THE CALIFORNIA STATE UNIVERSITY

UNIVERSITY OF CALIFORNIA

Guiding Notes
For
General Education Course Reviewers

January, 2012

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These Guiding Notes have been developed by the faculty and staff who review course outlines proposed for lower-division general education credit in the University of California and the California State University. They elaborate on state policy, adding suggestions and insights from past reviewers.

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We make these Notes available to the public so our colleagues can see what the CSU and UC look for in proposals for general education courses. For community colleges, this may make for quicker and more successful course submissions.

This document is continuously shaped by the faculty and staff in California's public colleges and universities who serve as GE course reviewers. California's Title 5, the IGETC Standards, and CSU Executive Orders remain the official policy documents for the general education transfer curriculum. Links to those policies and to these annually updated Notes are available in Part Three.

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PART ONE: BACKGROUND

The Purpose of General Education

General education represents the universal curriculum of the degree, the learning expected of all baccalaureates regardless of background or major. It develops the intellectual capacities and versatility that employers say they most value:

Effective oral and written communication
Critical thinking
Familiarity with styles of inquiry from a range of disciplines
Ability to work in groups
Skills to solve complex problems
Tolerance for ambiguity
An understanding of a variety of cultures, including one's own

The universities of the UC system and California State system have each created a distinct general education curriculum that meets these goals. Students who know which university they will attend may be best served by the local GE curriculum, but should check with the receiving campus to see whether IGETC or GE Breadth is preferred.

For transfer students planning to attend a public California university but unsure of which one, the GE transfer curriculum establishes universally accepted minimum requirements in different academic areas, so students know which courses will take them closer to the degree, while maintaining consistent breadth in the baccalaureate.

Students who transfer into the UC or CSU from California Community Colleges may be "certified" as having completed the lower-division units of their general education.

Administration of the two statewide general education patterns is set by Title 5 of the California Code of Regulations, and governed day-to-day by these policies:

	for students bound for	governing policy
Intersegmental GE Transfer Curriculum (IGETC)	any UC or CSU	IGETC Standards v1.3 www.ccctransfer.org
CSU General Education Breadth	any CSU	CSU Executive Order 1065 www.calstate.edu/eo

Each curriculum is defined by the set of courses approved for its subject areas, as published at www.assist.org and annually updated. The reviewers who use these Guiding Notes are participating in the annual updates by evaluating college course outlines proposed for general education credit in California's public universities.

General Education before Transfer

Both GE Breadth and IGETC will apply to any CSU, and IGETC will apply to any UC or CSU -- regardless of a student's choice of campus or major. However, students in high-unit majors such as science or engineering may find they can graduate sooner if they *don't* complete their GE before transferring.

For these majors, longer chains of prerequisites may make it more advantageous to take lower-division coursework in the discipline, and then complete General Education and major requirements as matriculated students at the university. Community college counselors can help students choose the most efficient way to complete their general education.

Students and their advisors should remember that any kind of GE certification before transfer is separate from – and doesn't guarantee – admission: certification recognizes completed coursework, not eligibility to enroll.

CSU GE Breadth vs. IGETC

Both the CSU GE Breadth and IGETC patterns are designed to educate students to think, write, and speak clearly and logically; to reason quantitatively; to know about the human body and mind, the development and functioning of human society, the physical and biological world, and human cultures and civilizations; and to develop an understanding of the principles, methods, and values of human inquiry.

They do so by grouping disciplines and modes of inquiry into areas such as science and social science, and each area is further divided into subareas such as "Biological Sciences" or "Ethnic Studies." Most areas and subareas in GE-Breadth match those in IGETC, and so course outlines are routinely submitted for both.

See the chart on the next page for a detailed comparison of areas.

GE Breadth (CSU only)		Discipline	IGETC (CSU and UC systems)	
AREA A	A1	Oral Communication	1C	AREA 1
	A2	Written Communication	1A	
	A3	Critical Thinking	1B	
AREA B	B1	Physical Sciences	5A	AREAS 5 and 2
	B2	Biological Sciences	5B	
	B3	Laboratory Activity	5C	
	B4	Mathematics	2	
AREA C	C1	Arts	3A	AREA 3
	C2	Humanities	3B	
AREA D	D1	Anthropology & Archeology	4A	AREA 4
	D2	Economics	4B	
	D3	Ethnic Studies	4C	
	D4	Gender Studies	4D	
	D5	Geography	4E	
	D6	History	4F	
	D7	Interdisciplinary Soc. Science	4G	
	D8	Political Science	4H	
	D9	Psychology	4I	
	D0	Sociology & Criminology	4J	
AREA E	E	Lifelong Learning		[no area]
[no area]		Language Other Than English	6A	AREA 6A

Detailed review criteria for each area and subarea, as well as sample reviewer's responses for each, comprise the next section of these Guiding Notes. Reviewers consider similar questions for the two patterns.

However, within their similarities are some important differences:

GE Breadth pattern (CSU only)	IGETC pattern (CSU plus UC)
⇒ requires oral communication	⇒ doesn't require oral communication of students transferring to the UC
⇒ doesn't require Language Other Than English	⇒ requires Language Other Than English for students transferring to the UC
⇒ any passing grade will count*	⇒ only grades of C or better will count
⇒ a single course may carry any number of units	⇒ each course must carry at least three semester- or four quarter-units
⇒ students may be certified one area at a time	⇒ only full certification is ordinarily available although students may complete up to two courses after transfer
⇒ includes an area in Lifelong Understanding and Self-Development	⇒ no area in Lifelong Understanding and Self-Development

*Note: while any passing grade will allow a course to count for GE credit, for the sake of admission to the CSU, students may still be held to minimum grades of C or better in certain GE areas.

In practice the IGETC pattern is more restrictive. Courses that are approved for IGETC are automatically approved for the corresponding area(s) or subarea(s) in GE Breadth. However, not all courses approved for GE Breadth are approved for IGETC.

CSU Executive Order 1061: American Institutions

CSU Executive Order 1061 establishes for all CSU students a separate graduation requirement in United States History, Constitution, and American Ideals (informally abbreviated "American Institutions" or "AI"). As with lower-division general education, transfer students may fulfill American Institutions requirements before or after matriculating to the CSU.

Each CSU campus decides whether coursework applied to an area of GE-Breadth may also be applied to American Institutions. At the time of this writing, no California State University denies a certification in American Institutions or GE Breadth/IGETC that relies on such double-counting.

Process Overview: Faculty and Staff Review

California Community Colleges submit new or revised course outlines to the CSU and UC system offices electronically via OSCAR, the On-Line Service for Curriculum and Articulation Review. Intersegmental faculty and staff then evaluate the outlines for consistency with the respective policy documents. Approved outlines from previous years are automatically carried forward, unless a community college reports that a course has changed substantially since its last review. (For a description of what counts as a "substantial" change, see Submission, below.)

Course Design

Courses are created by faculty at participating institutions, usually California Community Colleges. The CSU and UC systems don't suggest particular subjects. Before they can be offered (or submitted to a system office for GE transfer credit), courses go through the normal channels of curriculum approval, and only baccalaureate-level courses are eligible for GE transfer credit. Subsequent determinations made by the four-year schools relate only to the suitability of a course to an area of a GE pattern, and even high-quality courses may be denied.

A word of caution to the community college faculty who design courses for general education transfer credit in the UC or CSU: some published approvals are better models than others. Until 1993 courses were accepted without review by the four-year institutions. When the public segments created the current review process, those courses were "grandfathered in" without review. Second, as knowledge and the needs of our graduates evolve, so do our review criteria for general education. Creators of courses are encouraged to choose examples whose approval is recent, and in no case earlier than 1993.

Submission

Each fall, community college articulation officers submit courses by entering their new or substantially revised course outlines, one by one, into the online database at assist.org. (These course submission screens aren't visible to public users.)

Substantial changes include changes in content, student learning objectives, modes of delivery (if student learning objectives or content are affected), prerequisites, contact hours and/or units, or methods/criteria of assessment. Technical changes (not requiring review) include prefix, number, or title changes and/or updates of sample texts.

After the course outline data has been submitted, ASSIST forwards the information to a separate database called the "Online Service for Curriculum Articulation Review," or OSCAR. Submissions are copied to a working database at the CSU Office of the Chancellor, which displays to CSU and UC reviewers the course outline data as it was provided by the community colleges. The software permits users to log on, review the courses, and confidentially record their comments and recommendations.

1st Level Review

Every submitted course undergoes a 1st-level review in which it is judged against criteria developed by faculty to describe a given area of GE-Breadth or IGETC. Each 1st-level review ends with a preliminary recommendation.

2nd Level Review

Every course submitted for GE consideration then undergoes a 2nd-level review, which involves reading both the course outlines as submitted online, and evaluating the 1st-level reviews for fairness and consistency. 2nd-level reviewers write the comments that will be returned to the articulation officers at participating institutions. 2nd-level reviewers may also contact liaisons to the authors of the course outlines to get clarification or additional details.

Discipline Faculty

Courses with an unclear or marginal match to GE criteria are forwarded to intersegmental faculty in the disciplines, for a final decision.

Reconciliation

Reviewer recommendations for courses in GE Breadth and American Institutions are reconciled by the department of Academic Programs and Policy, in the CSU Office of the Chancellor. Determinations of IGETC congruence are made in discussions with the UC Office of the President.

Notification

By early April, the system offices forward their decisions to articulation officers at participating institutions throughout California. Soon afterward the review decisions in OSCAR are communicated to ASSIST, so the public can see which community college courses bear GE transfer credit at four-year institutions.

PART TWO: REVIEW CRITERIA BY AREA

Criteria Applying to All Areas

From the IGETC Standards 1.3:

> Courses in the IGETC shall be culturally broad in their conception. They should help students understand the nature and richness of human culture and social structures through a comparative approach and have a pronounced historical perspective. They should recognize the contributions to knowledge, civilization, and society that have been made by men, women and members of various ethnic or cultural groups.
>
> IGETC courses shall address the modes of inquiry that characterize the different areas of human thought: the nature of the questions that can be addressed, the way questions are formulated, the way analysis is conducted, and the validity and implications of the answers obtained.

When they submit courses for GE acceptability, participating institutions will indicate the pattern, area and subarea to which they want the course applied. Reviewers use area-specific criteria as well as the following, which apply to all submitted courses:

⇒ **Any course submitted for GE must be baccalaureate level.** Because community colleges serve multiple constituencies, not everything they teach is comparable in depth and rigor to courses at four-year universities; for example, some coursework is instead meant to train students for specific jobs, or to prepare them for college.

The UC faculty have asked to review every community college course proposed for transferability, whether or not for general education. Prior to the IGETC update cycle each year, community colleges use OSCAR to propose courses for the Transfer Credit Agreement (TCA).

CSU faculty chose instead to let community colleges decide which courses should transfer. In 1973 the CSU adopted Executive Order 167 to define transferability. Later the CSU's faculty senate elaborated on the definition in a document called "Determining a Baccalaureate Level Course." (Both the Executive Order and subsequent elaboration are available at the Academic Programs and Policy web site, calstate.edu/app.) Generally, indications that a course is baccalaureate level include (1) a clear emphasis on cultural, historic, aesthetic, or other intellectual facets of the subject taught – particularly in classes that otherwise would amount to skills development; (2) stated requirements in reading and writing; (3) high demands of students, substantial student-faculty interaction, and clearly distinguished entry- and exit-level expectations; and (4) the existence of comparable courses at four-year institutions.

⇒ **Courses should carry an appropriate number of units.** In the IGTEC pattern, any course must carry at least three semester-units or four quarter-units of credit. In the GE Breadth pattern, any unit level is acceptable as a matter of policy, but in practice courses below two units seldom meet the criteria for breadth, depth, and rigor expected of general education courses.

Both patterns make exception for science laboratories, when offered separately from the accompanying lecture.

⇒ **Course content should reflect a balance between breadth and depth appropriate for lower-division work.** While it's important for course outlines to reflect the depth of university-level work, proposed courses may be denied if their focus is too narrow. For example, an otherwise acceptable course in literature (IGETC Area 3B) that focuses on a single book, or in self-development (GE-Breadth Area E) that focuses only on the first years of childhood, would fail to provide the breadth expected of general education.

⇒ **Variable-topics courses are excluded.** As a rule, no variable-topics courses (or directed-studies courses) are acceptable for IGETC or CSU GE-Breadth regardless of area, because they change too much from one term (and instructor) to the next. However, not all the topics in a course have to be specified in great detail; for example, a course on Victorian-era English literature doesn't have to name every novel assigned. A course in "Contemporary Controversies in Science" that examined a different controversy every term would be denied.

⇒ **Course outlines may belong in area(s) other than those requested.** Some disciplines such as English and history may encompass multiple areas, for example by emphasizing the practice of English rhetoric (IGETC Areas 1A or 1B) vs. great works in English (IGETC Area 3B), or emphasizing the development of political philosophies (GE Breadth Area C2) vs. their historical impact on different social groups (GE Breadth Area D6). Reviewers may disagree with the participating institution's area designation as originally submitted, and will approve the course for the most appropriate area in their judgment.

⇒ **Proposed courses should include at least one textbook.** Reviewers use the representative text as a way to confirm their understanding of course content. It's understood that the instructor in a given section may choose a different text, but the proposed one is still given close attention. It's expected that the structure of the text will be consistent with the course outline. Including additional reading is a good way to demonstrate that multiple points of view will be evaluated, as a means of developing critical thinking.

Texts don't need to be published in hard copy. The UC and CSU welcome the use of online texts and other Open Educational Resources, so long as the resource is a stable, bona fide textbook, and not just a collection of links to lecture notes or other web pages.

⇒ **Courses and recommended textbooks should be current.** Course outlines should reflect contemporary thinking in the discipline, for example by showing a relatively recent date of approval from the department or campus curriculum committee.

Normally at least one text (and for some disciplines, *all* the texts) should have been published within seven years of the submission date (e.g., published in 2004 for course outlines submitted fall, 2011). Older books should be included if they're considered classics in the field. Reviewers make exceptions if the course authors provide a strong rationale.

⇒ **Any course outline should contain enough detail to make a decision possible.** Reviewers are asked not to make assumptions based on their own disciplinary background or knowledge of the community college, course topic, or instructor. Among the areas of information submitted, course descriptions are considered least reliable because they're used to market the course to students. Course objectives, methods of instruction, and methods of evaluation are more

informative. Listed prerequisites are also good indicators of course content, rigor, and disciplinary grounding.

⇒ **Course outlines should make sense to the reviewer.** Occasionally courses are rejected because the course outline is in a language other than English, doesn't match the "cross-listed course" in the OSCAR database, or has gaps or contradictions in the submitted information.

⇒ **Course outlines should be in English** -- even when the course isn't.

⇒ **IGETC and GE-Breadth decisions should be consistent.** Because transfer students count on courses that meet IGETC standards to work in the CSU Breadth pattern, reviewers will approve courses in GE-Breadth for the sake of consistency. This is true even for courses that were proposed only for IGETC.

Typical reviewer comments applying to all Areas

"This outline contains insufficient detail in the content section for reviewers to determine how the course meets the area requirements."

"Outlines submitted for IGETC course approval must be in English."

"This is primarily a skills course."

"No variable-topics courses (or directed-studies courses) are acceptable for IGETC or GE-Breadth."

"This is primarily an occupation-oriented course."

"This outline is different from the one submitted for the counterpart cross-listed course."

"Courses proposed for IGETC must have a minimum unit value of 3-semester or 4-quarter units."

"Textbook information should include the date of publication."

"The perspective is predominantly humanistic, not social scientific. The course is retained solely in Area C2 of GE Breadth and Area 3B of IGETC."

"The texts appear to be outdated. Outlines with texts more than five years old may be rejected if more recently published texts are appropriate and readily available."

"This course is accepted in Area D5 to maintain consistency with IGETC, as well as Area D3."

"This course is accepted in Area C2 to maintain consistency with its cross-listed counterpart."

CSU GE-Breadth Area A *and* IGETC Area 1

Communication in the English Language & Critical Thinking

Areas A and 1 emphasize development of students' communication and reasoning skills. These require coursework in "communication in the English language, to include both oral communication and written communication," making them the only areas in the GE patterns that must be taught in English.

1A Written Communication (GE Breadth Area A2)

Written Communication courses must lead to achievement of the same "freshman composition" objectives as found at most universities. Courses should explore rhetorical principles independent of the application of writing to a specific profession: an advertising department's course in Copy Writing or a journalism department's course in News Writing would not be suitable for Written Communication.

From the IGETC Standards 1.3:

> A first-semester course in English reading and written composition must include substantial instruction and practice in expository essay writing at the college level with a minimum of 6,000 words. Courses should also require a substantial amount of reading of significant literature.
>
> **Difference in GE Breadth:** Area A2 of the GE Breadth pattern has no minimum number of words; however, some number of words should be specified in the course outline.

Reviewers look for evidence of assigned and graded student writing, both in class and as assigned homework.

The course must carry an appropriate prerequisite, such as an SAT score or placement score, distinguishing it from a basic skills class.

Typical reviewer comments applying to Area A2/1A

"Courses in this area must be conducted in English."

"Courses designed exclusively for the satisfaction of remedial composition cannot be counted toward fulfillment of the English composition requirement."

"A revised outline should specify the approximate total number of words (counting only final drafts) that students are expected to write, and should specify writing assignments required in class and outside the classroom."

"Courses in news writing and reporting are excluded from Area A2."

"This course focuses on the development of students' creative writing skills and techniques rather than the development of expository writing, which emphasizes form, content, context, and effectiveness of communication."

1B Critical Thinking and Composition (GE Breadth Area A3)

The second semester of English composition adds a requirement of critical thinking.

From the IGETC Standards 1.3:

> Written work shall be evaluated for both composition and critical thinking. Texts chosen in this area should reflect an awareness of cultural diversity. A minimum of 6000 words of writing is required.
>
> Instruction in critical thinking is to be designed to achieve an understanding of the relationship of language to logic, which should lead to the ability to analyze, criticize, and advocate ideas, to reason inductively and deductively, and to identify the assumptions upon which particular conclusions depend. The minimal competence to be expected at the successful conclusion of instruction in critical thinking should be the ability to distinguish fact from judgment, and belief from knowledge; to use elementary inductive and deductive processes; and to recognize common logical errors or fallacies of language and thought.

Courses approved for IGETC Area 1B must have a stated prerequisite of a college-level course in English composition.

> **Difference in GE Breadth:** Area A3 in GE Breadth is a course in critical thinking but not writing. There's no minimum word count, and the course is typically offered by departments of philosophy.

Critical thinking courses include explicit instruction and practice in inductive and deductive reasoning and identification of formal and informal fallacies of language and thought. Literary criticism courses are typically not accepted in this area.

Typical reviewer comments applying to Area A3/1B

"The content section of the outline does not provide enough detail to determine whether all elements of critical thinking required by CSU E.O. 1033 for Area A3 are present (*e.g.*, whether students will be able to advocate ideas effectively and to reason inductively and deductively)."

"This course does not appear to include sufficient explicit instruction and practice in inductive and deductive reasoning or identifying formal and informal fallacies of language and thought."

"Area 1B courses must include evaluation of information."

"Journalism courses are excluded from Area A3."

Reviewers look for courses that develop students' ability to think systematically and identify faulty reasoning, such as:

- ⇒ hasty generalization
- ⇒ non sequitur
- ⇒ false analogies
- ⇒ post hoc arguments
- ⇒ attacks ad hominem
- ⇒ bandwagon appeal
- ⇒ tautology/circular reasoning
- ⇒ either-or fallacies

1C Oral Communication (GE Breadth Area A1)

Courses must include faculty-supervised, faculty-evaluated practice in communicating orally *in the physical presence of other listeners*. Rhetorical principles must be covered (study of effective communication in formal speeches or social interaction is appropriate, for example). The CSU Communications Departments have asked that course outlines submitted for IGETC Area 1C or CSU GE-Breadth Area A1 be very specific regarding how instruction and evaluation are conducted, so that it may be determined that student presentations will be made in front of faculty and other listeners (not online or recorded).

Interpersonal communications courses are not a natural fit in Area A1, but a few have been made to work by incorporating significant faculty-supervised, faculty-evaluated practice in speaking with others and at least a small component of traditional rhetoric.

Typical reviewer comments applying to Area A1/1C

"The revised outline will need to specify methods of instruction."

"Course must include faculty-supervised, faculty-evaluated practice in oral communication presented in front of other listeners (not online or recorded)."

"Rhetorical principles must be covered (study of effective communication in formal speeches or social interaction is appropriate, for example)."

"This course is accepted with reservations about the extent of faculty-supervised, faculty-evaluated practice in oral communication. Reviewers suggest revising the outline."

A note about Area 1C Oral Communication

The UC system doesn't require Oral Communication. Area 1C has been set aside under the IGTEC pattern so that evaluators can see whether students transferring into the CSU have met this graduation requirement, but the review standards are identical to those for Area A1 Oral Communication in the CSU's GE-Breadth pattern.

CSU GE-Breadth Area B4 *and* IGETC Area 2

Mathematical Concepts and Quantitative Reasoning

From Executive Order 1065:

> Courses in subarea B4 shall have an explicit intermediate algebra prerequisite, and students shall develop skills and understanding beyond the level of intermediate algebra. Students will not just practice computational skills, but will be able to explain and apply basic mathematical concepts and will be able to solve problems through quantitative reasoning.

From the IGETC Standards 1.3:

> The Mathematical Concepts and Quantitative Reasoning requirement shall be fulfilled by completion of a one-term course in mathematics or statistics above the level of intermediate algebra, with a stated course prerequisite of intermediate algebra. Courses outside the discipline of math using the application of statistics may be used to fulfill this requirement, as long as the course has intermediate algebra as a prerequisite and knowledge of intermediate algebra is necessary to be successful. An appropriate course in statistics must emphasize the mathematical basis of statistics, probability theory and estimation, application and interpretation, uses and misuses, and the analysis and criticism of statistical arguments in public discourse.
>
> Knowledge relevant to public and private decision making is expressed frequently in quantitative terms, we are routinely confronted with information requiring quantitative analysis, calculation, and the ability to use and criticize quantitative arguments. In addition, many disciplines require a sound foundation in mathematical concepts. The requirement in Mathematical Concepts and Quantitative Reasoning is designed to help prepare students to respond effectively to these challenges. Courses approved to fulfill this requirement must focus on quantitative analysis and the ability to use and criticize quantitative arguments.
>
> Symbolic Logic, Computer Programming, and survey courses such as Math in Society, were deemed unacceptable to fulfill the Mathematical Concepts and Quantitative Reasoning requirement.

Certain courses are always excluded from Area B4:

- ⇒ courses in the history of mathematics
- ⇒ logic and symbolic logic courses
- ⇒ computer programming courses (although Discrete Math offered by a Computer Science department may be acceptable)
- ⇒ courses without a stated prerequisite of intermediate algebra, or from institutions that don't have intermediate algebra among their criteria for admission

Difference from GE Breadth: Math courses developed specifically for students preparing to teach elementary school are excluded from IGETC but acceptable in GE Breadth. CSU math faculty have asked reviewers to check for inclusion of specific elements of math instruction before granting approval. See the next page for details.

Approving Math Courses for Elementary School Teachers

(GE Breadth pattern only)

Math courses designed as part of a teacher preparation or liberal studies curriculum must meet specific criteria to qualify for area B4 of GE Breadth. Faculty have asked that such courses include *all* of these elements listed in the January, 2008 posting of the TCSU math descriptor 120, "Mathematical Concepts for Elementary School Teachers - Number Systems."

Course Topics: In conformity with ESM standards, topics must include, but are not limited to:

1. Basic set theory and logic: set operations, relations and functions, Venn diagrams, DeMorgan's Laws, truth tables, equivalent statements, deductive reasoning, contradictions, tautologies;
2. Numeration systems: history, Hindu-Arabic numeration system, other place values systems, computations in different bases;
3. Integers: structure and basic properties, computational algorithms;
4. Modular arithmetic: operations, divisibility;
5. Basic number theory: prime and composite numbers, prime factorization, fundamental theorem of arithmetic, least common multiple and greatest common divisor;
6. Rational numbers: structure and properties, ratio and proportion;
7. Real numbers: structure and basic properties, arithmetic operations, rational and irrational numbers, decimal representation, number line representation;
8. Patterns and sequences: arithmetic sequences, geometric sequences, mathematical induction.

Student Learning Outcomes: In conformity with ESM standards, course outcomes must include, but are not limited to:

1. Analyze multiple approaches to solving problems from elementary and advanced levels of mathematics, using concepts and tools from sets, functions, and logic.
2. Compare numeration systems, including their historical development, with attention to base numeration systems, exponents, scientific notation, and place values.
3. Evaluate the equivalence of numeric algorithms and explain the advantages and disadvantages of equivalent algorithms in different circumstances.
4. Analyze algorithms from number theory to determine divisibility in a variety of settings, such as different base systems and modular arithmetic.
5. Analyze the structure of least common multiples and greatest common divisors and their role in standard algorithms.
6. Explain the concept of rational numbers, using both ratio and decimal representations; analyze the arithmetic algorithms for these two representations; and justify their equivalence.
7. Analyze the structure and properties of whole, rational, and real number systems; define the concept of rational and irrational numbers, including their decimal representation; and illustrate the use of a number line representation.

Arts and Humanities *and* Social and Behavioral Sciences

Between them these two areas cover Arts, Humanities, and Social Sciences – the broad middle ground of what most educated people consider liberal learning. Taken together, these two areas have accounted for more than half of all course outlines submitted for general education credit in California.

To ensure the breadth of learning expected of a baccalaureate, it's important that courses in these two areas be distinguished from each other:

Study in Arts and Humanities	Study in the Social Sciences
⇒ focuses on the human condition: its limits, potential, and creative expressions	⇒ uses hard-science techniques of experimentation and empirical evidence to explore human experience
⇒ relies on critical analysis of specific texts or works to support its claims	⇒ includes explicit use of research and the scientific method
⇒ is "hermeneutic," *i.e.*, interpretive, especially of speech or writing	⇒ employs quantitative and qualitative analysis
	⇒ is likelier to examine groups of people and patterns of behavior than particular artifacts, individuals or idiosyncrasies

Although the areas are distinct, some disciplines such as Ethnic Studies may comprise significant coursework in both kinds of inquiry, and so count in both areas of general education.

History is among the hardest disciplines to categorize, by historians' own admission:

> Since the 1980s, the discipline of history, which has always straddled the humanities and social sciences, has become more identified with the humanities . . . Indeed, the American Historical Association has recently urged the National Research Council (NRC) to classify history with the humanities in its periodic ranking of departments. For the institutional purposes that motivate the NRC rankings (and the methodologies used for them), the formal shift in category makes sense. But this change of institutional location in the national organization of research should not be understood as an intellectual abandonment of the discipline's historical association with the social sciences. History should value and maintain its Janus-faced position in the world of scholarship—looking to both the humanities and the social sciences.
>
> -- *The Education of Historians for the Twenty-First Century*
> American Historical Association, 2004

The CSU and UC systems take their cues from the discipline, and tend to categorize history in the humanities. However, if participating institutions submit a history course for approval in Area D/Area 4 Social Sciences and the outline supports the designation, then that's where the course is approved.

CSU GE-Breadth Area C *and* IGETC Area 3

Arts, Literature, Philosophy, and Foreign Languages

From the IGETC Standards 1.3:

> The Arts and Humanities historically constitute the heart of a liberal arts general education because of the fundamental humanizing perspective that they provide for the development of the whole person. Our understanding of the world is fundamentally advanced through the study of Western and non-Western philosophy, language, literature, and the fine arts.

From Executive Order 1065:

> Students will cultivate and refine their affective, cognitive, and physical faculties through studying great works of the human imagination. Activities may include participation in individual aesthetic, creative experiences; however Area C excludes courses that exclusively emphasize skills development.
>
> Students may take courses in languages other than English in partial fulfillment of this requirement if the courses do not focus solely on skills acquisition but also contain a substantial cultural component. This may include literature, among other content.

3A Arts (Art, Dance, Music, Theater) (GE Breadth Area C1)

Arts include:

- ⇒ visual arts
- ⇒ architecture
- ⇒ interior design
- ⇒ music
- ⇒ dance
- ⇒ theater
- ⇒ film

Studio and performance classes that develop technique or skills alone don't meet the standards established for this area. For C1 in the CSU's GE-Breadth pattern courses must also address aesthetic and cultural study; for the corresponding Area 3A in the IGETC pattern the requirement is stronger; courses must *predominantly* emphasize cultural and/or aesthetic study.

A note to faculty who create courses in this area: beware of emulating arts courses with existing approvals on ASSIST. Approval for arts courses in particular is often "grandfathered in" from years before 1993, when the current review process was put in place. These skills-heavy courses would be unlikely candidates for GE under the current procedure and criteria.

In 2011, CSU faculty addressed the problem of these grandfathered courses in Area C1 by removing those offered at below two units. In the other areas of GE Breadth, courses of any unit value may still appear grandfathered in.

To determine the degree of emphasis on skills acquisition in new submissions, reviewers look at the time spent in lecture vs. activity (1.5 vs. 4.5 hours per week more than tips the scale to activity-based). For example, community college courses in design and color often carry a heavy lab component to prepare students for immediate employment; this is sound professional preparation but tips the course away from the goals of general education.

On the other hand, a noteworthy course in ceramics did qualify. The outline took a historic approach to the study of ceramics, much as an art appreciation course would. The students created ceramic works only as a reinforcement of the historic/cultural style (*e.g.*, the students produced a ceramic piece in the Japanese raku style after studying the historic and cultural influence of raku).

Special cases:

Music Theory: Music Theory courses are primarily skills-development courses (notation and ear training) and are ordinarily excluded, even if they include some classical compositions.

Film Studies: Film studies courses (as opposed to film production) may qualify for either Arts or Humanities, depending on the focus of the course. Sometimes film is used as a means to study a particular time or culture, making a humanities (area C2 or 3B course) designation appropriate. When the focus is instead on film as a medium of artistic expression, the more appropriate placement is Arts (area C1 or 3A).

The same distinction applies to courses in still photography rather than motion pictures: if the medium is merely the means to examine the human condition, the approval will be in the Humanities area; if the medium itself is the main subject of study, then the approval will be in Arts.

Art for Teachers: Frequently these courses are denied for general education, because they emphasize pre-professional training for educators rather than great works of the human imagination.

Typical reviewer comments applying to Area C1 *and* 3A

"Performance and studio classes may be credited toward satisfaction of this subject area only if they include the integration of history, theory, and criticism."

"This course's strong focus on technical and performance skills precludes its acceptance in Area C1. It is accepted in Area E with the usual unit limitation on physical-activity courses."

3B Humanities

GE Breadth Area C2

From the IGETC Standards 1.3:

> Acceptable Humanities courses are those that encourage students to analyze and appreciate works of philosophical, historical, literary, aesthetic and cultural importance. The faculty of the two segments determined that courses such as English composition, Logic, Speech, Creative Writing, Oral Interpretation, Readers Theater, Spanish for Spanish Speakers, and all elementary foreign language courses were skills or performance courses that do not meet the specifications for IGETC. Advanced foreign language courses were approved if they include literature or cultural aspects. Theater and film courses were approved if they were taught with emphasis on historical, literary, or cultural aspects. The segments will also accept Logic courses if the focus is not solely on technique but includes the role of logic in humanities disciplines.

In determining which of these submissions should qualify under either pattern, reviewers ask:

- ⇒ will students learn to analyze and appreciate works of philosophical and cultural importance?
- ⇒ does the course use canonical or seminal works as pathways to a broader understanding of the human condition?
- ⇒ how will the course help students confidently understand and articulate their own subjective intellectual experiences?

These criteria are key to determining the suitability of courses in a range of disciplines:

- ⇒ **Language courses** should do more than impart vocabulary and rules of grammar; they should use the second language to evoke a sympathetic response to the acquired culture, to help students understand the "other" in the first person.

  For most languages courses in IGETC, the course should be equivalent to at least the third year of high school to meet the criteria for Area 3B. Another useful indicator of whether the course exceeds that threshold is in its prerequisite: courses approved for Area 6A under the IGETC pattern are intended to achieve that minimum proficiency level, and so if they're listed as prerequisite to a course submitted for Area C2 in GE-Breadth, then the more advanced course probably has a strong enough cultural component to qualify.

  The prerequisite may be stated as:

  - ⇒ a community college course that satisfies Area 6A of IGETC
  - ⇒ two years of high school study of the language
  - ⇒ some other measure of proficiency

  There may be a rare exception, however, for a course that (1) is intended for students who may begin just a little below proficiency level, (2) is designed to take them well beyond proficiency level, and (3) includes a significant cultural component.

  Difference from GE Breadth: Language courses at the elementary level may be acceptable for Humanities designation under GE Breadth but not IGETC.

Reviewers check to see if the cultural content justifies the qualification – *i.e.*, if it includes more than food, festivals, and holidays.

⇒ **Creative writing courses** are acceptable for GE Breadth Area C2 only if they include reading and analysis of respected works of literature. Students should be learning to "read as writers" (focusing on how creative writing is developed, not just how readers interpret what is written), which is a different process than literary criticism. (Note that there is a difference here between the GE Breadth pattern and the narrower IGETC pattern: creative writing courses are *never* accepted for IGETC.)

⇒ **Courses in geography, history, and art** may satisfy Area 3B Humanities if the outline indicates a strong cultural content and an exploration of subjective human experience.

⇒ **Literature courses** may be disallowed because they are too narrow. A course in a single novel or literary movement (*e.g.*, postmodern American fiction) is probably more suitable for upper-division work, since it may not incorporate literary analysis from a variety of critical perspectives.

⇒ **Courses in mass communication or mass media** are not accepted in Area 3B or C2. (However, courses that study the interaction of mass communication and society are often appropriate for social studies.)

⇒ **Courses in English as a Second Language** may – despite their focus on proficiency and the acquisition of skills – be advanced enough to meet the objectives of the Humanities Areas C2 and 3B.

⇒ **Logic courses** are categorically excluded from Area C2. Such courses are designed primarily to develop students' reasoning skills, not their appreciation of "great works of the human imagination."

⇒ Depending on their dominant mode of inquiry, **history courses** may be categorized in Area C2 Humanities, Area D6 History, or both.

⇒ Courses in linguistics may also be a close call between humanities and social science. In such cases reviewers may take the department prefix (typically Anthropology or English) to suggest which mode of inquiry is dominant.

⇒ **Art history courses** are always reviewed in Humanities, not as any of the social sciences in Areas D or 4.

Special Cases for History Courses in GE Breadth: Adding Areas

For each history course it submits, a community college may request GE designation under Humanities, Social Sciences, or both. In most cases reviewers accept that recommendation when categorizing the course.

However, there are several cases where reviewers *add* approval in an area of CSU GE Breadth where the course wasn't originally submitted:

1. **When the course is submitted differently for IGETC approval.** A course submitted under the Humanities area for one pattern but under the Social Sciences area for the other is approved in *both* the Humanities and Social Sciences areas for GE-Breadth. This protects transfer students who expect the IGETC pattern to work the same for both university systems, and switch to the GE-Breadth pattern before transfer.

2. **When the course is in the history of a U.S. ethnic group.** A course like "History of Native Americans" may be submitted in Area D6 History, and approved in Area D6 History *and* Area D3 Ethnic Studies. This facilitates graduation for students enrolled at CSU campuses which individually require coursework in cultural diversity, satisfied by Area D3.

3. **When a humanities-focused history course has been approved under the "U.S. history" objective of the CSU's United States History, Constitution, and American Ideals requirement.** For example, a course in the cultural influences of the major U.S. immigrant populations from 1840 to the present is submitted and approved under Area C2 Humanities, and had prior approval under Area US-1, Historical Development of American Institutions and Ideals. Reviewers will *add* approval under Area D6 History, for transfer students whose pre-major coursework relies on these areas double-counting.

Typical reviewer comments applying to Areas C2 *and* 3B

"Courses for native (heritage) speakers must emphasize culture and cultural readings in the language rather than a focus on grammar and written language skills exclusively."

"A significant cultural component (including the history and literature of the deaf community) needs to be made evident in the course outline."

"This children's literature course appears to focus too heavily on how to select books for children and how to read them to children, rather than on learning and applying the techniques of literary analysis and criticism to literature written for children."

"This course focuses on the development of students' creative writing skills and techniques rather than the critical analysis of literary genres."

"Mass communication/mass media courses are not accepted in IGETC Area 3B."

"The strong focus on skills and techniques precludes it from being accepted for Area C2."

CSU GE-Breadth Area D *and* IGETC Area 4

Social, Political, and Economic Institutions & Behavior; History

From CSU Executive Order 1065:

> Students learn from courses in multiple Area D disciplines that human social, political and economic institutions and behavior are inextricably interwoven. Through fulfillment of the Area D requirement, students will develop an understanding of problems and issues from the respective disciplinary perspectives and will examine contexts. Students will explore the principles, methodologies, value systems and ethics employed in social scientific inquiry. Courses that emphasize skills development and professional preparation are excluded from Area D. Coursework taken in fulfillment of this requirement must include a reasonable distribution among the subareas specified, as opposed to restricting the entire number of units required to a single subarea.

From the IGETC Standards 1.3

> The pattern of coursework completed shall ensure opportunities for students to develop understanding of the perspectives and methods of the social and behavioral sciences. Problems and issues in these areas should be examined in their contemporary, historical, and geographical settings. Students who have completed this requirement shall have been exposed to a pattern of coursework designed to help them gain an understanding and appreciation of the contributions and perspectives of men, women and of ethnic and other minorities and a comparative perspective on both Western and non-Western societies. The material should be presented from a theoretical point of view and focus on core concepts and methods of the discipline rather than on personal, practical, or applied aspects.

For this area, reviewers look in particular for evidence that:

- ⇒ students will learn how to practice social science, and not just understand what social scientists have concluded.
- ⇒ the course has a specific disciplinary focus. Because the Standards and the Executive Order both require coursework in more than one subarea, it's important for each course to keep a distinct, discipline-based perspective. Often the choice of textbook is used as evidence of this.
- ⇒ the course leads to a broad understanding of social science, and not just the discipline within it. In the words of one reviewer, "it has to look like Area D, not just Area D3."
- ⇒ students are learning more than pre-professional skills. At the extreme, courses proposed for GE social science can look too much like training for careers in criminal justice or social work, with learning objectives different from those of general education.

Areas D and 4 group disciplines into ten subareas:

4A Anthropology & Archaeology	**GE Breadth Area D1**
4B Economics	**GE Breadth Area D2**

4C Ethnic Studies **GE Breadth Area D3**

Ethnic studies courses must focus on one or more ethnic groups in the U.S. Courses with a focus outside the U.S. and that integrate anthropological perspectives, theories, and methods may qualify for Area 4A (Area D1 under GE Breadth).

4D Gender Studies **GE Breadth Area D4**

Ethnic Studies or Gender Studies courses emphasizing artistic or humanistic perspectives (rather than social scientific analysis) are categorized in Areas 3B and C2.

4E Geography **GE Breadth Area D5**

Many geography department courses fit here, but depending on the emphasis courses may be better suited to the physical sciences or life sciences (GE-Breadth Area B or IGETC Area 5).

4F History **GE Breadth Area D6**

For a number of reasons, course approvals for this area of GE-Breadth may be affected by approvals in IGETC or American Institutions.

4G Interdisciplinary Social or Behavioral Science **GE Breadth Area D7**

Interdisciplinary courses must specify which disciplinary perspectives are informing the course (through readings, coverage of theory and methods, and texts specific to the discipline). Interpersonal communication courses that draw on theories of psychology, sociology, and gender studies may be placed here.

4H Political Science, Government, and Legal Institutions **GE Breadth Area D8**

These courses focus on social scientific analysis of the *institutions* responsible for law enforcement, justice, and corrections. Courses that emphasize *individual* criminal behavior are considered for Area 4J/D0, below, and those that prepare students for specific professions are excluded from GE-Breadth.

4I Psychology **GE Breadth Area D9**

It's particularly important that psychology courses focus on the methods, approaches, and foundations of the discipline. At their weakest, submissions in Areas D9/4I may appear like self-help classes: how to be happy in marriage, conflict resolution for teens, etc.

Research Methods courses (often created by faculty in psychology or sociology) should include both the methodology of the discipline and basic social science theories and principles. If they are purely a methodology course emphasizing research strategies,

techniques, and use of statistics, then they may not have the requisite breadth for general education.

4J Sociology and Criminology — GE Breadth Area D0

Criminology courses should focus on social scientific analysis of the etiology (causation) of crime and criminal behavior, rather than emphasizing professional skills. Note also the distinction from courses in Criminal Justice, which focus on the institutions responsible for law enforcement, justice, and corrections), and are categorized within Political Science (Area D8).

In this area, reviewers are especially careful with Administration of Justice courses. The critical distinction is whether or not the course deals with the theory beyond criminal behavior. Sometimes the term "criminology" means procedures (not theory) so those courses are denied; at other times "criminology" is meant to include the theory behind the crime, and so the course is approved.

Typical reviewer comments applying to Areas D1-D0 *and* 4A-4J

"This course emphasizes the application of social scientific findings in an occupationally oriented context, rather than principles, theories, and methods of social science."

"Most of the course appears to be devoted to career-oriented teacher preparation, rather than social scientific concepts, theories, and methods."

"The sociological perspective makes the course more appropriate for Area 4J than Area 4I."

"With no prerequisites or co-requisites in archaeology or anthropology to provide a conceptual and theoretical context, this course's attention to archaeological methods is not sufficiently grounded in disciplinary perspectives to meet the objectives of Area D1."

"This course appears to concentrate on the development of students' communication skills rather than on social scientific principles, theories, and research methods. Its objectives are more appropriate for Area A1, but A1 courses cannot be specific to a single field of study (in this case, Business)."

"The course outline does not make clear how sociological concepts, theories, and methodology underlie the examination of marriage and the family as social institutions."

"This course is also accepted in CSU GE Area D3 to reflect its focus on an ethnic group (ethnic populations) in the United States."

CSU GE-Breadth Areas B1-B3 *and* IGETC Area 5

Physical and Biological Sciences

These areas of IGETC and GE Breadth call for three kinds of coursework: physical science lecture, life science lecture, and a lab associated with a lecture.

From the IGETC Standards 1.3:

> Courses [in physical and biological sciences] must emphasize experimental methodology, the testing of hypotheses, and the power of systematic questioning, rather than only the recall of facts. Courses that emphasize the interdependency of the sciences are especially appropriate for non-science majors.
>
> The contemporary world is influenced by science and its applications, and many of the most difficult choices facing individuals and institutions concern the relationship of scientific and technological capability with human values and social goals. To function effectively in such a complex world, students must develop a comprehension of the basic concepts of physical and biological sciences, and a sophisticated understanding of science as a human endeavor, including the limitations as well as the power of scientific inquiry.

From CSU Executive Order 1065:

> In subareas B1-B3, students develop knowledge of scientific theories, concepts, and data about both living and non-living systems. Students will achieve an understanding and appreciation of scientific principles and the scientific method, as well as the potential limits of scientific endeavors and the value systems and ethics associated with human inquiry.

Courses in these subareas of Areas B and 5 emphasize the perspectives, concepts, principles, theories, and methodologies of the scientific disciplines. Those that have built-in laboratory activity may also qualify for Area B3, so long as the course outline clearly distinguishes the laboratory activity from the lecture.

Some but not all course outlines submitted for these areas will refer to "the scientific method." Implicit inclusion of the scientific method is acceptable, especially for courses designed for students majoring in science. EO 1033 refers to "methodologies of science as investigative tools," so Area B/5 courses should enhance students' appreciation of how scientists do science, not just what scientists have concluded.

This distinction of learning not just the conclusions of scientists but also *how science is practiced* is the key to making review decisions in a few special cases:

⇒ **Multi-disciplinary and interdisciplinary science courses.** Some community colleges have designed courses to meet California's credentialing standards for prospective elementary school teachers, who will need to know something about geology, astronomy, physics and chemistry. These "do-it-all" courses are usually acceptable, so long as they address science as a way of intellectual inquiry.

Organic chemistry courses may also strike reviewers as interdisciplinary, but are ordinarily categorized in B1/5A Physical Science, where the subject is frequently housed and taught.

⇒ **Physical geography courses.** These are almost always accepted in Area B1. (Other kinds of geography course are closer to the social sciences and are instead approved in Area D5.)

⇒ **Physical anthropology courses.** Depending on the emphasis, a course in physical anthropology may belong with other biological sciences in Area B2.

⇒ **Lower-division major preparation courses.** These may work unless they're too narrow; the question is whether students will achieve the "science literacy" expected of educated citizens in any profession.

In defining "science literacy" for an educated populace, science faculty from across the CSU agreed to this definition and course-scoring rubric, which reviewers of community college courses may find helpful:

A student who achieves science literacy through a course that satisfies a general education science requirement must master literacy in understanding both:

(a) science as the system of reasoning—the acquisition of testable knowledge of the physical world, including explanations of the phenomena and

(b) the minimal foundational concepts and content of the science discipline(s) addressed by the course.

This rubric addresses "a":

Unacceptable	Minimally acceptable	Very Acceptable	Ideal
Item 13 only or item 13 plus omission of any items 1-7	Items 1-7, plus Item 13	Items 1-10 plus Item 13	Items 1-13

Learning Outcomes for Science Literacy in
Science as a Framework of Reasoning in an Introductory Course

1. Student can articulate in her/his own words a reasonable definition for what constitutes science.
2. Student can describe, using at least two specific examples, how science literacy is important in everyday life to an educated person.
3. Student can explain why the attribute of doubt has value in science.
4. Student can explain how scientists select which among several competing working hypotheses best explains a physical phenomenon.
5. Student can explain how "theory" as used and understood in science differs from "theory "as commonly used and understood by the general public.
6. Student can explain why peer review generally improves our quality of knowing within science.
7. Student can explain how science uses the method of reproducible experiments to understand and explain the physical world.
8. Student can name one assumption that underlies all science.
9. Student can provide two examples of science and two of technology and use these to explain a central concept by which one can distinguish between science and technology.
10. Student can cite a single major theory from one of the science disciplines and explain its historical development.
11. Student can explain and provide an example of modeling as used in science.
12. Student can explain why awareness of ethics becomes increasingly important to a society becoming increasingly advanced in science.
13. Student can meet the minimal learning outcomes specified by the discipline that address the major ideas, concepts and content of the science discipline. *The arbiter of "specified by discipline" might range from locally at the scale of a department to internationally as specified by the larger profession.*

Typical reviewer comments applying to Areas B1 *and* 5A and Areas B2 *and* 5B

"This course emphasizes professional applications of chemistry rather than science as an investigative tool; it does not address sufficiently the principles, theories, and methodology of chemistry."

"Because the course emphasizes technical skills rather than the scientific principles and theories of physical or cultural geography, it is appropriate for neither Area 5A nor Area 4E."

"Science courses should cover basic scientific principles and not just include memorization of facts or skills practice."

"The college is urged to revise the outline to distinguish clearly the laboratory activities from the content of the lectures."

Laboratory Activity

Courses meeting the requirements of this subarea must be associated with a lecture component, either built into the laboratory section itself or connected as a co-requisite or prerequisite. It's especially important for colleges to clearly delineate laboratory activity from the lecture: a list of topics to be covered in the lab sections is seldom enough to tell reviewers whether the activity warrants the additional lab approval. Reviewers rely in particular on the choice of textbook, checking that it's appropriate for a course with lab activities.

When a participating institution submits a science course that includes both lecture and lab, it may be approved for GE Breadth Areas B1 & B3 as a pair, or Areas B2 & B3 as a pair – even if the institution didn't request placement in Area B3. The same is true for the corresponding areas in IGETC: reviewers will add the lab designation (Area 5C) if it seems appropriate, whether or not the submission requests it.

Stand-alone lab courses are designated B3 or 5C only, and *only* when associated with a lecture course as either a pre- or co-requisite.

Laboratory courses offered entirely online are held to particularly close scrutiny. University science faculty have instructed reviewers to be sure such delivery doesn't compromise learning objectives that are met by in-person instruction. For the time being, all such submissions are referred to discipline faculty for further review.

Typical reviewer comments applying to Areas B3 and 5C

"Lecture-and-Lab science outlines should distinguish lecture content from lab activity."

"This course is accepted in Area B3, to reflect the laboratory component, as well as in Area B1."

"This laboratory course is acceptable in Area B3 only if the corresponding lecture is adopted as its pre- or co-requisite."

GE-Breadth Area E (CSU only)

Lifelong Learning and Self-Development

Courses that meet the learning objectives of Area E draw on findings from the biological, behavioral, and social sciences to study humans from psychological, sociological, and physiological perspectives.

From Executive Order 1065

> A minimum of three semester units or four quarter units in study designed to equip learners for lifelong understanding and development of themselves as integrated physiological, social, and psychological beings.
>
> Student learning in this area shall include selective consideration of content such as human behavior, sexuality, nutrition, physical and mental health, stress management, financial literacy, social relationships and relationships with the environment, as well as implications of death and dying and avenues for lifelong learning. Physical activity may be included, provided that it is an integral part of the study elements described herein.

With the exception of courses in physical activity (detailed below), reviewers expect courses in Area E to include three kinds of inquiry:

- ⇒ **Sociological:** in this context, the relationships between an individual and broader society.
- ⇒ **Physiological:** the human body as an integrated organism with systemic functions such as movement, nutrition, growth, reproduction, and aging.
- ⇒ **Psychological:** the study of the mental processes that create consciousness, behavior, emotions, and intelligence.

Any single course should address all three – though not necessarily with equal emphasis. Submissions in this area fail when they focus on a single learning skill (e.g. library use, computer literacy, first aid, or study skills for college success).

Second, any course submission should address all three areas for *more than a few years of a human lifespan*. The consideration doesn't need to extend from cradle to grave, but study should include more than early childhood or the octogenarian experience, in order to provide the breadth expected of general education.

Conversely, child development courses that meet criteria for Area E are often designated Area D7/4G Interdisciplinary Social Sciences.

Physical Activity

Physical activity courses (except for special-topics or directed studies courses) are acceptable in Area E, if the students move and are instructed (or supervised or coached) by a faculty member or a designee when doing so. In this area a textbook isn't required, but faculty supervision is essential. Varsity sports may be included, and so may basic training in the military, in cases where they are awarded academic credit.

However, students may not complete Area E using only physical activity courses. Participating institutions are asked to limit the number of physical-activity units they count when certifying a student for Area E.

(Note the wording: a community college may offer a three-semester-unit class in badminton and qualify it for Area E; it just can't apply all three units to a student's Area E certification.)

Military Service

CSU Executive Order 1036 encourages campuses to use evidence of military training to satisfy Area E for their students who enroll without a prior certification in GE. Typically the evidence is the completion of basic training as listed on the veteran's discharge papers, Form DD-214. All CSU campuses have elected to honor GE Breadth transfer certifications that clear Area E Lifelong Learning with a DD-214.

Typical reviewer comments applying to Area E

"This course is accepted in Area E with the usual unit limitation on physical-activity courses."

"For physical-activity courses to qualify for Area E, the activity has to be under the supervision of the instructor (or appropriately qualified staff members working with the instructor)."

"It is not clear that an instructor or qualified assistant observes the students' physical activity and provides instruction, supervision on the students' performance."

"Attention to the integration of physiological, psychological, and social considerations does not appear to be sufficient; most of the course appears to be devoted to college-specific material, study skills, and educational planning."

"Courses that teach specific job skills are not considered appropriate for Area E."

"This course does not appear to integrate physiological, psychological, and sociological study to a sufficient extent to qualify for Area E."

"Child development courses qualify for Area E only if they cover birth through adolescence."

"Although there is some mention of "behavior" in the outline, the extent to which the course integrates psychological and socio-cultural considerations with its physiological content is not clear."

"Although this course has some topics that draw clearly on findings and principles of psychology and sociology, it hardly touches on physiological (e.g., health) considerations and appears to be devoted to too great an extent to college-specific material and educational planning."

There is no IGETC Counterpart to Area E.

Students using the IGETC pattern to meet their lower-division general education before transfer to the CSU are exempted from this systemwide requirement.

IGETC Standards Area 6A (UC only)

Language Other Than English

Courses approved for this area are deemed "proficiency," *i.e.*, equivalent to two years' high school foreign language. This means that language courses above this level could in theory have a strong enough cultural component to qualify under Area C2 in GE-Breadth (or Area 3B in IGETC).

Some UC campuses and departments may require more than two years of language proficiency; students should check with the receiving campus to determine whether a course satisfying IGETC Area 6A will clear the entire requirement in a Language Other Than English.

From the IGETC Standards 1.3:

> Students shall demonstrate proficiency in a language other than English equal to two years of high school study. Those students who have satisfied the UC freshman entrance requirement in a language other than English will have fulfilled this requirement. This requirement may also be satisfied by demonstration of equivalent proficiency prior to transfer.
>
> Language courses should provide instruction in the written and oral language as well as history and cultural traditions of the country associated with the language studied. Languages other than English for Native Speakers are appropriate for transfer. Courses primarily conversational must have as a prerequisite a course equivalent to the third year of high school study or one year of college level in the language. Also, the content of conversation courses should not be primarily business or travel-oriented.

CSU "American Institutions" (CSU only)

U.S History, Constitution, and American Ideals

The CSU's graduation requirements in American Institutions are established in Executive Order 1061, separately from the areas of GE Breadth. EO 1061 implements Title 5 Section 40404 of California's Civil Code, which calls for study in three areas:

1. The historical development of American institutions and ideals (Area US-1),
2. The Constitution of the United States and the operation of representative democratic government under that Constitution (Area US-2), and
3. The process of California state and local government (Area US-3).

While the Executive Order doesn't set a unit or course minimum for these areas, it's unusual for a single course to adequately address all three. Instead participating community colleges submit a sequence of courses – typically including courses from their history and/or political science departments – that together meet the graduation requirement in American Institutions.

Following the executive order, reviewers use these criteria for each of the three areas:

Area US-1: American History

Students are expected to learn significant events from U.S. history, as follows:

- ⇒ covering a minimum time span of approximately one hundred years
- ⇒ occurring in the entire area now included in the United States of America
- ⇒ including the relationships of regions within that area and with external regions and powers
- ⇒ the role of major ethnic and social groups
- ⇒ the "continuity of the American experience" (i.e., not a string of isolated events) and its derivation from others cultures, including study of politics, economics, social movements, and/or geography (at least three of the four)

Area US-2: The U.S. Constitution

Course outlines should reflect content that teaches:

- ⇒ the political philosophies of the framers of the Constitution
- ⇒ the operation of United States political process and institutions under the U.S. Constitution
- ⇒ the rights and obligations of individual citizens in the political system established under the Constitution

Area US-3: California State and Local Government

Courses in this area will address:

- ⇒ the Constitution of the State of California
- ⇒ the nature and processes of California state and local government
- ⇒ the relationships between the U.S government and California's state and local governments

Notice that these criteria are extremely detailed. Good courses are often turned down, as reviewers have to consider not only their quality but also how closely they meet these exact criteria, as set by administrative law and CSU policy.

Typical reviewer comments applying to American Institutions

"The outlines will have to be revised to include considerably more information about the courses' coverage of the U.S. and California state constitutions and the nature and processes of the federal, state, and local governments."

"The course content section of the outline does not address the political philosophies of the framers of the U.S. Constitution or the Constitution of the State of California"

"The course content appears to focus largely on the American Southwest, not the entire area now comprising the U.S."

"This course covers a time span of 62 years, which is considerably less than the 100-year time span that is expected of courses meeting the historical elements of the requirement."

"This course in the history of Armenian Americans is too narrowly focused on a single population to qualify for US-1."

ELECTRONIC BIBLIOGRAPHY

These notes are available on-line at www.calstate.edu/app/general-ed-transfer.shtml.

The documents cited in these Guiding Notes are those in effect as of January, 2011. Readers are encouraged to refer to online sources, as these references are often revised or superseded.

General Education Breadth, IGETC, and American Institutions

- ⇒ IGETC Standards 1.3
  www.ccctransfer.org

- ⇒ CSU Executive Order 1065: General Education Breadth
  www.calstate.edu/eo/EO-1065.pdf

- ⇒ CSU Executive Order 1061: American Institutions
  www.calstate.edu/eo/EO-1061.pdf

- ⇒ Guiding Notes for General Education Course Reviewers
  www.calstate.edu/app/general-ed-transfer.shtml

Courses and Articulation in California

- ⇒ ASSIST
  www.assist.org

- ⇒ College Catalogs
  www.collegesource.org

- ⇒ California Community Colleges and Districts
  www.cccco.edu

Transferability of Baccalaureate-Level Coursework

- ⇒ CSU Executive Order 167: Transfer of Credit
  www.calstate.edu/eo/EO-167.pdf

- ⇒ Working Definition of Baccalaureate Credit (Faculty Senate Resolution of 1987)
  www.calstate.edu/app/general-ed-transfer.shtml