3.4	
f. Reading, writing, and listening effectively	A1.4, A2.1, A2.3, A3.2, A3.5		C2.1, C2.2		
g. Active participation and practice in both written communication and oral communication in English	A1.2, A1.4, A2.1, A2.3, A3.2, A3.5				
h. Understand logic and its relation to language	A2.5, A3.3	B4.1			
i. Elementary inductive and deductive processes	A3.1				
j. Understanding of the formal and informal fallacies of language and thought	A3.3				
k. Distinguish matters of fact from issues of judgment or opinion	A3.1			D3.4	

EO 1033 Area A Outcomes	Area A	Area B	Area C	Area D	Area E
l. Develop the abilities to analyze, criticize, and advocate ideas	A1.2, A1.4, A2.1, A3.1		C2.3		
m. Reach well-supported factual or judgmental conclusions	A1.2, A2.2, A2.3, A3.3	B1.2, B3.4			

EO 1033 Area B Outcomes	Area A	Area B	Area C	Area D	Area E
a. Inquiry into the physical universe and its life forms		B1.1, B1.3, B1.4, B2.1, B2.2, B2.3, B2.4, B2.5			
b. Immediate participation in a related laboratory activity		B1.2, B1.3, B3.4			
c. Develop knowledge of scientific theories, concepts, and data about both living and non-living systems		B1.1, B1.2, B1.4, B2.1, B2.2, B2.3, B2.4, B2.5, B3.1, B3.2, B4.3			
d. Achieve an understanding and appreciation of scientific principles and the scientific method	A3.4	B1.1, B1.2, B1.3, B1.4, B4.3			
e. [Understand] the potential limits of scientific endeavors and the value systems and ethics associated with human inquiry	A1.3	B3.3	C3.2, C3.4	D5.4	
f. Develop skills and understanding beyond the level of intermediate algebra		Not stated			
g. Practice computational skills		B4.1, B4.4			
h. Explain and apply basic mathematical concepts		B4.1, B4.4			
i. Solve problems through quantitative reasoning		B3.4, B4.1, B4.4			

EO 1033 Area C Outcomes	Area A	Area B	Area C	Area D	Area E
a. Cultivate intellect, imagination, sensibility and sensitivity			C1.1, C2.1, C4.1		
b. Respond subjectively as well as objectively to aesthetic experiences and will develop an understanding of the integrity of both emotional and intellectual responses			C1.1, C1.2, C1.4, C1.5		
c. Cultivate and refine their affective, cognitive, and physical faculties through studying great works of the human imagination			C1.1, C1.2, C2.1, C3.1		
d. Develop a better understanding of the interrelationship between the self and the creative arts and of the humanities in a variety of cultures			C1.1, C1.3, C2.1, C2.2, C2.4, C3.1, C4.1, C4.3	D2.2	
e. Participation in individual aesthetic, creative experiences			C1.5		
EO 1033 Area D Outcomes					
a. Human social, political, and economic institutions and behavior and their historical background				D1.1, D1.2, D2.1, D2.2, D2.3, D3.1, D4.1, D4.2, D4.3	
b. Human social, political and economic institutions and behavior are inextricably interwoven			C1.3, C2.4, C3.3	D1.1, D1.2, D1.4, D2.4, D2.6, D3.2, D3.4, D5.1, D5.2	E1.2
c. Develop an understanding of problems and issues from the respective disciplinary perspectives		B3.3, B4.3	C2.2	D1.4, D2.4, D5.1, D5.2	E1.3

EO 1033 Area D Outcomes	Area A	Area B	Area C	Area D	Area E
d. Examine issues in their contemporary as well as historical settings and in a variety of cultural contexts			C1.3, C2.2, C3.4, C4.3	D2.4, D1.3, D3.3, D5.3	
e. Explore the principles, methodologies, value systems and ethics employed in social scientific inquiry				D1.3, D2.5, D3.4	
EO Area E Outcomes					
a. Equip learners for lifelong understanding and development of themselves as integrated physiological, social, and psychological beings	Many apply	Many apply	Many apply	Many apply	E1.1, E1.2, E1.3, E1.4

SUMMARY:

All EO Outcomes for Area A are met, though in varying degrees by the GE outcomes. It is obvious that some EO outcomes get more coverage than others throughout the Area A sequence of classes. For example, EO outcomes *A.i, A.j, and A.k* are not thoroughly as covered as the other EO outcomes. This may be of note, as these are the areas emphasizing fundamental critical thinking concepts. It is also interesting to note that some Area B GE outcomes could be considered as either meeting and/or contributing to Area A EO outcomes. The Area A EO Outcomes are far more extensive than any of the other EO Outcomes.

While all of the Area B EO outcomes are met by the GE outcomes, their coverage is uneven. Overall, the EO aligns better with the Overall Area B GE outcomes, than it does with the specific sub-areas of Area B. A revised GE curriculum may consider broadening the categories or combining some categories. Also, While it may be assumed to be so, the GE outcomes do not explicitly address math skills "beyond the level of intermediate algebra", as expressed in *B.f.*

All of the Executive Order outcomes in Area C are met by the Area C GE outcomes. However, EO Outcome C.e ("Participation in individual aesthetic, creative experiences") gets the least coverage. The GE outcomes from Area C have the most outcomes that fulfill outcomes in other areas, such as Area D and Area A. The Area C GE outcomes concentrate much more on cultural diversity and the understanding of a variety of cultures than does the Executive Order.

All of the Executive Order outcomes in Area D are met by the Area D GE outcomes. The outcomes for Areas D3 and D4 fall somewhat outside of this evaluation because they are for state-mandated portions of the curriculum.

The Area E outcomes meet the EO outcomes, however some of the objectives overlap greatly with Area D1 (individual and society).

Supporting Document 4

Alignment of the GE Area Objectives with the GE Mission, Goals, & Objectives

The GE Mission, Goals and Objectives (Appendix 1) were approved by the Academic Senate in 2003. The following chart examines how the GE Area Objectives (Chapter 3) that were developed in 2008 align with the GE Mission, Goals and Objectives.

1. Acquire a foundation of intellectual skills and capacities	**Area A**	**Area B**	**Area C**	**Area D**	**Area E**
a. Develop intellectual curiosity	None explicitly	None explicitly	None explicitly	None explicitly	None explicitly
b. Develop research skills	A1.3, A2.3, A2.4, A3.5	B1.2*		D3.4	
c. Write and speak effectively to various audiences	A1.1, A1.2, A2.2, A2.5, A2.6, A3.3	B4.5	C1.5		
d. Evaluate everyday experiences critically	A3.2	B3.3	C3.4		E3
e. Develop capacity to reason quantitatively	A3.4	B4.1, B4.4, B4.5			
f. Work collaboratively to achieve defined goals and objectives	A1.5	B4.5			
g. Develop skill in the use of information technology	A2.3				
h. Imagine, design, and execute scholarly and creative projects	None explicitly	None explicitly	None explicitly	None explicitly	None explicitly
i. Translate problems into common language	A3.3	B1.2, B3.4, B4.4			

2. Develop social and global knowledge	**Area A**	**Area B**	**Area C**	**Area D**	**Area E**
a. Understand and appreciate human diversity and multicultural perspectives		B2.4?	C2.1, C2.2, C2.4, C3.1, C4.1, C4.2, C4.3	D1.1, D2.2, D3.2, D3.3, D5.1	
b. Prepare for active engagement in the community					E4
c. Understand and be sensitive to the global environment		B2.4		D2.6	
d. Understand social justice issues			C2.4,	D1.1, D1.2, D1.3, D1.4, D5.2, D5.3, D5.4	E2
e. Engage with challenging moral and ethical human dilemmas		B3.3	C3.2, C3.3, C3.4	D5.4	

3. Understand and use multiple methods of inquiry and approaches to knowledge	**Area A**	**Area B**	**Area C**	**Area D**	**Area E**
a. Understand and appreciate mathematics and science		All B			
b. Understand and appreciate fine and performing arts			All C		
c. Understand and appreciate historical and social phenomena				All D	
d. Recognize and use perspectives of diverse disciplines	A2.1			D1.3	E3
4. Develop capacities for integration and lifelong learning					
a. Evaluate alternative career choices	None	None	None	None	None
b. Recognize the importance of lifelong learning					E1
c. Integrate general education experiences	None	None	None	None	None
d. Cultivate ways to empower the learning of others	None	None	None	None	None
e. Engage in responsible citizenship					E4

Chapter 4 - Assessment of GE courses

A. Analysis of Program Review documents

A survey of GE course offerings across the university curriculum revealed a range of department/program efforts to articulate the goals of the various general education mission, goals and objectives (MGOs) as they relate to each course or set of courses. Most departments and/or programs (90%) surveyed had a narrative description or bulleted list describing the GE goals in embedded in the course. (Table 1)

Table 1- Narrative or bulleted descriptions of GE courses in department program review

Present	Absent
American Multicultural Studies	Criminology and Criminal Justice
Anthropology	Political Science
Art History	Nursing*
Chemistry	School of Education*
Chicano and Latino Studies	
Computer Science	
Economics	
French	
Geography	
History	
Hutchins School of Liberal Studies	
Kinesiology	
Mathematics	
Physics and Astronomy	
Psychology	
Spanish	
Theatre Arts and Dance	
Women's and Gender Studies	

*Professional programs

The two professional programs (School of Education; Department of Nursing) offering GE courses did not have an articulated statement of how GE mission, goals and objectives (MGOs) were met in GE courses offered. These courses serve a dual purpose as program courses and upper division GE courses. Program courses are offered for post-baccalaureate degrees as well as upper division GE courses. It appears that the GE purpose of the courses is less emphasized

than their program role. However, GE goals would be better assessed and met with the addition of information describing how each course addresses the MGOs of each GE area.

Using the self-study data provided from department program reviews, it appears that the assessment of GE goals is largely indirect or deductive. The program narratives describe teaching and/or learning activities, but few explain how the course or set of courses measure the effectiveness in meeting intended GE learning objectives. The information provided is largely descriptive in nature. There appears to be no quantifiable data that measures the efficacy of particular courses in achieving GE objectives. Narratives or lists of course experiences, student learning activities, assignments, and a delineation of intended outcomes are provided as assessment data.

An analysis of the assessment narratives indicates an overall goal of providing students with active learning experiences through which they would acquire the skills that are described in the GE learning objectives. For example, some narratives describe learning activities such as in-depth study of theory, learning cultural inclusivity, conducting research, textual analysis, oral presentations, entering data, and others. However, only six programs describe how GE learning goals were measured. Of these six, three departments focused their assessment of GE learning goals on student self-report surveys and exit surveys that rate the effectiveness of the course. Self-report can be a valuable part of a comprehensive assessment plan, but not a substitute for direct assessment of student learning outcomes (see Table 2).

Table 2- Department program review descriptions of GE learning goals and activities and assessment

Department	Description	Assessment of GE learning goals
American Multicultural Studies	Yes	No
Anthropology	Yes	No
Art History	Yes	Written exams, slide identification, essays, research term paper
Computer Science	Yes	No
Economics	Yes	No
French	Yes	Participation, oral & written communication, specific exercises, exams
Geography	Yes	Capstone thesis, teaching evaluations, student surveys, exit surveys
History	Yes	No
Hutchins School of Liberal Studies	Yes	Portfolio, written & oral communication, skills evaluations, capstone course, faculty retreats
Kinesiology	Yes	Student focus groups, exit surveys; alumni surveys
Mathematics	Yes	No

Department	Description	Assessment of GE learning goals
Physics and Astronomy	Yes	No
Psychology	Yes	No
Spanish	Yes	Written examinations, oral and written communication, specific exercises, participation
Theatre Arts and Dance	Yes	Student surveys, exit surveys
Women's and Gender Studies	Yes	No
Chemistry	No	No
Chicano and Latino Studies	No	No
Criminology and Criminal Justice	No	No
Political Science	No	No

Based on this analysis, it is unclear what assessments are currently being used to evaluate GE courses. At this time, it is difficult to gauge how successful these assessments are in measuring effectiveness of the GE goals. The student self-report data and exit surveys are important and informative; however, these data do not shed much light on the match of the assessments to the GE goals and mission.

Three questions emerge for further study:

1. What assessments are used in the classes to evaluate and grade student activities, assignments, and learning outcomes?
2. Do these evaluations provide relevant information on the effectiveness of the GE goals?
3. What signature course assignments or other assessment tools are available at SSU to measure GE MGOs within and across GE areas?

B. Analysis of syllabi of courses taught in GE

To complete this program review, all available syllabi for courses taught for GE credit were collected from departments and assembled into binders (available in the Office of the Provost, Academic Affairs, with program review documents). About 500 syllabi from across the campus were collected, and from this collection a representative sample of 256 syllabi of courses taught between Fall 2007 and Spring 2009 were selected for analysis. This review focuses on recent syllabi because these were developed after the SSU Course Outline Policy was issued in April 2006.

The sample was stratified to cover the breadth of the GE curriculum in terms of GE area (A-E), course level, inferred course format, and course staffing. Of the 256 syllabi analyzed, 182 were lower division GE courses and 72 were upper division. Tenure track faculty represented 48% (124) of the instructors and lecturers represented 52% (132) of the instructors (no delineation between lecturer and long-term lecturer was available). Courses with many sections, such as Area A, are represented in the data set by multiple syllabi (list of syllabi available in Appendix 16).

Table 3- Number of syllabi and inferred format of course analyzed by semester and year.

Semester	Lecture	Lecture and Discussion	Discussion	Lecture and Laboratory	Lab	Online
FA 2007	*20*	*9*	*9*	*2*	*1*	--
SP 2008	*46*	*44*	*27*	*10*	*3*	--
FA 2008	*25*	*15*	*22*	*1*	--	*1*
SP 2009	*3*	*8*	*10*	*1*	--	--
Total	*94*	*76*	*68*	*14*	*4*	*1*

Inferences about the format of the course were made from information provided in each syllabus. This included any information about course schedule or format, and/or the assignment structure or basis of grading described in the syllabus. The inferred course formats shown here have not yet been cross-checked with course CS numbers.

The following questions were posed that related to the SSU Course Outline Policy:

1) Were course objectives explicitly stated?
2) Were assignments stated?
3) Was the method for assigning a grade stated?
4) In which GE area did the course belong?
5) Were the SSU GE Mission, Goals and Objectives stated??

Table 4- Percentage of GE syllabi that were consistent with SSU Course Outline Policy and that mentioned the GE area or SSU GE Mission, Goals, and Objectives.

	A	*B*	*C*	*D*	*E*	*Hutchins*	*FYE*
n =	*56*	*41*	*70*	*58*	*14*	*17*	*9*
Course Goals and Objectives Stated	77%	83%	81%	83%	93%	100%	100%
Assignments Stated	100%	95%	96%	95%	93%	100%	100%
Grading Policy Described	77%	93%	87%	90%	93%	71%	100%
GE Area Mentioned	30%	59%	26%	40%	64%	6%	100%
SSU GE MGOs Stated	21%	22%	11%	9%	36%	0%	56%

We considered a syllabus to be stating course objectives if there was a section labeled as "Objectives," or objectives were interwoven into another section such as the course description. If a syllabus posed inquiries but made no connection between them and the course content, the syllabus was scored as not stating course objectives. Course format was determined using the course description or inferred from grading policy or schedule of activities. Grading policy was considered to be stated if there was a list of percentages or points allocated for each assignment.

These show that most courses adhere to SSU Course Outline Policy. Course goals and objectives are usually stated and assignments and grading policy are usually described. However, many courses do not mention the GE area in which the course is taught, and most courses do not refer to the Mission, Goals and Objectives of General Education. This points towards a lack of integration of GE learning outcomes. A breakdown of these data at the GE subarea level and including syllabi from lecturers and tenure track faculty illustrates discrepancies among subareas and between tenure-track faculty and lecturers (Appendix 16).

The next level of analyses focused on the assessment tools used in each course to measure teaching and learning efficacy. A list of assignments was generated from the syllabus text and grouped into categories (Table 5).

Table 5- Percentage of syllabi where specific assignments were given in GE courses.

Assignment	Lecturer (*n = 132*)	Tenure Track (*n = 124*)
Examinations	74%	75%
Quizzes	42%	29%
Homework	56%	66%
Participation	64%	63%
Attendance (in addition to participation)	38%	47%
Presentations	39%	39%
In Class Essay	11%	8%
Argumentative Essay	36%	27%
Research Paper	33%	23%
Portfolio, Journal, Lab Notebook	21%	18%
Laboratory	7%	14%
Extra Credit	3%	7%
Field Trip	2%	5%

Table 5 reveals that examinations are the most common assessment tool, used throughout the curriculum. Homework and participation were the next most common assessment tools. Writing assignments are given in some courses, and the most common writing assignments were argumentative essays and research papers. Attendance is credited in over 40% of classes. Overall, lecturers tend to assign more writing assignments. This pattern may be partially explained by the high proportion of lecturers teaching A2 writing classes.

Table 6 shows how the distribution of assignments varies among GE subarea and between lecturer and tenure track faculty members. These data reveal differences among subject area in assessment strategy, and they also reflect differences in teaching style among lecturers and tenure track faculty members within a subarea. Where there is significant agreement between assessment tools of lecturers and tenure track faculty members, we surmise that the program has developed learning goals and overseen their implementation. When there is little agreement, we

infer that there is less coordination between types of teaching staff and, therefore, likely less implementation of common learning goals.

Not surprisingly, Table 6 shows less emphasis on examinations and quizzes in most area A courses that stress writing, critical thinking, and oral expression skills. These courses rely on writing assignments more often. With respect to teaching staff, there is the greatest congruence between lecturers (l) and tenure track instructors (TT) in assessment tools and experiences in areas A1 and A1A3 (FYE-The First Year Experience). Perhaps the relative match of the General Education revised mission, goals and objectives and course requirements and The First Year Experience, can explain the correspondence.

The inconsistency in assessment measures between lecturer and tenure track instructors might indicate that faculty members do not meet on a regular basis to coordinate the course experiences and/or assessments. The data does indicate that multiple measures are used in all GE areas to evaluate the students' knowledge. The course syllabi indicate that a variety of assessments are in place and we believe that some of the current assessment may be used to measure both the course goals and objectives and the GE MGOs. When using this data to assess GE at this point, it is apparent that a process to systematically measure the effectiveness of GE courses in meeting the MGOs is necessary. Additionally, a process within schools, departments or programs to promote alignment in course experiences and assessments as these relate to GE are in order.

Table 6. Assessment tools used in GE courses, arranged by GE area and staffing

GE area	Description	Number of Sections L / TT	Exams L / TT	Quizzes L / TT	Homework L / TT	Participation L / TT	Attendance L / TT	Presentations L / TT	In Class Essay L / TT	Argumentative Essay L / TT	Research Paper L / TT	Portfolio, Journal, or Lab Notebook L / TT	Laboratory Assignments L / TT	Extra Credit L / TT	Field Trip L / TT
A1	Written & Oral Analysis	*5 / 6*	40 / 33	20 / 17	100 / 100	80 / 83	60 / 67	100 / 17	20 / 0	60 / 67	60 / 0	20 / 0	0 / 0	0 / 0	0 / 0
A1A3	Freshman Year Experience	*2 / 7*	100 / 100	0 / 29	100 / 100	100 / 100	100 / 43	50 / 71	100 / 57	0 / 14	50 / 14	0 / 29	0 / 0	0 / 0	0 / 0
A2	Fundamentals of Communication	*21 / 4*	29 / 25	52 / 25	43 / 75	67 / 75	24 / 50	43 / 50	48 / 0	76 / 75	50 / 14	33 / 75	0 / 0	5 / 0	0 / 0
A3	Critical Thinking	*5 / 6*	60 / 83	20 / 33	60 / 50	80 / 50	80 / 33	60 / 0	0 / 0	80 / 0	0 / 17	80 / 0	0 / 0	0 / 0	0 / 0
B1	Physical Sciences	*6 / 7*	83 / 71	83 / 57	100 / 57	33 / 29	0 / 29	17 / 0	0 / 0	0 / 0	0 / 14	17 / 0	50 / 57	0 / 29	0 / 0
B2	Biological Sciences	*2 / 0*	100 / --	100 / --	50 / --	0 / --	0 / --	0 / --	0 / --	0 / --	0 / --	0 / --	50 / --	0 / --	0 / 0
B3	Specific Emphasis	*7 / 13*	100 / 100	57 / 38	57 / 54	29 / 38	43 / 46	14 / 23	0 / 8	0 / 0	43 / 38	14 / 23	43 / 54	14 / 31	14 / 8
B4	Mathematical Concepts and Quantitative Reasoning	*3 / 3*	100 / 100	33 / 67	67 / 100	33 / 33	0 / 0	0 / 0	0 / 0	0 / 0	33 / 33	0 / 0	0 / 0	0 / 0	0 / 0
C1	History of the Fine Arts, Theater, and Music	*9 / 6*	78 / 83	67 / 17	33 / 33	78 / 33	89 / 33	22 / 17	0 / 17	44 / 17	11 / 33	0 / 0	0 / 0	0 / 0	0 / 0
C2	World Literature	*5 / 4*	80 / 75	20 / 50	60 / 0	80 / 100	60 / 75	60 / 50	0 / 50	80 / 50	60 / 50	0 / 0	0 / 0	20 / 0	0 / 0
C3	Philosophy and Values	*3 / 9*	33 / 89	0 / 11	67 / 56	67 / 67	33 / 22	100 / 33	0 / 0	0 / 11	22 / 0	0 / 0	0 / 0	0 / 0	0 / 0
C4	Comparative perspectives and Foreign Languages	*10 / 24*	100 / 79	30 / 42	90 / 83	70 / 79	50 / 54	20 / 75	0 / 4	10 / 13	10 / 17	0 / 25	20 / 25	0 / 4	0 / 4
D1	Individual and Society	*9 / 8*	90 / 100	11 / 13	89 / 50	67 / 63	22 / 38	44 / 38	0 / 0	22 / 63	22 / 25	0 / 13	0 / 0	0 / 0	22 / 0
D2	World History and Civilization	*3 / 3*	100 / 100	33 / 67	67 / 33	33 / 0	67 / 0	0 / 0	0 / 0	33 / 33	33 / 0	0 / 0	0 / 0	0 / 67	0 / 0
D3	United States History	*3 / 1*	100 / 100	0 / 100	33 / 0	100 / 0	33 / 0	0 / 100	0 / 0	33 / 0	33 / 100	0 / 0	0 / 0	0 / 0	0 / 0
D4	US Constitution and State and Local Government	*21 / 3*	100 / 100	71 / 0	5 / 0	67 / 0	24 / 0	33 / 0	0 / 0	19 / 67	48 / 0	33 / 0	0 / 0	5 / 0	0 / 0
D5	Contemporary International Perspectives	*5 / 2*	100 / 100	60 / 50	60 / 100	60 / 0	20 / 0	40 / 0	0 / 0	20 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
E	Integrated Person	*9 / 5*	67 / 100	11 / 0	78 / 80	56 / 80	11 / 60	56 / 60	11 / 0	44 / 0	44 / 40	0 / 0	0 / 0	0 / 0	0 / 0
Hutchins	All	*4 / 13*	0 / 0	0 / 0	75 / 85	100 / 92	100 / 100	100 / 46	0 / 8	50 / 77	0 / 31	0 / 0	0 / 0	0 / 0	0 / 31

C. SSU participation in standardized and systematic assessment

Current standardized and/or systematic assessment tools that offer direct and indirect data for assessing GE include:

1. National Survey of Student Engagement (NSSE)

The National Survey of Student Engagement (NSSE)[1] is a national survey used to assess freshmen and seniors on various aspects of engagement in college. It is a self-report survey that attempts to measure how students feel about their education. Two areas of the NSSE that shed some light on the effectiveness of the general education program are *Level or Academic Challenge* and *Active and Collaborative Learning*.

In 2006 and 2008 the NSSE was given to a random sample of freshmen and seniors using a web format. Response rates ranged from 24-28% of the number of students in each academic class and samples were representative of the student body with respect to gender and ethnicity. Results described here are summaries of data produced by SSU Institutional Research, Office of the Provost.

Values for SSU students are compared to undergraduates at other universities and colleges that are members of the Council of Public Liberal Arts Colleges (COPLAC, http://www.coplac.org/), and the Carnegie Foundation for the Advancement of Teaching (http://www.carnegiefoundation.org/). Benchmarks are indicated on a 100-point scale. Results are expressed as 'Effect Sizes,' which relate to differences between average scores submitted by SSU students and for students at the COPLAC and Carnegie Peers comparison institutions (Appendix 17).

Level of Academic Challenge

The level of academic challenge relates to preparation for class; number of textbooks assigned; the number of papers written; skills taught in the classroom such as critical thinking, synthesis, and making judgments; working hard to meet instructor's expectations; and time studying. The following patterns are evident (Table 6):

- First year SSU students submitted higher scores in 2008 than in 2006. In 2006, SSU students scored significantly lower than students at comparison institutions, but by 2008 this difference disappeared.
- SSU seniors also submitted higher scores in 2008 than in 2006. By 2008 their scores were significantly greater than some comparison institutions.
- Not surprisingly, the level of academic challenge increased from first year to the senior year.

Active and Collaborative Learning

The active and collaborative learning benchmark includes items about asking questions in class, making a class presentation, working with other students inside and outside of class, community-based projects, and discussing course ideas outside of class. The following patterns are evident (Table 6):

[1] http://www.nsse.iub.edu/index.cfm

- First year and senior SSU students generally submitted similar scores as those at comparison institutions. In 2008, seniors scored higher than Carnegie Peers students
- This benchmark increases substantially between the first year and senior years.

Table 7- Results of NSSE survey for SSU and comparison students

Student Class	Year	SSU Benchmark	COPLAC	Carnegie Peers
Level of Academic Challenge				
First Year	2006	49.4	-0.18**	-0.12*
	2008	53.2	--	0.11*
Senior	2006	55.5	--	--
	2008	57.8	--	0.12**
Active and Collaborative Learning				
First Year	2006	41.1	--	--
	2008	44.1	--	--
Senior	2006	52.1	--	--
	2008	52.4	--	0.11*

*$P < 0.01$, **$P < 0.01$, '—' indicates no significant difference in effect size. Effect sizes of 0.1 to 0.3 are considered 'small' by NSSE.

2. Collegiate Learning Assessment (CLA)

The CLA is administered by the Council for Aid to Education (CAE)[2]. It is an essay test that measures critical thinking, analytical reasoning, problem solving, and communication skills in first year (freshmen) and senior students. Three types of essay writing are assessed: the 'Performance' task and two analytic writing tasks, the 'Make an argument' and 'Critique an argument' tasks.

The purpose of the examination is to determine whether improvement in student competencies through university study is similar to the degree of improvement at comparison institutions of higher education. In order to assess improvement, the confounding factors of initial student competency at admission and differences among institutions in student competency (assessed by average SAT score) must be eliminated. When the analysis is complete, a picture is gained as to whether an institution is contributing adequately towards development in competency (value

[2] http://www.cae.org/content/about.htm

added).

At SSU, the CLA was administered to first year students during the fall 2007 semester ($n = 95$) and to seniors ($n = 57$) during the spring 2008 semester. Students were recruited via campus email and received a $25 financial reward for participation. The samples were representative with respect to SAT score and gender. About half of the students took the 'Performance' test and half of them took the 'Analytic writing' test.

To assess an institution's performance on the CLA, the mean CLA scores per class (first year/senior) per institution class are related to an overall regression line of the relationship between mean SAT and CLA score across many institutions where students take the CLA during the same period. This generates 'actual' and 'expected' CLA scores. The difference between the regression line and the individual institution is converted to a percentile rank. These percentile ranks are categorized as being 'Below Expected' ($0 – 29^{th}$ percentile), 'At Expected' ($30 – 69^{th}$ percentile, or 'Above Expected' ($70 – 99^{th}$ percentile).

Table 8- Results of CLA for SSU students

	N	SAT score	CLA score Obs/Exp	Percentile	Performance compared to expectation
Performance task					
First Year	*48*	996	994/1013	38	At
Senior	*27*	1074	1167/1157	58	At
Analytic writing task					
First Year	*47*	1013	1071/1049	73	Above
Senior	*30*	1057	1174/1166	59	At

SSU students performed at or above expectations on the tasks assessed in the CLA. The value added estimates are shown in Table 8. These evaluate the increase in competency after four years of university education at SSU, compared to the same increase at other institutions. These indicate that SSU contributes more to learning gains made by students on the Performance Task than 78 percent of students (Above Expectation). Values for the Analytic Writing task were somewhat lower and counted as 'At Expectations' based on the index described above.

Table 9- Value added for SSU University education based on CLA

	Percentile	Performance compared to expectation
Performance Task	78	Above
Analytic Writing Task	38	At

Overall, the results of these cross-campus analyses indicate that student learning at SSU is comparable to that at comparison institutions. There is clearly room for improvement, but the situation at SSU does not seem to be drastically unfavorable at this time.

3. Assessment in the Hutchins School of Liberal Studies

The lower division program of the Hutchins School fulfills, with the exception of Areas B4 and E, all of the Sonoma State University lower-division General Education requirements. The program consists of four interdisciplinary seminars of 12 units each (LIBS 101,102, 201, 202). Each of these seminars enrolls 13-15 students and a single instructor. Learning proceeds by a process of reading, writing, and Socratic seminars in which all students are required to take an active part. Strongly emphasizing written communication, the program includes extensive written assignments and regular tutorials. Each seminar is part of a larger Learning Community that meets together once a week for lectures, field trips, labs, and other group projects. The thematic curriculum for the lower division seminars is developed collaboratively by the instructional faculty. Lower Division "cadres" (teams of 4-6 faculty from various disciplines) meet every week for one hour to provide continuous discussion of curriculum and assessment. The entire program faculty meets six times a semester, with the addition of two day long Retreats a year

Hutchins students meet individually with their instructor to discuss their progress at mid-semester. At the end of the semester, students receive an official grade of Credit or No Credit along with a detailed evaluation of their work. This evaluation assesses the student's cognitive skills, seminar participation, understanding of the course content, writing skills, attendance, behavior, etc. A written commentary accompanies this assessment. Students submit Portfolios of their coursework to the instructor at the end of each semester in the lower division GE program (LIBS 101, 102, 201, and 202) and again at the end of the senior year in the Senior Synthesis (LIBS 402), the capstone course in the Hutchins Program.

In 2006 the Hutchins faculty administered exit surveys of sophomores completing the lower division GE program, Seniors completing the LIBS major, and Blended students completing both the B.A. and Elementary School Credential in an accelerated 4 year program collaboratively run by the Hutchins School and the School of Education. The Freshmen entry survey (CIRP) has been administered to all incoming Hutchins Freshmen since 2006. *Report of the WASC Visiting Team Special Visit, March 24-26, 2004*, stated that faculty at SSU were "concerned about the time involved in implementing good assessment plans (like that of the Hutchins School for [sic] Liberal Studies)."

4. Freshmen Year Experience (FYE) Assessment Process

This system is tied to the FYE learning objectives and General Education Lower Division

MGOs. FYE faculty developed common assignments across courses and instituted a systematic assessment plan that includes weekly faculty meetings to discuss student and program progress; opportunities for students to indicate their understandings through formal assignments and/or in class discussion; weekly Socratic seminars on lecture and reading topics; observation of students during Socratic seminars to determine the depth of discussion and engagement; mid-semester evaluations and feedback on teaching; writing assignments that are discussed and analyzed using common criteria for evaluation; and, finally, frequent meetings between or among faculty and students frequently to discuss learning progress. The WASC Visiting Team in its *Report of the WASC Visiting Team: Capacity and Preparatory Review, March 12-14, 2008"* noted that the FYE course "appears to exemplify thoughtful planning, careful execution, and thorough assessment." The team went on to recommend that the university consider finding "alternate means for judicious expansion of a program demonstrated to be effective in meeting its important objectives."

D. Integration of assessment into curricular review/academic planning

The current GE assessment analysis indicates that departments and program are interested in providing a strong lower and upper division General Education experience to SSU students. However, there is currently no clear procedure for assessing the effectiveness of these courses in teaching the general education goals and objectives. Although GE courses may be successful, at this time there is no measureable evidence to support this claim (other than in those areas cited above, notably the Freshman Year Experience course). Course assessment overall has been faculty-driven and related to evaluating the students' progress in the courses and not the GE MGOs.

A systematic use of quantitative and qualitative measures of GE effectiveness seems to be a logical next step after the development of specific learning goals by each GE area. The assessment of GE should link to the area goals. Areas goals should map back to the general education mission, goals and objectives.

A majority of the self-study reports noted the following limitations in developing a deeper or more systematic assessment plan:

- Increased class size in GE courses
- Increased number of GE course sections in departments
- Decrease in support and funding
- Increased number of English as a Second Language learners

In considering the integration of GE assessment in curricular review and academic planning, it is important to note that assessment tenets call for triangulation or the use of multiple measures for assessing achievement. Using the existing NSSE, CLA, and COPLAC data along with student surveys and the course assessments of activities and learning outcomes would likely yield a richer picture of the relative success of GE MGOs in all categories and at the lower and upper division levels. Several components of a multiple measure plan are in place. The missing piece seems to be a greater use of data currently collected in courses on assessment of activities and learning outcomes. As previously stated, a few departments are collecting data in these areas and can serve as a model for others.

Current Course Assessments

Based on the analysis of GE course syllabi, there are many types of student assessments in GE courses. A high percentage of these assessments are anecdotal, observational, or interactive. When assessment is a dynamic feature of teaching and learning, faculty may not view it as a legitimate assessment for learning outcomes- in this case GE MGOs. The GE subcommittee should assist departments in determining how current course evaluations can be redesigned to more specifically assess GE learning outcomes. Additionally, when dynamic assessment data (e.g. presentations, participation, lab and field work) is used, it may be difficult for instructors to translate observational or anecdotal data into GE assessment data. Developing procedures for systematically collecting these more data would be another important next step in assessment of general education.

There is a perception, and often rightly so, that data collection is cumbersome, time-consuming, and interruptive of the learning process. However, simple systems may be put in place to collect data from existing assignments using focused rubrics, signature assignments, or collection devices that result in little additional time or work. The University community might look to Modern Languages, Geography, Hutchins, and the FYE University 150 courses for examples of departments that do this sort of simultaneous course, program, and GE assessment.

Assessment Data Sources

Data sources other than student grading assessments include the Written English Proficiency Test (WEPT), the National Survey of Student Engagement (NSSE), Collegiate Learning Assessment (CLA), and student self-report data on the effectiveness of a GE course or program in meeting the general education learning goals and objective. Self-report data can be valuable in determining direction for further analysis and study, but is not generally as valid, nor a substitute, for authentic, direct and concrete outcome measures. The above data is more useful when used to triangulate data from other more direct and authentic assessments.

F. Conclusion

The GE subcommittee should continue in the development of an overall, systematic assessment plan for the general education program at Sonoma State University. Departments and programs need to develop assessments or build on the assessments currently being used for course evaluations in collaboration with the GE subcommittee. GE assessments can be developed from both the GE area learning objectives and the overarching mission, goals and objectives. Developing a systematic plan for how and when GE MGO's are measured is imperative. Using the same type of collaborative process that was successfully used to develop the area learning objectives makes sense. Providing information or workshops on how to use dynamic assessment data (e.g., observations, anecdotal records, participation expectations, rubrics and informal data collection) to measure the relative success of teaching/learning experiences is another way to move the assessment plan forward and the GE subcommittee or EPC might seek funds to do this work as well.

When considering the development of an assessment plan, it is important to include the two sets of GE courses that do not have departmental homes. The first course is the FYE (Univesity 150A/B), now a permanent course developed by an interdisciplinary committee of tenure track faculty and long term lecturers. There are ten sections of this course with a total enrollment of 170 freshmen, a maximum of seventeen in each section. FYE does not have a school or

department "home" and is administered from Academic Affairs, the Office of the Provost. As noted above, its assessment plan was recognized by the WASC visiting team and could provide strategies to other GE courses housed in the various schools. A second course, HUM 200, Area A1, is funded by the School of Arts and Humanities and is assigned to the A&H Dean's office and should be included in assessment plans developed for other courses within Area A.

A possible starting place for discussion of future GE programmatic assessment strategies would be by disseminating the information generated in the GE program review self-study and the external review. A campuswide meeting to report the results of the GE Program Review followed by a series of meetings with each GE area could be a comprehensive way to widely disseminate the information and begin the process of designing a systematic assessment plan.

Suggest future/additional assessments

When considering an assessment plan for general education, it may be helpful to ask:

- *What assessments are currently used in general education courses that may be useful to GE assessment and review?*
- *What potential assessment data sources are currently in place at SSU?*
- *What procedures exist or need to be developed to systematically collect all GE course syllabi?*
- *What procedures exist or need to be developed to systematically develop and collect assessment data on the effectiveness of GE teaching and learning?*
- *What mechanisms need to be in place to systematically assess GE, analyze the data, provide feedback, and make improvements to the GE curriculum as needed?*
- *What will be the role of the departments, schools, GE subcommittee, EPC, etc., in insuring that outcomes assessment of GE is implemented?*
- *What 5-year action plan will result from the above in order to improve the educational effectiveness of the GE Program and to prepare for the next Program Review of GE?*