



THE CALIFORNIA STATE UNIVERSITY



UNIVERSITY OF CALIFORNIA

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# Guiding Notes for General Education Course Reviewers

These Guiding Notes have been developed based on recommendations from the faculty and staff who review course outlines proposed for lower-division general education credit in the University of California (UC) and the California State University (CSU). They elaborate on state and systemwide policies, adding suggestions and insights from past reviewers.

The Guiding Notes are in five parts:

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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 Five.

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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 baccalaureate-level students inclusive of every background and major. It develops these 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 and CSU systems 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 CSU GE Breadth is preferred.

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

Students who transfer into the UC or CSU from California Community Colleges (CCC) 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:

|  | <b>For students bound for</b> | <b>Governing Policy</b>         | <b>Guidelines</b>   |
|--|-------------------------------|---------------------------------|---|
| <b>CSU GE Breadth</b>                                | Any CSU                       | <a href="#">EO 1100 Revised</a> | These Guiding Notes   |
| <b>Intersegmental GE Transfer Curriculum (IGETC)</b> | Any UC or CSU                 | <a href="#">EO 1100 Revised</a> | <a href="#">IGETC Standards v 1.9</a> and these Guiding Notes |

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

## General Education before Transfer

Both CSU GE Breadth and IGETC will apply to any CSU, and IGETC will apply to any UC or CSU. However, IGETC may not be acceptable or recommended for students in some colleges or in high-unit majors (e.g., science or engineering). For these majors, longer chains of prerequisites may make it more advantageous to take lower-division coursework in the

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

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. For more details on this process, see “CSU GE Breadth and IGETC for STEM Majors within ADTs” below. For UC, see [“Quick Reference Guide to UC Admissions.”](#)

## 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. Most areas and subareas in CSU 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.

## Certification via Completion of an Approved Associate Degree for Transfer (ADT)

Students are considered fully lower-division general education certified if they successfully completed CSU GE Breadth or IGETC (requirements) and are awarded a CCC ADT.

## CSU GE Breadth and IGETC for STEM Majors within ADTs

Students pursuing Chemistry or Biology ADTs may complete CSU GE Breadth for STEM (33 units) or IGETC for STEM (31 units), deferring one lower-division course in Area C or Area 3 and one lower-division course in Area D or Area 4 until after transfer. CSU GE Breadth for STEM and IGETC for STEM is applicable only to majors for which the Transfer Model Curriculum specifies.

A CCC preparing a CSU GE Breadth for STEM certification as part of an ADT shall ensure that the student has completed the following before transfer:

- a. All courses in Areas A, B, and E of the traditional GE curriculum; and
- b. One course in Subarea C1 Arts and one course in Subarea C2 Humanities; and

- c. Two courses in Area D from two different disciplines.

A CCC preparing IGETC for STEM certification as part of an ADT shall ensure that the student has completed the following before transfer:

- a. All courses in Area 1, 2, and 5 of the traditional IGETC; and
- b. One course in Area 3A; one course in Area 3B; and two courses in Area 4 from two different disciplines.

**CSU GE Breadth and IGETC similarities and differences:**

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 CSU GE Breadth if the CCC also requests it in the course proposal. However, not all courses approved for CSU GE Breadth are approved for IGETC. The exception to this rule is CSU GE Subarea A1 (IGETC 1C). Approval for courses in this Subarea is based solely on the CSU decision.

| GE Breadth (CSU only)   | IGETC (CSU and UC)  |
|---|---|
| A single course may carry any number of units. However, courses of less than 3 semester (or 4 quarter) units are rarely approved for CSU GE (except for physical activity courses). Stand-alone lab courses, which have a prerequisite or co-requisite of the corresponding lecture course, must be a minimum of 1 semester/quarter unit. | Each course must carry a minimum of 3 semester (or 4 quarter) units. Stand-alone lab courses which have a prerequisite or co-requisite of the corresponding lecture course must be a minimum 1 semester/quarter unit.   |
| Requires Oral Communication.  | Does not require Oral Communication for students transferring to the UC.  |
| Any passing grade will count for courses other than the golden four which require a C- or better: Written Communication, Oral Communication, Critical Thinking, and Quantitative Reasoning.   | Only grades of C or better will count for any courses.  |
| Courses in Subarea B4 will only have a prerequisite reflective of the skills and knowledge needed to succeed in the course.   | Requires intermediate algebra or higher math as prerequisite for courses in Area 2A, Mathematics. Until 2019, math courses with prerequisites of intermediate algebra OR courses that satisfy the UC TCA Guidelines for Statistics and are approved by CSU per the memo of October 2015 are acceptable to fulfill the quantitative reasoning requirement. |
| Includes an area in Lifelong Understanding and Self-Development.  | No area in Lifelong Understanding and Self-Development  |
| Does not require Language Other Than English (LOTE).  | Requires Language Other Than English (LOTE) for students transferring to the UC.  |

| GE Breadth (CSU only) |         | Discipline                  | IGETC (CSU and UC systems) |                                |
|-----------------------|---------|-----------------------------|----------------------------|--------------------------------|
| AREA A                | A1      | Oral Communication          | 1C                         | [1C not UC required]<br>AREA 1 |
|                       | A2      | Written Communication       | 1A                         |                                |
|                       | A3      | Critical Thinking           | 1B                         |                                |
| AREA B                | B1      | Physical Sciences           | 5A                         | AREA 5<br><br>AREA 2           |
|                       | B2      | Biological Sciences         | 5B                         |                                |
|                       | B3      | Laboratory Activity         | 5C                         |                                |
|                       | B4      | Mathematics                 | 2A                         |                                |
| AREA C                | C1      | Arts                        | 3A                         | AREA 3                         |
|                       | C2      | Humanities                  | 3B                         |                                |
| AREA D                | D       | Social Sciences             | 4                          | AREA 4                         |
| AREA E                | E       | Lifelong Learning           | no area                    | [not UC required]              |
| [not CSU required]    | no area | Language Other than English | 6A                         | [not CSU required]             |

**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. Typically, students take courses that count for both AI and GE.

**Process Overview: Faculty and Staff Review**

CCCs submit new or revised course outlines to the CSU and UC system offices electronically via ASSIST Intersegmental faculty and staff then evaluate the outlines for consistency with the respective policy documents. CCCs are responsible for submitting accurate and current course outlines. If a course has changed substantially since its last review, a CCC should select “Substantial Change” during the course submission process. (For a description of what counts as a “substantial” change, see Submission, below.)



*Figure 1: Annual Review Process*

### Course Design

Courses are created by faculty at CCC. 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. CCC courses must be UC-transferable (approved for the UC TCA) to be approved for IGETC. 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 CCC 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

In the fall, CCC articulation officers submit courses by entering their new or substantially revised course outlines into ASSIST. (These course submission screens aren't visible to public users.) Course outlines submitted with "substantial" changes must include explanation of revisions.

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

| <b>Substantial Changes (requires review)</b>  |
|---|
| Course content  |
| Student learning objectives   |
| Modes of delivery ( <i>only if</i> student learning objectives or content are affected) |
| Prerequisites   |
| Contact hours and/or decrease in units  |
| Methods/criteria of assessment  |

| <b>Technical Changes (not requiring review)</b> |
|---|
| Course prefix/subject                           |
| Course number                                   |
| Title change                                    |
| Updates to representative textbooks             |

After the course outline data has been submitted, it is then available to the CSU Office of the Chancellor (CSUCO) and the UC Office of the President (UCOP).

|                         |   |
|-------------------------|---|
| <b>1st Level Review</b> | Every submitted course undergoes a 1st-level review conducted by at least two readers. Courses are reviewed comprehensively; that is, if a course with current approval in biology is resubmitted for additional approval in social science, then reviewers will evaluate its fit for both areas of general education, and the pre-existing approval in biology may be withdrawn. Each 1st-level review ends with a preliminary recommendation. |
| <b>2nd Level Review</b> | For a minority of submitted courses, first-level reviewers are unable to agree on whether to recommend approval. These courses are referred to 2nd level review by additional staff or by faculty in the disciplines. 2nd-level reviewers may also contact liaisons to the authors of the course outlines to get clarification or additional details.   |
| <b>Reconciliation</b>   | Reviewer recommendations for courses in CSU GE Breadth and American Institutions are reconciled in the CSUCO. Determinations of IGETC congruence are made in discussions between the CSUCO and UCOP.  |
| <b>Notification</b>     | By early April, articulation officers at participating institutions throughout California are able to view decisions within ASSIST.   |

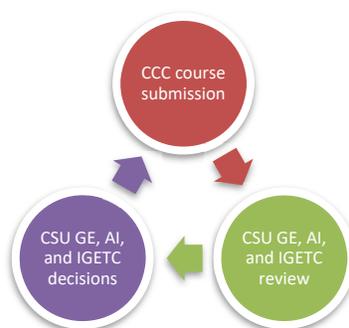


Figure 2: Ongoing Review Cycle

### Respecting Precedent vs. Responding to Change

Submitting CCCs sometimes point to comparable courses already approved at another CCC, and ask whether reviewers feel bound by precedent. For the most part the answer is “no”: if a recently denied submission looks like longstanding approved courses elsewhere, then we are more likely to reconsider and remove the originally approved course than to extend similar approvals for the sake of consistency. The needs of the state, guidance from disciplinary faculty, and our understanding of the world and how best to learn about it are all evolving, and good articulation has to accommodate that, even if progress does not happen everywhere at the same rate.

However, we also recognize that frequent changes in the statewide transferability of a single course can disrupt enrollment, advising, and planning, and so very recent approvals may be allowed to stand even over the valid objections of subsequent reviewers.

## **PART TWO: REVIEW CRITERIA BY AREA**

### **Criteria Applying to All Areas**

### **IGETC Standards 1.9**

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.

CCCs will indicate the pattern, GE Area and Subarea to which courses are proposed 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 CCCs serve multiple constituencies, not everything they teach is comparable in depth and rigor to courses at four-year universities; for example, some courses are 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 ASSIST to propose courses for the UC Transfer Credit Agreement (UC TCA).

CSU faculty chose instead to let CCCs 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: <http://calstate.edu/app/policies>.) 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 IGETC pattern, any course must carry at least 3 semester units or 4 quarter units of credit. In the CSU GE Breadth pattern, *courses of less than 3 units are rarely approved for CSU GE* (other than physical activity courses). Stand-alone lab courses that have a prerequisite or co-requisite of the corresponding lecture course must be a minimum 1 semester/quarter unit). For specific unit requirements, see [CSU Executive Order 1100 Revised](#).

**Course content should reflect a balance between breadth and depth appropriate for lower-division work.** While it is 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 (CSU GE Breadth Area E) that focuses only on the first years of childhood, would not provide the breadth expected of GE.

**Variable-topics courses are excluded.** Variable-topics courses (or directed-studies courses) are not 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 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.

**Courses may be approved in more than one area.** One course may meet the criteria for more than one GE area. However, ordinarily students will be able to count it toward only one area.

**CSU GE Breadth courses may be offered in any modality.** The CSU allows online and hybrid course offerings across all areas of CSU GE, as does IGETC provided that the courses have been approved by the CSU and UC during the IGETC course review process.

**Proposed courses shall 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 do not need to be published in hard copy. The UC and CSU welcome the use of online texts and other Open Educational Resources (OER), 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.

### Open Educational Resources (OER)

All CSU and UC campus departments consider the content of textbooks when reviewing articulation proposals from the CCCs. The use of online texts is reviewed by campuses on a case-by-case basis for articulation with CCCs.

Multiple CCC courses already use online texts that are approved for CSU- and UC-transferability, and for articulation with CSU and UC campuses.

Some CSU and UC campus departments use online texts themselves.

Texts, both online and traditional, must be dated within seven years for most course submissions. If they are not, there should be a note of explanation included, e.g., if the text is considered a classic.

**Courses and representative 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.



### Textbooks

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 2011 for course outlines submitted fall 2018).

Older books should be included if they're considered classics in the field and clearly identified *as classics* in the course outline (e.g.: "classic," "discipline classic").

Lab manuals *are required* and must be explicitly listed on the COR for all courses in IGETC Area 5C and CSU GE Breadth Subarea B3.

"Home-grown" lab manuals, created by CCC faculty, are also acceptable.

Reviewers may make exceptions if the course authors provide a strong rationale.

Course outlines lacking textbooks or out-of-date textbooks will not be considered for CSU GE Breadth or IGETC.

**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 ASSIST Next Gen, or has gaps or contradictions in the submitted information.

**Course outlines should be in English**—even when the course is not.

**CSU GE Breadth decisions should be consistent with IGETC.** Because transfer students count on courses that meet IGETC standards to work in the CSU Breadth pattern, reviewers will approve courses in CSU GE Breadth for the sake of consistency.

## **CSU GE BREADTH REQUIREMENTS AND IGETC STANDARDS**

### **CSU GE BREADTH AREAS A and IGETC AREA 1**

#### **Oral Communication**

Instruction approved for fulfillment of the requirement in oral communication is to be designed to emphasize the content of communication as well as the form and should provide an understanding of the psychological basis and the social significance of communication, including how communication operates in various situations. Applicable courses should view communication as the process of human symbolic interaction focusing on the communicative process from the rhetorical perspective: reasoning and advocacy, organization, accuracy; the discovery, critical evaluation and reporting of information; reading and listening effectively as well as speaking and writing. This must include faculty-supervised, faculty-evaluated oral presentations in the presence of others (physically or virtually).

Interpersonal communication and debate courses are not a natural fit in the oral communication area, but a few have incorporated significant faculty-supervised, faculty-evaluated practice in speaking with others; added at least a small component of traditional rhetoric; and won placement in the oral communication area.

This request is met by language in the CSU's executive order governing General Education Breadth 1100 Revised August 23, 2017. <http://www.calstate.edu/eo/eo-1100-rev-8-23-17.pdf>

The CSU asks that course outlines submitted for CSU GE Breadth Subarea A1 or IGETC Area 1C be specific regarding how instruction and evaluation are conducted, so that it may be determined that student presentations, no matter what modality the course is

offered in, will be made either in front of faculty and other listeners. Rhetorical principles must be covered (e.g., study of effective communication in formal speeches or social interaction is appropriate). To qualify in CSU GE Breadth Subarea A1, students must speak their own words, not recite words written by others.

**Oral Communication (CSU requirement)**

**IGETC Standards 1.9**

| CSU GE Breadth<br>Area A   | IGETC<br>Area 1   |
|--|---|
| <p><b>A1 Oral Communication</b></p> <ul style="list-style-type: none"> <li>• faculty-supervised, faculty-evaluated oral presentations in the presence of others (physically or virtually)</li> <li>• course outlines should be very specific regarding methods of instruction and methods of evaluation</li> <li>• student presentations will be made either in front of faculty or other listeners, or in online environments</li> <li>• rhetorical principles must be included and specified in the course outline (for example, the study of effective communication in formal speeches or social interaction would be appropriate)</li> <li>• courses must require students to speak their own words, not recite words written by others</li> <li>• Interpersonal communications and debate courses are not a natural fit</li> </ul> | <p><b>1C Oral Communication</b></p> <ul style="list-style-type: none"> <li>• courses should provide an understanding of the psychological basis and social significance of communication, including how communication operates in various situations</li> <li>• courses should view communication as the process of human symbolic interaction focusing on the communicative process from the rhetorical perspective: reasoning and advocacy, organization, accuracy; the discovery, critical evaluation and reporting of information; reading and listening effectively as well as speaking and writing</li> </ul> |

**CSU GE BREADTH AREAS A and IGETC AREA 1**

**English Language Communication and 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.

**Written Communication**

**IGETC Standards 1.9**

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. Successful completion of the course in reading and written composition (i.e., a course that satisfies English 1A) shall be prerequisite to the course in Critical Thinking/English Composition.

Reviewers look for evidence of assigned and graded student writing, both in class and as assigned homework. The course must carry an appropriate prerequisite course (or SAT score or placement score), distinguishing it from a basic skills class.

| <b>CSU GE Breadth<br/>Area A</b>   | <b>IGETC<br/>Area 1</b>   |
|--|---|
| <p><b>A2 Written Communication</b></p> <ul style="list-style-type: none"> <li>• courses conducted in English</li> <li>• must achieve same objectives as “freshman composition” found in most universities</li> <li>• explore rhetorical principles independent of the application of writing to a specific profession</li> <li>• no minimum number of words; however, number of words should be specified in the course outline</li> </ul> | <p><b>1A Written Communication</b></p> <ul style="list-style-type: none"> <li>• substantial instruction and practice in expository essay writing at the college-level</li> <li>• minimum 6,000 words</li> <li>• courses should require substantial amount of reading and significant literature</li> <li>• prerequisite to course in Critical Thinking/English Composition</li> </ul> |

## CSU GE BREADTH AREAS A and IGETC AREA 1

### Critical Thinking and Composition

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.

### Critical Thinking and Composition

### IGETC Standards 1.9

The second semester of English composition adds a requirement of critical thinking taught in a variety of disciplines which provide, as a major component, instruction in the composition of substantial essays and require students to write a sequence of such essays.

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.

| CSU GE Breadth<br>Area A   | IGETC<br>Area 1  |
|--|--|
| <p><b>A3 Critical Thinking</b></p> <ul style="list-style-type: none"> <li>• courses in critical thinking, <u>not</u> writing</li> <li>• no minimum word count</li> <li>• courses include explicit instruction and practice in inductive and deductive reasoning and identification of formal and informal fallacies of language and thought</li> <li>• literary criticism courses are typically not accepted in this area</li> </ul> | <p><b>1B Critical Thinking</b></p> <ul style="list-style-type: none"> <li>• must have prerequisite of English Composition (course that satisfies English 1A)</li> <li>• written work evaluated for both composition and critical thinking</li> <li>• minimum 6,000 words of writing is required</li> <li>• texts chosen should reflect an awareness of cultural diversity</li> </ul> |

## CSU GE BREADTH SUBAREAS B1-B3 and IGETC AREA 5

### Scientific Inquiry, Physical and Biological Sciences

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

#### Scientific Inquiry

##### From CSU Executive Order 1100 Revised:

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. The nature and extent of laboratory experience is to be determined by each campus through its established curricular procedures.

#### Physical and Biological Sciences

#### IGETC Standards 1.9

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.

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 and 5C, 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. Area B and 5 courses should enhance students’ appreciation of how scientists do science, not just what scientists have concluded.

### 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 is 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 is appropriate for a course with lab activities.



#### Lab Manuals

Lab manuals are required, and must be explicitly listed on the COR, for all courses in IGETC Area 5C and CSU GE Breadth Subarea B3.

“Home-grown” lab manuals, created by CCC faculty, are also acceptable.

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.

| CSU GE Breadth<br>Area B  | IGETC<br>Area 5  |
|---|--|
| <p><b>B1-B2 Physical and Life Sciences</b></p> <ul style="list-style-type: none"> <li>emphasize the perspectives, concepts, principles, theories, and methodologies of the scientific disciplines</li> <li>appreciation of how scientist do science, not just what scientists have concluded</li> </ul> | <p><b>5A-5B Physical and Biological Sciences</b></p> <ul style="list-style-type: none"> <li>one course in Physical Science (5A), one in Biological Science (5B), with at least one incorporating a laboratory (5C)</li> <li>emphasize experimental methodology, testing of hypotheses, and power of systematic questioning, rather than only recall of facts</li> <li>focus on teaching basic concepts of physical and biological sciences</li> <li>sophisticated understanding of science as a human endeavor, including</li> </ul> |

|   |  |
|---|--|
|   | limitations and power of scientific inquiry <ul style="list-style-type: none"> <li>emphasize major concepts of the discipline, including biochemical and physiological principles</li> </ul>   |
| <b>B3 Laboratory Activity</b> <ul style="list-style-type: none"> <li>must be associated with a lecture component, either built into the laboratory course itself or connected as a co-requisite or prerequisite</li> <li>course outline clearly distinguishes the laboratory activity from the lecture</li> <li>lab manuals are required, and must be explicitly listed the course outline</li> </ul> | <b>5C Laboratory Science</b> <ul style="list-style-type: none"> <li>must correspond to one of the lecture courses</li> <li>lecture course is a prerequisite or co-requisite of the laboratory course</li> <li>lecture and lab courses may have separate course numbers</li> <li>lab manuals are required, and must be explicitly listed on the course outline</li> </ul> |

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 mode of intellectual inquiry and emphasize the major concepts of the discipline.*

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

- Physical anthropology courses.** Depending on the emphasis, a course in physical anthropology may belong with other biological sciences in Subareas B2 and 5B.
- Physical geography courses.** These are almost always accepted in Subarea B1 and 5A. (Other kinds of geography course are closer to the social sciences and are instead approved in Areas D and 4.)
- Lower-division major preparation courses.** These may work unless they are too narrow; the question is whether students will achieve the “science literacy” expected of educated citizens in any profession.
- Lab manuals.** Lab manuals are required, and must be explicitly listed on the COR, for all courses in IGETC Area 5C and CSU GE Breadth Subarea B3.

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.*

**CSU GE BREADTH SUBAREA B4 and IGETC AREA 2**

**Mathematics/Quantitative Reasoning, Mathematical Concepts and Quantitative Reasoning**

**Mathematics/Quantitative Reasoning**

**From Executive Order 1100 Revised:**

Through courses in Subarea B4 students shall demonstrate the abilities to reason quantitatively, practice computational skills, and explain and apply mathematical or quantitative reasoning concepts to solve problems. Courses in this Subarea shall include a prerequisite reflective only of skills and knowledge required in the course. In addition to traditional mathematics, courses in Subarea B4 may include computer science, personal finance, statistics or discipline-based mathematics or quantitative reasoning courses, for example.

**Mathematical Concepts and Quantitative Reasoning**     **IGETC Standards 1.9**

The Mathematical Concepts and Quantitative Reasoning requirement shall be fulfilled by completion of a one-term course in baccalaureate level mathematics or statistics, with a stated course prerequisite of intermediate algebra or equivalent.\* 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 or equivalent\* as a prerequisite. 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.

\*The prerequisite for Mathematics courses is intermediate algebra or equivalent; equivalent courses should cover the content and mathematical practices of the Common Core State Standards for Mathematics, or CCSSM. Statistics course prerequisites/co-requisites should be consistent with CCSSM math standards and teach the skills and knowledge without which the student is highly unlikely to succeed in college-level statistics. For details see the UC TCA Guidelines for [Mathematics](#) and [Statistics](#).

Courses approved to fulfill this requirement must focus on quantitative analysis and the ability to use and criticize quantitative arguments. Symbolic Logic, Computer Programming, Mathematics for Teachers and survey courses such as Math in Society, were deemed unacceptable to fulfill the Mathematical Concepts and Quantitative Reasoning requirement.

| CSU GE Breadth<br>Area B  | IGETC<br>Area 2   |
|---|---|
| <p><b>B4 Mathematics/Quantitative Reasoning</b></p> <ul style="list-style-type: none"> <li>• courses shall include a prerequisite reflective only of skills and knowledge required in the course</li> <li>• may include computer science, personal finance, statistics or discipline-based mathematics or quantitative reasoning courses</li> <li>• courses require students to demonstrate the abilities to reason quantitatively, practice computational skills, and explain and apply mathematical or quantitative reasoning concepts to solve problems</li> </ul> | <p><b>2A Mathematical Concepts and Quantitative Reasoning</b></p> <ul style="list-style-type: none"> <li>• fulfilled by completion of a mathematics or statistics course with a stated course prerequisite of intermediate algebra or its equivalent courses should cover the content and mathematical practices of the CCSSM</li> <li>• courses approved to fulfill this requirement must focus on quantitative analysis and the ability to use and criticize quantitative arguments.</li> </ul> |

**Difference from CSU GE Breadth:** Math courses developed specifically for students preparing to teach elementary school are *excluded from IGETC but acceptable in CSU GE Breadth*. CSU math faculty have asked reviewers to check for inclusion of specific elements of math instruction before granting approval. (For Subarea B4 requirements, see Approving Math Courses for Elementary School Teachers below.)

**CSU GE Breadth Subarea B4 Mathematics/Quantitative Reasoning (QR)**

Courses submitted for CSU GE Breadth Subarea B4 approval shall ask students to:

- interpret and communicate quantitative information and mathematical and statistical concepts using language appropriate to the context and intended audience;
- make sense of problems, develop strategies to find solutions, and persevere in solving them;
- reason, model, draw conclusions, and make decisions with quantitative information about problems arising in everyday life, society, and the workplace;
- construct, critique, and evaluate quantitative arguments that utilize mathematical, statistical, and quantitative information;
- use appropriate tools strategically.<sup>1</sup>

Statistics courses, in particular, shall ask students to:

- produce and interpret graphical displays and numerical summaries;
- recognize questions for which the investigative process of statistics is useful and answer questions using that process
- have a conceptual and computational understanding of descriptive and basic inferential statistical methods;
- recognize and explain the roles of variability in statistics and randomness in designing studies and drawing conclusions;

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<sup>1</sup> Drawn from Dana Center QR Learning Outcomes, Common Core Standards for Mathematical Practice, Committee on the Undergraduate Program in Mathematics Curriculum Guide 2004

- demonstrate an understanding of concepts useful in building statistical literacy such as correlation is not causation and the difference between statistical significance and practical importance.<sup>2</sup>

Courses that do not make significant use of quantitative reasoning are excluded from Subarea B4. These include:

- courses in the history of mathematics
- computer programming courses
- symbolic logic courses

*Computer Science courses* that go beyond programming concepts, methodologies, and fundamental techniques to meaningfully address quantitative information may be acceptable.

*Survey courses* are excluded from IGETC but are acceptable for CSU GE Breadth if they meet the expectations outlined in this document for CSU GE B4 courses.

*Additional quantitative reasoning courses* (beginning with the fall 2018 semester) may be approved for CSU GE Breadth but may not be considered for IGETC.

For *general QR courses* such as Math for Liberal Arts, Mathematics for Practical Purposes, Introduction to Mathematical Modelling, and more targeted introductory courses such as Personal Finance, students should be proficient in a broad set of skills and knowledge from 8th grade mathematics, geometry, and Algebra I (or equivalent). Students enrolling in these courses should be able to:<sup>3</sup>

- demonstrate procedural fluency with real number arithmetic operations and using those operations to represent real-world scenarios and to solve stated problems;
- evaluate with the use of technology expressions that involve arithmetic with signed numbers, square roots, squaring, exponents, factorials, and summation notation;
- demonstrate number sense, including dimensional analysis and conversions between fractions, decimals, and percentages;
- represent numbers, intervals, and inequalities on the number line;
- make estimates and predications, understand when approximations are appropriate and when exact calculations are necessary;
- evaluate, and apply linear, quadratic, and absolute value expressions and formulas;
- use information about functions and features of graphs to model relationships between quantities (positive, negative, increasing, decreasing, etc.);
- solve, graph, and interpret linear equations and inequalities; solve problems modeled by linear equations;
- demonstrate an understanding of displays of data such as tables, bar charts, histograms, pie charts, and line graphs;
- use data to calculate and interpret median, and mean;

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<sup>2</sup> Drawn from UC transfer regulations for courses in specific subject areas, Guidelines for Assessment and Instruction in Statistics Education (GAISE) College Report 2016, CID Descriptor for Math 110

<sup>3</sup> Drawn from Dana Center Quantitative Reasoning Course, Statement on Competencies in Mathematics Expected of Entering College Students, California Common Core State Standards: Mathematics

- solve application problems applying measurement and geometry topics such as distance, area, perimeter, and volume

Courses in *elementary statistics* may be offered by multiple departments, including business, economics, mathematics, social science, and science. Students should be proficient in a broad set of skills and knowledge from 8th grade mathematics, geometry, and Algebra I (or equivalent). Students enrolling in these courses should be able to:<sup>4</sup>

- work with numerical information:
  - ordering decimals, order of operations, operations with fractions and percentages,
  - converting fractions to decimals and percentages,
  - representing numbers, intervals, and inequalities on the number line.
- evaluate expressions with the use of technology that involve arithmetic with signed numbers, square roots, squaring, exponents, factorials, and summation notation;
- solve simple linear equations in one variable;
- model linear models;
  - interpreting slope and intercept;
  - graphing a line and points;
  - making predictions;
  - calculating vertical deviation of a point from the line;
- approximate areas of specified regions given the area under a curve or histogram;
  - extracting information from graphs and tables;
- understanding set notation and diagrams;
  - finding the complement of a set;
  - finding the union and intersection of two sets.

For courses that require stronger algebra skills, such as finite math, college algebra, or precalculus, the prerequisite skills and knowledge will also include topics from Algebra II. In addition to the topics listed for general QR courses, students enrolling in these courses should be able to:<sup>5</sup>

- Evaluate and apply polynomial, rational, exponential, power, rational, and trigonometric expressions and formulas;
- solve, graph, and interpret quadratic equations; solve two linear equations in two unknowns; solve problems modeled by quadratic equations;
- perform arithmetic operations on polynomials and rational expressions; apply factoring techniques to simplify expressions and locate roots;
- understand the relationship between the multiple representations (variable, graph, data, words) of various functions (quadratic, power, exponential, rational, trigonometric functions);
- find inverse functions;

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<sup>4</sup> Drawn from UC Requirements for Transferable Courses and Dana Center Math Prerequisites for Success in Introductory Statistics

<sup>5</sup> Drawn from Statement on Competencies in Mathematics Expected of Entering College Students, California Common Core State Standards: Mathematics, DCMP Reasoning with Functions II

- create and interpret mathematical models, by building functions that describe a given situation;
- use the concepts of congruence, similarity, and symmetry to demonstrate relationships in geometric figures such as lines, triangles, circles, quadrilaterals, and other polygons;
- use trigonometric ratios to solve problems involving right triangles;
- understand the graphs and properties of trigonometric functions;
- analyze data to calculate center (mean and median), and measures of spread (standard deviation and interquartile range);
- describing data, interpreting summaries of data, and making predictions based on the data;
- demonstrate a basic understanding of inductive and deductive reasoning, hypotheses and conclusions.

Across all CCC courses that are approved for CSU GE Breadth (including Subarea B4), the course content and outcomes must be baccalaureate level, requiring as prerequisite the skills and knowledge developed in high school that are needed for the given course.

*Note: With the issuance of CSU EO 1110 Revised, CSU students will no longer be required to complete remedial courses but will enroll in courses with support as indicated by multiple measures. Similarly, we leave it to the individual CCC to determine how students who have not completed the prerequisites to Subarea B4 courses will be supported to succeed (e.g., traditional remedial courses, co-requisite, stretch, or pathways models).*

### **Approving Math Courses for Elementary School Teachers (CSU GE Breadth pattern only)**

Math courses designed as part of a teacher preparation or liberal studies curriculum must meet specific criteria to qualify for Subarea B4 of CSU GE Breadth. Faculty have asked that such courses include *all* of these elements listed in the March 2013 posting of the [C-ID Math 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. Numeration systems: history, Hindu-Arabic numeration system, and place value systems;
2. Integers: structure and basic properties, computational algorithms;
3. Basic number theory: divisibility, prime and composite numbers, prime factorization, fundamental theorem of arithmetic, least common multiple and greatest common divisor;
4. Rational numbers: structure and properties, ratio and proportion;
5. Real numbers: structure and basic properties, arithmetic operations, rational and irrational numbers, decimal representation, number line representation;
6. Patterns, problem solving, communication, connections, modeling, reasoning, and representation; and
7. National and state curriculum standards for elementary school math including Common Core State Standards.

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

1. Perform calculations with place value systems;
2. Evaluate the equivalence of numeric algorithms and explain the advantages and disadvantages of equivalent algorithms in different circumstances;
3. Apply algorithms from number theory to determine divisibility in a variety of settings;
4. Analyze least common multiples and greatest common divisors and their role in standard algorithms;
5. Explain the concept of rational numbers, using both ratio and decimal representations; analyze the arithmetic algorithms for these two representations; and justify their equivalence;
6. 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;
7. Develop and reinforce conceptual understanding of mathematical topics through the use of patterns, problem solving, communication, connections, modeling, reasoning, and representation; and
8. Develop activities implementing curriculum standards.

### **CSU GE BREADTH AREA C and IGETC AREA 3**

#### **Arts and Humanities**

##### **From Executive Order 1100 Revised:**

Across the disciplines in Area C coursework, students will cultivate intellect, imagination, sensibility and sensitivity. Students will respond subjectively as well as objectively to aesthetic experiences and will develop an understanding of the integrity of both emotional and intellectual responses. Students will cultivate and refine their affective, cognitive, and physical faculties through studying works of the human imagination. Activities may include participation in individual aesthetic, creative experiences; however, Area C excludes courses that exclusively emphasize skills development.

In their intellectual and subjective considerations, students will develop a better understanding of the interrelationship between the self and the creative arts and of the humanities in a variety of cultures.

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.

**Arts and Humanities**

**IGETC Standards 1.9**

**Arts**

Courses that have as their major emphasis the integration of history, theory, aesthetics, and criticism. Performance and studio classes may be credited toward satisfaction of this subject area if their major emphasis is the integration of history, theory, and criticism (e.g., Dance History in Cultural Context, Film Art, History of Architecture, History of Modern Art, Multi-Cultural Theatre, Music History and Literature, The Jazz Experience).

**Humanities**

Acceptable Humanities courses are those that encourage students to analyze and appreciate works of philosophical, historical, literary, aesthetic and cultural importance. Advanced foreign language courses may be approved if they include literature or cultural aspects. Theater and film courses may be approved if taught with emphasis on historical, literary, or cultural aspects. Logic courses may be accepted if the focus is not solely on technique but includes the role of logic in humanities disciplines (e.g., Chinese Civilization, Early African Literature, Comparative Religions, Mexican and Chicano Literature, Moral and Political Philosophy, Native American Mythology and Literature, Women in Literature).

| CSU GE Breadth<br>Area C<br>Arts and Humanities  | IGETC<br>Area 3<br>Arts and Humanities  |
|--|---|
| <p><b>C1 Arts: Arts, Cinema, Dance, Music, Theatre</b></p> <ul style="list-style-type: none"> <li>• Arts include the visual arts, architecture, design, music, dance, theatre, and film</li> <li>• courses should help students make connections between the arts and cultural and social issues, and serving as an introduction to the arts as an aesthetic and creative endeavor</li> <li>• skills development permitted, but only when it contributes to a broader contextual understanding of the arts</li> <li>• courses that exclusively emphasize skills development are not appropriate for general education</li> <li>• determine the degree of emphasis on skills acquisition; look at the time spent in lecture vs. activity</li> </ul> | <p><b>3A Arts</b></p> <ul style="list-style-type: none"> <li>• analyze and appreciate works of philosophical, historical, literary, aesthetic and cultural importance</li> <li>• develop and advance historical understanding of major civilizations and cultures, both Western and non-Western, through the study of philosophy, language, literature and the fine arts</li> <li>• recognize contributions to knowledge, civilization, and society by men and women, and members of various ethnic or cultural groups</li> <li>• encourages student to analyze and appreciate works of philosophical, historical, literary, and cultural importance</li> <li>• historically constitutes the heart of a liberal arts general education because of the fundamental humanizing perspective for the development of the whole person</li> </ul> |

|  |   |
|--|---|
| <p><b>C2 Humanities: Literature, Philosophy, Languages Other than English</b></p> <ul style="list-style-type: none"> <li>• students learn to analyze and appreciate works of philosophical and cultural importance</li> <li>• course serves as a pathway to a broader understanding of the human condition</li> <li>• course will help students confidently understand and articulate their own subjective intellectual experiences</li> <li>• creative writing courses if they include reading and analysis of works of literature</li> <li>• geography, history, and art courses if outline indicates a strong cultural content and exploration of subjective human experience</li> <li>• language courses should evoke a sympathetic response to the acquired culture</li> <li>• English as a Second Language courses may be advanced enough to meet the objectives of Humanities</li> <li>• art history courses</li> </ul> | <p><b>3B Humanities</b></p> <ul style="list-style-type: none"> <li>• analyze and appreciate works of philosophical, historical, literary, aesthetic and cultural importance</li> <li>• advanced foreign language courses may be approved if they include literature or cultural aspects</li> <li>• theater and film courses may be approved if taught with emphasis on historical, literary, or cultural aspects</li> <li>• logic courses may be accepted if the focus is not solely on technique but includes the role of logic in humanities disciplines (e.g. Chinese Civilization, Early African Literature, Comparative Religions, Mexican and Chicano Literature, Moral and Political Philosophy, Native American Mythology and Literature, Women in Literature)</li> </ul> |
|--|---|

**Arts for General Education**

*Studio and performance classes that develop technique or skills alone do not meet the standards established for this area. Skills development is permitted, but only when it contributes to a broader contextual understanding of the arts, such as helping students make connections between the arts and cultural and social issues, and serving as an introduction to the arts as an aesthetic and creative endeavor. (Audition-based courses will not be approved for GE.)*

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

In 2011, CSU faculty addressed the problem of these grandfathered courses in Subarea C1 by removing those offered at or 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 GE.

On the other hand, a noteworthy course in ceramics did qualify. The course 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 in Arts and Humanities:*

*Music Theory courses* are primarily skills development courses (notation and ear training) and are ordinarily excluded, even if they include some classical compositions. In the review conducted in Academic Year 2016-17, readers identified a handful of courses that seemed to satisfy the criteria both for the major and for GE.

*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, warranting a Humanities designation appropriate. When the focus is instead on film as a medium of artistic expression, the more appropriate placement is Arts.

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 courses* are frequently denied for GE, because they emphasize pre-professional training for educators rather than great works of the human imagination.

## **Humanities for General Education**

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 language 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 Subarea C2 in CSU GE Breadth or Area 3B in IGETC, then the more advanced course probably has a strong enough cultural component to qualify. The course outline should include this cultural component content.

The prerequisite for language courses that satisfy Humanities may be:

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

*Creative writing courses* are acceptable for CSU GE Breadth Subarea C2 only if they include reading and analysis of 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.

*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 seldom accepted in Area 3B or Subarea C2. (However, courses that study the interaction of mass communication and society are often appropriate for social science.)

*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 Subarea C2 and Area 3B.

*Logic courses* are categorically excluded from Subarea 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 Subarea C2 or Area 3B Humanities, Areas D or 4 Social Sciences, or both.

*Courses in linguistics* may also be a close call between humanities and social science. In addition to reviewing the content of the course outline, reviewers may refer to the department prefix (typically Anthropology or English) to suggest which mode of inquiry is dominant.

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

## 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 GE credit in California.

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

| Study in Arts and Humanities  | Study in the Social Sciences  |
|---|---|
| focus on the human condition: its limits, potential, and creative expressions | uses social scientific techniques of experimentation and empirical evidence to explore human experience                                     |
| relies on critical analysis of specific texts or works to support its claims  | includes theoretical perspectives and focus on core concepts and methods of the discipline, including quantitative and qualitative analysis |
| is “hermeneutic,” i.e., interpretive specially of speech or writing           | is more likely to examine groups of people and patterns of behavior and social dynamics   |

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 may categorize history in the humanities. However, if participating institutions submit a history course for approval in Area D/Area 4 Social Sciences and the course outline supports the designation, then that is where the course is approved.

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

**Social Sciences and Social and Behavioral Sciences**

**Social Sciences**

**From CSU Executive Order 1100 Revised:**

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 issues in their contemporary as well as historical settings and in a variety of cultural 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.

**Social and Behavioral Sciences**

**IGETC Standards 1.9**

The pattern of coursework completed shall ensure opportunities for students to develop understanding of the perspectives and research 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.

| CSU GE Breadth<br>Area D  | IGETC<br>Area 4   |
|---|---|
| <p><b>Social Sciences</b></p> <ul style="list-style-type: none"> <li>• students learn how to practice social science, and not just understand what social scientists have concluded</li> <li>• course leads to a broad understanding of social science, and not just the discipline within it</li> <li>• students are learning more than pre-professional skills</li> <li>• 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 GE</li> </ul> | <p><b>Social and Behavioral Sciences</b></p> <ul style="list-style-type: none"> <li>• students develop understanding of the perspectives and research methods of the social and behavioral sciences</li> <li>• problems and issues examined in contemporary, historical, and geographical settings</li> <li>• comparative perspective on both Western and non-Western societies</li> <li>• material presented from a theoretical point of view and focuses on core concepts and methods of the discipline rather than on personal, practical, or applied aspects</li> </ul> |

|  |  |
|--|--|
|  | <ul style="list-style-type: none"><li>• students gain basic knowledge of the cultural and social organizations in which they exist as well as the behavior and social organization of their human societies</li><li>• study of perspectives that have been made by men and women, and members of various ethnic or cultural groups</li><li>• Administration of Justice courses accepted if focus is on core concepts of social and behavioral sciences</li></ul> |
|--|--|

*Special cases in Social and Behavioral Science Research Methodology:*

A growing number of CCCs propose courses like “Research Methods in Psychology” or “Research Methods in Sociology” to satisfy both GE transfer requirements in social science, and major requirements for ADTs. Reviewers have found that for such courses to meet GE criteria, the challenge is often to “rise above technique,” to develop the student’s analytical capacity and understanding of social science in ways that would be useful to any educated citizen and transferable to many walks of life in addition to those of professional social scientists. Such courses often cover disciplinary fundamentals in addition to statistical techniques, *but unless the course outline states these both explicitly, it is unlikely to be approved for Area 4 or D.*

**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 1100 Revised:**

This requirement is designed to equip learners for lifelong understanding and development of themselves as integrated physiological, social, and psychological beings. Physical activity may be included, if it is an integral part of the study elements described herein.

Content may include topics such as student success strategies, human behavior, sexuality, nutrition, physical and mental health, stress management, information literacy, social relationships and relationships with the environment, as well as implications of death and dying or avenues for lifelong learning. Courses in this area shall focus on the development of skills, abilities and dispositions.

**There is no IGETC Counterpart to Area E.** Students using the IGETC pattern to meet their lower-division GE before transfer to the CSU are exempted from this systemwide requirement.

**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 CSU GE Breadth transfer certifications that clear Area E Lifelong Learning and Self-Development with a DD-214.

*Note: Courses in personal finance are no longer considered for CSU Area E. Personal finance courses that are currently approved for Area E will have their CSU Breadth GE status removed effective fall 2018. CCCs may submit revised personal finance courses for Subarea B4 consideration during the 2018-2019 CSU GE Breadth/IGETC review period.*

| <b>CSU GE Breadth<br/>Area E</b>   |
|--|
| <p><b>Lifelong Learning and Self-Development</b><br/>                     With the exception of courses in physical activity (detailed below), reviewers expect courses in Area E to include three kinds of inquiry: sociological, physiological, and psychological.</p> <ul style="list-style-type: none"> <li>• Courses should address all three areas for <i>more than a few years of a human lifespan</i>. 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.</li> <li>• Courses that focus on a single learning skill (e.g., library use, computer literacy, or first aid) are not appropriate for GE.</li> </ul> <p><b>Sociological:</b></p> <ul style="list-style-type: none"> <li>• In this context, the relationships between an individual and broader society.</li> </ul> <p><b>Physiological:</b></p> <ul style="list-style-type: none"> <li>• The human body as an integrated organism with systemic functions such as movement, nutrition, growth, reproduction, and aging.</li> </ul> <p><b>Psychological:</b></p> <ul style="list-style-type: none"> <li>• The study of the mental processes that create consciousness, behavior, emotions, and intelligence.</li> </ul> |
| <p><b>Physical Activity</b></p> <ul style="list-style-type: none"> <li>• Physical activity courses (except for special-topics or directed studies courses) are acceptable in Area E.</li> <li>• 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.</li> </ul> <p><i>(Note the wording: a CCC 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.)</i></p>  |

**IGETC STANDARDS AREA 6A (UC only)**

**Language Other Than English (LOTE)**

**IGETC Standards 1.9**

Students must demonstrate proficiency in a language other than English equal to two years or the second level of high school instruction. Students who satisfied the UC freshman entrance requirement in a language other than English (LOTE) have already fulfilled this requirement.

For students who did not meet the LOTE requirement in high school, they may fulfill IGETC Area 6A by completing a college course/courses, or by demonstrating proficiency in one of several other available methods. Language courses must 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 also acceptable for meeting this requirement. Courses that are primarily conversational (content cannot be primarily for business or travel-oriented language instruction) must have as a prerequisite a course equivalent to the third year/third level of high school instruction or one year of college level instruction in the language to be acceptable.

**There is no CSU GE Breadth Counterpart to Area 6A.** Students using the CSU GE Breadth pattern to meet their lower-division GE before transfer to the CSU are exempted from this systemwide requirement.

| <b>IGETC<br/>Area 6A</b>  |
|---|
| <p><b>Language Other than English (LOTE)</b></p> <ul style="list-style-type: none"><li>• Equal to two years or the second level of high school instruction</li><li>• Language courses must provide instruction in the written and oral language as well as history and cultural traditions of the country associated with the language studied.</li><li>• Languages other than English for Native Speakers are also acceptable for meeting this requirement.</li><li>• Courses that are primarily conversational (content cannot be primarily for business or travel-oriented language instruction) must have as a prerequisite a course equivalent to the third year/third level of high school instruction or one year of college level instruction in the language to be acceptable.</li></ul> <p>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 Subarea C2 in CSU GE Breadth or Area 3B in IGETC.</p> |

## 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 CSU GE Breadth. EO 1061 implements Title 5 Section 40404 of California’s Code of Regulations, 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 EO 1061 does not set a unit or course minimum for these areas, it’s unusual for a single course to adequately address all three. Instead, participating CCC 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 100 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.*

## **PART THREE: COURSE SUBMISSION CHECKLIST**

### **Criteria Applying to All Areas**

CCCs will indicate the pattern, CSU GE Breadth and/or IGETC Areas (including subareas) to which proposed courses are applied. Reviewers use area-specific criteria as well as the following, which apply to all submitted courses:

Any course submitted for CSU GE Breadth or IGETC must be baccalaureate level. For IGETC, courses must be UC-transferable (on the UC TCA).

Course has appropriate number of units for CSU GE Breadth or IGETC Area.

Course content should reflect a balance between breadth and depth appropriate for lower-division work.

Variable-topics courses are excluded (directed-study or independent study).

Course outline includes at least one textbook; laboratory activities must include lab manual.

Representative textbooks are current and published within 7 years of submission year (e.g., published in 2011 for courses submitted fall 2018), or identified as a "classic."

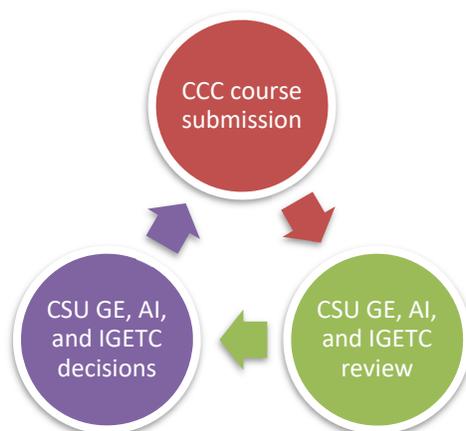
Course outline includes methods/criteria of assessment and college-level assignments.

Course outline contains enough detail to make a decision in proposed CSU GE Breadth and/or IGETC Area.

Course outline should make sense to the reviewer.

Course outline is in English.

Course outline is complete.



**PART FOUR: COMMON EXAMPLES OF CORRECTIONS**

**Common Examples of Corrections Needed to Align Courses with CSU GE Breadth and IGETC Criteria**

**English Language Communication and Critical Thinking**

**Subarea A1/1C**

Course must include faculty-supervised, faculty-evaluated practice in oral communication presented in front of other listeners.

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

**Subarea A2/1A**

Courses in this area must be conducted in English.

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.

Courses designed exclusively for the satisfaction of remedial composition cannot be counted toward fulfillment of the English composition requirement, whether they are in the CCC or in the CSU.

**Subarea A3/1B**

The content section of the outline does not provide enough detail to determine whether all elements of critical thinking required by CSU EO 1100 Revised for Subarea A3 are present (*e.g.*, whether students will be able to advocate ideas effectively and to reason inductively and deductively).

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.

*Common Examples (continued)*

**Scientific Inquiry, Physical and Biological Sciences**

| <b>Subareas B1/5A and B2/5B</b>   |
|---|
| 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. |
| 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 4.                  |
| Science courses should cover basic scientific principles and not just include memorization of facts or skills practice.   |
| Revise the outline to distinguish clearly the laboratory activities from the content of the lectures.   |

| <b>Subareas B3/5C</b>  |
|--|
| Lecture-and-Lab science outlines should distinguish lecture content from lab activity.                                       |
| A lab manual is required for courses in this area and none is listed on the course outline.                                  |
| Laboratory course is acceptable in Area B3/Area 5C only if the corresponding lecture is adopted as its pre- or co-requisite. |

**Mathematics/Quantitative Reasoning, Mathematical Concepts and Quantitative Reasoning**

| <b>Subarea B4/2A</b>  |
|---|
| This course is remedial work in quantitative reasoning or the first part of “stretch,” co-requisite, or pathway portion of a quantitative reasoning course and is not acceptable for CSU GE Breadth or IGETC.                     |
| This statistics course lacks conceptual or computational skills in basic inferential statistical methods, probability as it relates to statistical inference, or attention to statistical literacy.                               |
| Remedial work in mathematics, defined as work in topics from arithmetic, beginning and intermediate algebra, high school geometry, or trigonometry if taught as a separate course are not acceptable for CSU GE Breadth or IGETC. |

*Common Examples (continued)*

**Arts and Humanities**

| <b>Subarea C1/3A</b>  |
|---|
| Performance and studio classes may be credited toward satisfaction of this subject area only if they include substantial integration of history, theory, and criticism. |
| Strong focus on technical and performance skills precludes its acceptance in Subarea C1/Area 3A.  |
| This course appears to be for Art majors, not general education students and is thus denied for general education.  |

| <b>Subarea C2/3B</b>  |
|---|
| 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.   |
| Children’s literature courses that appear 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. |
| 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 unlikely to be accepted in IGETC Area 3B.   |
| Strong focus on skills and techniques precludes it from being accepted for Subarea C2.  |

**Social Sciences, Social and Behavioral Sciences**

| <b>Area D/4</b>   |
|---|
| Course emphasizes the application of social scientific findings in an occupationally oriented context, rather than principles, theories, and methods of social science. |
| The course appears to be devoted to career-oriented preparation, rather than social scientific concepts, theories, and methods.   |
| Course appears to concentrate on the development of students' communication skills rather than on social scientific principles, theories, and research methods.         |
| The course outline does not make clear how sociological concepts, theories, and methodology underlie the examination of marriage and the family as social institutions. |

*Common Examples (continued)*

**Lifelong Learning and Self-Development**

| <b>Area E</b>   |
|---|
| 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 library use.  |
| Courses that teach specific job skills are not considered appropriate for Area E.   |
| Course does not appear to integrate physiological, psychological, and sociological study to a sufficient extent to qualify for Area E.  |
| Child development courses may qualify for Area E if they cover birth beyond 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.  |
| 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. |

**American Institutions**

| <b>American Institutions</b>  |
|---|
| Courses lacking 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.  |
| 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. |
| Course in the history of Armenian Americans is too narrowly focused on a single population to qualify for US-1.   |

*Common Examples (continued)*

**Across All GE Areas**

| All GE Areas  |
|---|
| This outline contains insufficient detail in the content section for reviewers to determine how the course meets the area requirements.   |
| Outlines submitted for CSU GE or IGETC course approval must be in English.  |
| The course is primarily a skills course or focused on the development of technique.   |
| No variable-topics courses (or directed-studies courses) are acceptable for IGETC or CSU GE.  |
| The title does not match course description or course content in course outline.  |
| 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 texts appear to be outdated. At least one textbook must have been published within the past seven years, or identified as a disciplinary “classic.” Outlines with texts more than seven years old may be rejected if more recently published texts are appropriate and readily available. |

## **PART FIVE: ELECTRONIC BIBLIOGRAPHY**

These notes are available online at [calstate.edu](http://calstate.edu).

The documents cited in these Guiding Notes are those in effect as of October 2018. Readers are encouraged to refer to online sources, as these references are often revised or superseded.

### **CSU General Education Breadth, IGETC, and American Institutions**

- [IGETC Standards Version 1.9](#)
- [CSU Executive Order 1100 Revised \(August 23, 2017\): CSU General Education Breadth](#)
- [CSU Executive Order 1061: Graduation Requirements in United States History Constitution and American Ideals](#)

### **Courses and Articulation in California**

- [ASSIST Resource Center](#)
- [Course Identification Numbering System \(C-ID\)](#)
- [Associate Degrees for Transfer \(ADTs\)](#)
- [College Catalogs](#)
- [California Community Colleges and Districts](#)

### **Transferability of Baccalaureate-Level Coursework**

- [CSU Executive Order 1036](#)
- [CSU Executive Order 167: Transfer of Credit](#)
- [Working Definition of Baccalaureate Credit \(Faculty Senate Resolution of 1987\)](#)