



California Community Colleges

Guidelines for Title 5 Regulations Section 55003

Policies for Prerequisites, Corequisites and Advisories on Recommended Preparation

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*There are no changes to these sections but they are included for your convenience.

**California Community Colleges
California Code of Regulations
Title 5, Section 55003
Policies for Prerequisites, Corequisites and Advisories
on Recommended Preparation**

Introduction

Student success at California community colleges is of great importance to the future of the state. Increasing course success eventually leads to program and degree success, but all of this is predicated on providing students with accurate information about the appropriate preparation needed to succeed in courses. Prerequisites, corequisites and advisories are one method used to provide this information. Given the impact that prerequisites, corequisites and advisories can have on a student's ability to pursue a course of study, the establishment of the same must be implemented with careful consideration of both student access and student success.

The California Community Colleges Board of Governors adopted new title 5 regulations on prerequisites, corequisites and advisories on March 8, 2011, to allow faculty to base their determination for prerequisites and corequisites in English, reading, or mathematics for college-level courses outside of an English, reading, or mathematics sequence on content review alone or on content review with statistical validation. Previously, establishing prerequisites and corequisites for non-sequence courses had only one option for scrutiny - the use of statistical validation with content review methodology. Moving forward, if a college intends to establish prerequisites or corequisites by content review only, the new regulatory provisions require colleges to adopt a local, board approved plan that addresses specific criteria.

While the primary focus of these guidelines is to address the substantive changes made to title 5, section 55003¹ in March 2011, we include foundational information about the process of establishment of prerequisites, corequisites and advisories for the convenience of the reader and user of this document. The non-substantive changes made to section 55003, consisting of renumbering of subdivisions and deletion of redundant or unneeded references, are not addressed. For ease of reference, changes are noted in the italicized regulation language as underlined text. The complete text of section 55003 is found in appendix A.

Definitions

Prerequisites are conditions of enrollment that students are required to meet prior to enrollment in particular courses and programs. The assignment of a prerequisite to a course signifies that the course skills, or body of knowledge described in the prerequisite, are essential to the success of the student in that course and that it is highly unlikely that a student who has not met the prerequisite will receive a satisfactory grade in the course for which the prerequisite has been established.

¹All section references in this document are to title 5 of the California Code of Regulations, unless otherwise indicated.

Corequisites also signify that a body of knowledge or course skills is essential to the success of a student in a course. However, this body of knowledge or course skills can be acquired or developed concomitantly with the primary course. Therefore, a student is required to enroll in a corequisite simultaneously with (or, in some cases, may be allowed to enroll in the corequisite prior to) the primary course.

Advisories signify that acquisition of a body of knowledge or course skills will be of great advantage to a student prior to enrollment in a specific course. However, enrollment in a course to acquire this knowledge or skills is not required, merely recommended.

The curriculum committee at each college is charged with the responsibility for establishing prerequisites, corequisites, and advisories on recommended preparation to courses offered by a community college during the approval process according to standards and criteria established in title 5, section 55002.

Overview of Regulations Regarding Prerequisites and Corequisites

Establishing prerequisites and corequisites

Title 5, section 55003(d) delineates the four purposes for which prerequisites and corequisites may be established:

1. The prerequisite or corequisite is expressly required or expressly authorized by statute or regulation;
2. The prerequisite will assure that a student has the skills, concepts, and/or information needed to succeed (receive a satisfactory grade) for the course it is established;
3. The corequisite will assure that a student has the skills, concepts, and/or information needed to succeed (receive a satisfactory grade) for the course it is established;
4. The prerequisite or corequisite is needed to protect the health or safety of the student or others.

Requirements for establishing prerequisites, corequisites and advisories

Prerequisites and corequisites shall be made on a course-by-course or program-by-program basis; colleges can choose to use either content review with statistical validation or content review alone to adopt prerequisites or corequisites, or conceivably both, and must then meet the requirements for adoption by either option. No matter the method of scrutiny, when a college chooses to adopt course prerequisites, colleges are required to meet the following requirements:

- Adopt policies on how the college plans to adopt only those prerequisites, corequisites, and advisories on recommended preparation that the college determines are “necessary and appropriate for achieving the purpose for which it is established;” [§ 55003(b)(1)]
- Adopt procedures to assure that “courses for which prerequisites or corequisites are established will be taught in accordance with the course outline of record;” [§ 55003(b)(2)]

- Adopt policies to ensure that “each section of the prerequisite or corequisites is to be taught by a qualified instructor” and in accordance with the course outline of record; [§ 55003(b)(3)]
- Adopt a process for the review of prerequisites and corequisites at least once every six years to assure they remain necessary and appropriate. For vocational courses or programs, title 5 requires prerequisites and corequisites to be reviewed every two years. Advisories are subject to periodic review. [§ 55003(b)(4)]
- Establish the basis and process for students to challenge the application of a prerequisite or corequisites consistent with section 55003(p). [§§ 55003(b)(5) and (p)]
- Prerequisites establishing communication or computational skill requirements may not be established across the entire curriculum unless established on a course-by-course basis; [§ 55003(j)]
- Determination of whether a student meets a prerequisite shall be based on successful completion of an appropriate course or on an assessment using multiple measures; [§ 55003(k)], and
- Ensure that no exit test may be required to satisfy the prerequisite or corequisite unless incorporated into the grading for the course. [§ 55003(n)]

Additional requirements for certain types of prerequisites

For prerequisites requiring precollegiate skills in reading, written expression, or mathematics, regardless of the level of scrutiny (content review with statistical validation or content review alone), districts must also:

- Ensure that courses and sections designed to teach the required skills are available with reasonable frequency based on the number of students who are required to meet the prerequisites; [§ 55003(l)(1)]
- Conduct an evaluation to determine the impact on student success and whether there is any disproportionate impact. Where there is disproportionate impact, develop and implement a plan, in consultation with the Chancellor’s Office, to correct the disproportionate impact. [§ 55003(l)(2)(A) and (B)]

Additional requirements for districts conducting content review alone

In addition to the foregoing, districts establishing prerequisites or corequisites in reading, written expression or mathematics for degree-applicable courses not in a sequence using content review alone (without statistical validations), must also adopt a plan that specifies:

- the method used to determine which courses might be the most compelling candidates for new prerequisites and corequisites
- the provision of appropriate numbers of prerequisite and corequisite course sections
- the assurance that other degree applicable courses are available such that student progress toward their educational goals is not unnecessarily impeded
- training for the curriculum committee, and

- the use of research to evaluate the effect of new prerequisites and corequisites on student success; particular attention should be given to disproportionate impact.

See section 55003(c) below for more information about plan requirements.

Prerequisites and Monitoring Disproportionate Impact through College Student Equity Plans

Title 5, section 55003(l)(2) ties the establishment of prerequisites and corequisites requiring precollegiate skills in reading, written expression, or mathematics with the student equity plan provisions of section 54220 to ensure that prerequisite and corequisite requirements do not have a disproportionate impact on particular groups of student in terms of race, ethnicity, gender, age, or disability. Section 54220 delineates the requirements for college student equity plans and identifies five broad areas that colleges are required to address: (1) access, (2) retention, (3) degree and certificate completion, (4) ESL and basic skills completion, and (5) transfer.

Matriculation Plans and Prerequisite Policies and Procedures

Although not originally a part of matriculation, title 5 was later amended to include the college’s review and student challenge policy and process for prerequisites and corequisites as the eighth component of the matriculation plan. Section 55510(a)(6) and (7) requires college matriculation plans to include “procedures for establishing and periodically reviewing prerequisites pursuant to section 55003” and “procedures for considering student challenges to prerequisites established pursuant to section 55003.” As colleges develop new or revise existing policies and procedures related to the establishment of prerequisites and corequisites, it is important to note that each college is responsible for certifying the adoption of policies and procedures that are consistent with the requirements of title 5 in the college’s Matriculation plan. You can access information regarding requirements for Matriculation plans and certification on the Chancellor’s Office website under Student Services.

Title 5, section 55003 - Subsection by Subsection Guidelines

Section 55003(a)

Permission to use Content Review with Statistical Validation or Content Review Alone

Subdivision (a) of section 55003 allows either content review alone or content review with statistical validation as options that the governing board of a community college district may allow to be used in order to establish prerequisites, corequisites, and advisories on recommended preparation to any course. Section 55003(a) states:

(a) The governing board of a community college district may establish prerequisites, corequisites, and advisories on recommended preparation, but must do so in accordance with the provisions of this article. Nothing in this subchapter shall be construed to require a district to establish prerequisites, corequisites, or advisories on recommended preparation; provided however, that a prerequisite or corequisite shall be required if the course is to be offered for associate degree credit and the curriculum committee finds that the prerequisite or corequisite is necessary pursuant to sections 55002(a)(2)(D) or 55002(a)(2)(E). Unless otherwise specified in this section, the level of scrutiny required to establish prerequisites, corequisites, and

advisories on recommended preparation shall be based on content review as defined in subdivision (c) of section 55000 or content review with statistical validation as defined in subdivision (f) of this section. Determinations about prerequisites and corequisites shall be made on a course-by-course or program-by-program basis. (Emphasis added.)

Guidelines: The following sections provide guidance to colleges on the requirements for establishing prerequisites, corequisites and advisories using the two options for scrutiny: content review only and content review with statistical validation. With the exception of the specific requirements in subdivisions (c) and (l) below, the regulations in section 55003 pertain to all prerequisites and corequisites and not just to those in reading, written expression or mathematics.

Establishing Prerequisites and Corequisites Based on Content Review Only

Title 5 regulations allowing colleges to adopt prerequisites and corequisites by a content review process only is new and the following sections are intended to provide in-depth guidance on the requirements that colleges are expected to meet to adopt prerequisites and corequisites using this methodology.

“Content review” is defined in title 5, section 55000(c) as:

a rigorous, systematic process developed in accordance with sections 53200 to 53204, approved by the Chancellor as part of the district matriculation plan required under section 55510, and that is conducted by faculty to identify the necessary and appropriate body of knowledge or skills students need to possess prior to enrolling in a course, or which students need to acquire through simultaneous enrollment in a corequisite course.

In other words, content review is a process that determines what skills or knowledge are required for success in a given course and how that preparation can be obtained in order to advise or require students to acquire the necessary preparation prior to enrolling in (prerequisite) or while taking (corequisite) a given course. It is more than reviewing the traditional “exit and entrance skills” and involves examining how the course is taught and all components of the Course Outline of Record (COR).

Content Review and the Course Outline of Record

The content review process begins with a review of the Course Outline of Record (COR). The COR delineates not only the content of the course, but also the competencies a student is expected to achieve (objectives and/or student learning outcomes), the assignments to be completed (e.g., reading assignments, projects, and reports), and the assessments that will be used to measure student performance. During the initial approval of a course and subsequent revisions, a content review is conducted. The COR is examined and the skills and knowledge a student needs for success are identified. When faculty determine that content knowledge within the discipline is necessary for success, content review has always sufficed for the establishment of a prerequisite or corequisite. For example, if a biological psychology course presumes student understanding of basic psychology concepts, the faculty have always been able to establish a

psychology course as a prerequisite. Similarly, math and English coursework typically consists of intradisciplinary sequenced courses that build upon one another.

However, a more complex, interdisciplinary content review process is needed to determine that an English or reading prerequisite or corequisite is appropriate for a psychology, history, or political science course or that a math prerequisite or corequisite is appropriate for an economics or automotive course. Such a review process should also take into consideration, as far as possible, the diversity of the students in the classroom, including learning styles, prior knowledge, and cultural background.

As a starting point for ensuring that local content review processes are sufficiently rigorous for use in establishing prerequisites and corequisites, one may consider this description of content review, which emphasizes that faculty in the discipline must:

1. Approve the course; and,
2. As a separate action, approve any prerequisite or corequisite, only if:
 - i. The prerequisite or corequisite is an appropriate and rational measure of a student's readiness to enter the course or program as demonstrated by a content review including, at a minimum, all of the following:
 - a. involvement of faculty with appropriate expertise;
 - b. consideration of course objectives set by relevant department(s) (the curriculum review process should be done in a manner that is in accordance with accreditation standards);
 - c. be based on a detailed course syllabus and outline of record, tests, related instructional materials, course format, type and number of examinations, and grading criteria;
 - d. specification of the body of knowledge and/or skills which are deemed necessary at entry and/or concurrent with enrollment;
 - e. identification and review of the prerequisite or corequisite which develops the body of knowledge and/or measures skills identified under d.
 - f. matching of the knowledge and skills in the targeted course (identified under d.) and those developed or measured by the prerequisite or corequisite (i.e., the course or assessment identified under e.); and
 - g. maintain documentation that the above steps were taken.

Establishing Prerequisites and Corequisites Based on Content Review with Statistical Validation

In addition to the content review described in the section above, statistical validation of a prerequisite or corequisite requires research. Data should be gathered according to sound research practices in at least one of the following areas:

- a. The extent to which students, those currently enrolled in the course or those who have completed it, believe the proposed prerequisite to corequisite is necessary.
- b. Comparison of the faculty members' appraisal of students' readiness for the course to whether students met the proposed prerequisite or corequisite. The faculty appraisal could be done at any time in the semester that the college determined was appropriate and based on independent assignments, quizzes and exams, participation in class, or other indicators that the student was or was not ready to take the course.
- c. Comparison of students' performance at any point in the course with completion of the proposed prerequisite or corequisite.
- d. Comparison of student performance in the course to their scores on assessment instruments in the manner required to validate an assessment instrument and cut scores for the course in question.

The standard for any comparison shall be that a student is highly unlikely to receive a satisfactory grade in the course unless the student has met the proposed prerequisite or corequisite. The research design, operational definition, and numerical standards, if appropriate, shall be developed by research personnel, discipline faculty, and representatives of the Academic Senate. If the evidence fails to meet the standard established, each college may establish the proposed prerequisite or corequisite as an advisory and may seek to establish it as a prerequisite or corequisite only by following the process described in this policy and any applicable college policies.

Whether or not research is required to establish a prerequisite, data collected to validate assessment instruments and cut scores is always relevant to reviewing the prerequisites for the associated courses.

Section 55003(b) Board Policies

- (b) A district governing board choosing to establish prerequisites, corequisites, or advisories on recommended preparation shall, in accordance with the provisions of sections 53200-53204, adopt policies for the following:*
 - (1) the process for establishing prerequisites, corequisites, and advisories on recommended preparation. Such policies shall provide that in order to establish a prerequisite or corequisite, the prerequisite or corequisite must be determined to*

be necessary and appropriate for achieving the purpose for which it is being established.

- (2) procedures to assure that courses for which prerequisites or corequisites are established will be taught in accordance with the course outline of record, particularly those aspects of the course outline that are the basis for justifying the establishment of the prerequisite or corequisite.*
- (3) the process to ensure that each section of the prerequisite or corequisite is to be taught by a qualified instructor and in accordance with a set of objectives and with other specifications defined in the course outline of record, as required in section 55002 for all courses.*
- (4) the process, including levels of scrutiny, for reviewing prerequisites and corequisites to assure that they remain necessary and appropriate. These processes shall provide that at least once each six years all prerequisites and corequisites established by the district shall be reviewed, except that prerequisites and corequisites for vocational courses or programs shall be reviewed every two years. These processes shall also provide for the periodic review of advisories on recommended preparation.*
- (5) the bases and process for an individual student to challenge the application of a prerequisite or corequisite.*

Guidelines: Subdivision (b) of section 55003 lists the provisions required in policies adopted by a district governing board choosing to establish prerequisites, corequisites, and advisories on recommended preparation. Subdivision (b)(3) was added to specify that instructor qualifications and standards for course outlines of record must comply with title 5 section 55002 for all courses.

The guidelines for subdivision (a) emphasize the role of the course outline of record (COR) in the content review process. Content review is only valid if the elements of the COR are followed, and then only by a qualified instructor.

Section 55003(c)

Requirements before Implementing Content Review Only

(c) A district governing board choosing to use content review as defined in subdivision (c) of section 55000 to establish prerequisites or corequisites in reading, written expression or mathematics for degree-applicable courses not in a sequence shall first adopt a plan specifying:

(1) the method to be used to identify courses to which prerequisites might be applied;

(2) assurance that courses are reasonably available to students when prerequisites or corequisites have been established using content review as defined in subdivision (c) of section 55000. Such assurance shall include sufficient availability of the following:

(A) appropriate courses that do not require prerequisites or corequisites, whether basic skills or degree-applicable courses; and

(B) prerequisite or corequisite courses;

- (3) provisions for training for the curriculum committee; and
(4) the research to be used to determine the impact of new prerequisites based on content review.

Guidelines: Subdivision (c) applies only to the establishment of prerequisites or corequisites in reading, written expression or mathematics for courses that are not in a sequence. If district governing boards choose to use content review (without statistical validation), the board must first adopt a plan that specifies how courses to which prerequisites and corequisites are applied are identified; that assures that the prerequisite or corequisite courses and courses that do not require prerequisites or corequisites will be reasonably available; that details the training for the curriculum committee on the establishment of prerequisites and corequisites; and that lays out the research that needs to be conducted regarding the impact of the new prerequisites and corequisites established using content review (without statistical validation).

The requirement that colleges develop an implementation plan should have the effect of bringing together discipline faculty, curriculum committee members, senate leaders, and key administrators to identify parts of the curriculum in which the introduction of a prerequisite or corequisite might significantly improve student success². The new regulatory elements require that the college have developed an intentional strategy of identifying such courses and that the curriculum committee be trained before new prerequisites or corequisites may be applied. Additionally, those responsible for enrollment management must assure that students have opportunities to reach their educational goals by making adequate provision for both prerequisite and corequisite courses and degree-applicable courses that do not require prerequisites, corequisites.

Data and other forms of evidence will be a critical element in a college's development of its prerequisite plan and useful to discipline faculty as they prioritize which courses should be considered for the establishment of new prerequisites and corequisites. Quantitative and qualitative data may help to establish trends or patterns of success that may be affected by student preparation for a course. Examining success rates for all students in all courses in a discipline can help faculty identify the course with the lowest student success as measured by withdrawal and pass rates. This course may be the best and first to consider for a prerequisite or corequisite in the discipline. Alternatively, courses where students are generally more prepared may also be viable candidates; if a course has a high pass rate due to students generally being more prepared, proper signaling of a required level of preparation may protect students from enrolling in a course in which they have little chance of success.

Both regulatory language and common sense require that the addition of new prerequisites and corequisites be phased in at an appropriate pace that does not unreasonably impede student progress or unduly disrupt college-scheduling decisions. One approach to expanding the use of prerequisites and corequisites may be to determine which disciplines feel that prerequisites or corequisites are needed for their courses and then to identify one course in each of those disciplines that most warrants a prerequisite or corequisite. After each discipline that perceives a need for prerequisites or corequisites identifies one course with the lowest rates of student

²This sentence and the remainder of this section is adapted from *Implementing Content Review for Communication and Computation Prerequisites* (Academic Senate for California Community Colleges, 2011).

success, then curriculum committees could prepare to assist faculty with the next steps to confirm that a prerequisite or corequisite is warranted and that it is the correct level or course for the prerequisite or corequisite. This approach to prioritization will assist in planning and enrollment management for the college and workload management for the curriculum committee.

Other forms of evidence that faculty may want to consider in determining the need for a prerequisite or corequisite include the use of existing support provided to students in particular courses such as tutoring services on campus. Tutoring centers and labs may have data on student use of services, the type of tutoring received, and other information that may inform the discussions about a need for a communication or computation prerequisite or corequisite.

The assessment for placement process is another source of data which may contribute to an understanding of the preparation of students and the need for establishing prerequisites or corequisites. Assessment office staff can provide information on the number of students placing into basic skills courses below transfer which can give a sense of the number of basic skills sections required to meet student need. In addition, success rates of students placed into basic skills courses can be tracked to the types of degree applicable or transfer level courses in which they register and their success in those courses. Courses where students have low success rates may be courses where student placement scores are also low. Researchers may also be able to assist with analyzing assessment for placement scores. Success rates and placement into basic skills sequences are related measures that can inform the prioritization of courses for prerequisites or corequisites.

By considering factors determined through data analysis and strategies in place at the college, faculty can move thoughtfully to the next step in the process, which involves participating in the content review of courses and using faculty's professional expertise to determine the best preparation for students.

Once the prerequisite or corequisite is established, data on student success must be tracked. The initial collection and review of data prior to establishing the prerequisite or corequisite will form the baseline for future comparisons. Prerequisites and corequisites must be reviewed every six years (or two years for career technical education courses and programs), but student performance should be monitored much more frequently in order to ensure that the identified prerequisite or corequisite is having the anticipated impact on student success and not creating an unwarranted barrier to access. Curriculum committees, as well as discipline faculty, will want assistance from researchers to find the best means to track student performance in courses with newly established prerequisites and corequisites.

Section 55003(d) **Establishing Prerequisites and Corequisites**

- (d) Prerequisites or corequisites may be established only for any of the following purposes:

- (1) the prerequisite or corequisite is expressly required or expressly authorized by statute or regulation; or
- (2) the prerequisite will assure, consistent with section 55002, that a student has the skills, concepts, and/or information that is presupposed in terms of the course or program for which it is being established, such that a student who has not met the prerequisite is highly unlikely to receive a satisfactory grade in the course (or at least one course within the program) for which the prerequisite is being established; or
- (3) the corequisite course will assure, consistent with section 55002, that a student acquires the necessary skills, concepts, and/or information, such that a student who has not enrolled in the corequisite is highly unlikely to receive a satisfactory grade in the course or program for which the corequisite is being established; or
- (4) the prerequisite or corequisite is necessary to protect the health or safety of a student or the health or safety of others.

Guidelines: No changes were made to section (d). This section is included here for ease of reference.

Section 55003(e) Courses Exempt from Content Review

(e) Except as provided in this subdivision, no prerequisite or corequisite may be established or renewed unless it is determined to be necessary and appropriate to achieve the purpose for which it has been established. A prerequisite or corequisite need not be scrutinized using content review as defined by subdivision (c) of section 55000 or content review with statistical validation as defined by subdivision (f) of this section, if:

- (1) it is required by statute or regulation; or*
- (2) it is part of a closely-related lecture-laboratory course pairing within a discipline;*
or
- (3) it is required by four-year institutions.; or*
- (4) baccalaureate institutions will not grant credit for a course unless it has the particular communication or computation skill prerequisite.*

Guidelines: Subdivision (e) of section 55003 specifies the conditions under which a prerequisite or corequisite does not need to be subject to either content review or content review with statistical validation. Subdivision (e)(4) is moved from existing subdivision (e)(1) to be included as one of the specified circumstances under which scrutiny is not required.

Section 55003(f) Definition of Content Review with Statistical Validation

(f) Content review with statistical validation is defined as conducting a content review (as defined in subdivision (c) of section 55000) and the compilation of data according to

sound research practices which shows that a student is highly unlikely to succeed in the course unless the student has met the proposed prerequisite or corequisite.

Guidelines: Subdivision (f) of section 55003 provides a clear definition of content review with statistical validation. For more information about statistical validation, refer to *Establishing Prerequisites and Corequisites Based on Content Review with Statistical Validation* under the guidelines for subdivision (a) above.

Section 55003(g)

Application of the Regulation regarding Content Review with Statistical Validation

(g) If the curriculum committee, using content review with statistical validation, initially determines, pursuant to section 55002(a)(2)(E), that a new course needs to have a communication or computation skill prerequisite or corequisite, then, despite subdivision (e) of this section, the prerequisite or corequisite may be established for a single period of not more than two years while the research is being conducted and the final determination is being made, provided that all other requirements for establishing the prerequisite or corequisite have been met. The requirements of this subdivision related to collection of data shall not apply when the prerequisite or corequisite is required for enrollment in a program, that program is subject to approval by a state agency other than the Chancellor's Office and both of the following conditions are satisfied:

- (1) colleges in at least six different districts have previously satisfied the data collection requirements of this subdivision with respect to the same prerequisite or corequisite for the same program; and*
- (2) the district establishing the prerequisite or corequisite conducts an evaluation to determine whether the prerequisite or corequisite has a disproportionate impact on particular groups of students described in terms of race, ethnicity, gender, age or disability, as defined by the Chancellor. When there is a disproportionate impact on any such group of students, the district shall, in consultation with the Chancellor, develop and implement a plan setting forth the steps the district will take to correct the disproportionate impact.*

Guidelines: The small change to the first sentence of subdivision (g) of section 55003 clarifies that the exceptions set forth therein are applicable only to prerequisites or corequisites that have been established using content review with statistical validation and not those established using solely content review.

Section 55003(h)

Publication of Prerequisites, Corequisites and Advisories

(h) Prerequisites, corequisites, and advisories on recommended preparation must be identified in college publications available to students as well as the course outline of any course for which they are established.

Guidelines: No changes were made to section (h). This section is included here for ease of reference.

Section 55003(i)

Reporting of the Establishment of Prerequisites, Corequisites and Advisories to the State

(i) By August 1 of each year districts choosing to establish prerequisites, corequisites or advisories shall submit to the Chancellor's Office in the manner specified by the Chancellor the prerequisites and corequisites that were established during the prior academic year. Districts shall also specify the level of scrutiny, i.e., content review as defined in subdivision (c) of section 55000 or content review with statistical validation as defined in subdivision (e) of this section, used to determine whether the prerequisite or corequisite was necessary and appropriate for achieving the purpose for which it was established.

Guidelines: Subdivision (i) of section 55003 requires that districts establishing prerequisites, corequisites or advisories report to the Chancellor's Office new prerequisites and corequisites established during the year as part of the annual MIS data collection cycle for districts. This data can then be used to report student progress in course offerings, student demographics and assess potential disproportionate impacts.

The evaluation of the effect of new prerequisites should be especially manageable because the Chancellor's Office will use data from the curriculum inventory to track newly developed prerequisites. These data will allow evaluation of the effect of new prerequisites not only at the campus level but at the regional and state level as well.

Section 55003(j)

Prerequisites across the Entire Curriculum

(j) Prerequisites establishing communication or computational skill requirements may not be established across the entire curriculum unless established on a course-by-course basis.

Guidelines: No changes were made to section (j). This section is included here for ease of reference.

Section 55003(k)

Requirement for Multiple Measures in Assessment as a Prerequisite

(k) The determination of whether a student meets a prerequisite shall be based on successful completion of an appropriate course or on an assessment using multiple measures, as required by section 55521(a)(3). Any assessment instrument shall be

selected and used in accordance with the provisions of subchapter 6 (commencing with section 55500) of this chapter.

Guidelines: Reference to section 55521(a)(3) makes clear that multiple measures are not satisfied by the use of two or more instruments that are highly correlated. *Multiple Measures and Other Sorrows* (Chancellor's Office, 1998) provides a succinct explanation of the issue.

Title 5 does not prohibit using two tests. It does, though, prohibit using two or more tests that are *highly correlated*. When tests are highly correlated, they are essentially testing the same skills or knowledge. Therefore, you wouldn't really have multiple measures, you would have two instruments yielding the same information. Faculty at the Center for Educational Testing and Evaluation at the University of Kansas (assessment consultants to the Chancellor's Office) have identified a correlation of .75 or higher as the standard for determining whether or not two or more instruments are highly correlated.

Section 55003(1)

Monitoring the Impact of Prerequisites and Corequisites

(1) If a prerequisite requires precollegiate skills in reading, written expression, or mathematics, the district shall:

(1) ensure that courses designed to teach the required skills are offered with reasonable frequency and that the number of sections available is reasonable given the number of students who are required to meet the associated skills prerequisites and who diligently seek enrollment in the prerequisite course.

(2) monitor progress on student equity in accordance with section 54220. Monitoring shall include:

(A) conducting an evaluation to determine the impact on student success including whether the prerequisite or corequisite has a disproportionate impact on particular groups of students described in terms of race, ethnicity, gender, age or disability, as defined by the Chancellor.

(B) where there is a disproportionate impact on any such group of students, the district shall, in consultation with the Chancellor, develop and implement a plan setting forth the steps the district will take to correct the disproportionate impact.

Guidelines: Subdivision (1)(2) of section 55003 requires that districts establishing prerequisites or corequisites monitor whether or not the prerequisites or corequisites have a disproportionate impact on particular groups of students. As with subdivision (c) above, this regulation pertains only to prerequisites in reading, written expression, or mathematics.

Section 55502(d) states that “ ‘Disproportionate impact’ occurs when the percentage of persons from a particular racial, ethnic, gender, age or disability group who are directed to a particular service or placement based on an assessment instrument, method, or procedure is significantly different from the representation of that group in the population of persons being assessed, and that discrepancy is not justified by empirical evidence demonstrating that the assessment

instrument, method or procedure is a valid and reliable predictor of performance in the relevant educational setting.” This definition serves well as a general definition for the broader topics of prerequisites and corequisites.

At the current time, the Board of Governors has identified the following subgroups for the purposes of MIS reporting: African-American, American Indian/Alaskan Native, Asian, Filipino, Hispanic, Pacific Islander, and White Non-Hispanic; 19 or less, 20-24, 25-29, 30-34, 35-39, 40-49, 50 and above; male and female. This information is provided for reference. A college may define its subgroups in a different way to address specific local circumstances.

To assess impact, colleges currently collect disaggregated student success data to ascertain whether any specific cohort of students is struggling with success. Such data can be correlated with specific courses and the data from the curriculum inventory which tracks newly implemented prerequisites or corequisites. However, coming to an understanding of what exactly constitutes “student equity” is more of a challenge.

As stated in the Academic Senate paper *Student Equity: From Dialog and Access to Action* (2010), “Equitable does not mean equal, but it does require that the results are close enough to the percentages of the original cohort group to be acceptable.” It is with this concept of equity in mind that the Academic Senate makes the following recommendations for action:

- Agree upon a statistical definition of equity that will be used by the district or college researchers or whoever is providing student equity data.
- Develop an expanded definition of equity based on the college mission, community needs, or other criteria relevant to students.
- Disseminate the definitions of student equity to all campus constituents.
- Agree upon categories of cohorts of students that are important to track, starting with the historically underrepresented groups required in title 5.
- Disaggregate data by relevant groups or cohorts for all data sets.
- Examine data and evidence deeply and critically when there appears to be a disproportional impact.

Section 55003(m)

Sufficient Course Sections to Meet Corequisite

- (m) Whenever a corequisite course is established, sufficient sections shall be offered to reasonably accommodate all students who are required to take the corequisite. A corequisite shall be waived as to any student for whom space in the corequisite course is not available.

Guidelines: No changes were made to section (m). This section is included here for ease of reference.

Section 55003(n)
Exit Tests

(n) No exit test may be required to satisfy a prerequisite or corequisite unless it is incorporated into the grading for the prerequisite or corequisite course.

Guidelines: No changes were made to section (n). This section is included here for ease of reference.

Section 55003(o)
Student Failure to Meet a Prerequisite or Corequisite

(o) The determination of whether a student meets a prerequisite shall be made prior to his or her enrollment in the course requiring the prerequisite, provided, however, that enrollment may be permitted pending verification that the student has met the prerequisite or corequisite. If the verification shows that the student has failed to meet the prerequisite, the student may be involuntarily dropped from the course. If the student is dropped, the applicable enrollment fees shall be promptly refunded. Otherwise a student may only be involuntarily removed from a course due to excessive absences or as a result of disciplinary action taken pursuant to law or to the student code of conduct.

Guidelines: Subdivision (o) of section 55003 clarifies that students who are dropped due to failure to meet a prerequisite or corequisite shall receive a prompt refund of the applicable enrollment fees.

The timing of the actions outlined in this subdivision reinforces the need to have clearly delineated and efficient processes in place for verifying whether or not a student has met a prerequisite or corequisite.

Section 55003(p) and (q)
Student Challenge of Prerequisites or Corequisites

- (p) Any prerequisite or corequisite may be challenged by a student on one or more of the grounds listed below. The student shall bear the initial burden of showing that grounds exist for the challenge. Challenges shall be resolved in a timely manner and, if the challenge is upheld, the student shall be permitted to enroll in the course or program in question. Grounds for challenge are:
- (1) The prerequisite or corequisite has not been established in accordance with the district's process for establishing prerequisites and corequisites;
 - (2) The prerequisite or corequisite is in violation of this section;
 - (3) The prerequisite or corequisite is either unlawfully discriminatory or is being applied in an unlawfully discriminatory manner;

- (4) The student has the knowledge or ability to succeed in the course or program despite not meeting the prerequisite or corequisite;
 - (5) The student will be subject to undue delay in attaining the goal of his or her educational plan because the prerequisite or corequisite course has not been made reasonably available; or
 - (6) Such other grounds for challenge as may be established by the district governing board.
- (q) In the case of a challenge under subdivision p)(3) of this section, the district shall promptly advise the student that he or she may file a formal complaint of unlawful discrimination pursuant to subchapter 5 (commencing with section 59300) of chapter 10 of this division. If the student elects to proceed with the challenge, completion of the challenge procedure shall be deemed to constitute an informal complaint pursuant to section 59327.

Guidelines: No changes were made to sections (p) and (q). These sections are included here for ease of reference.

Appendix A

Frequently Asked Questions

The following are common questions and answers on the implementation of title 5 requirements related to the establishment of course prerequisites, corequisites and advisories. Originally published in 1997, the Q&A document has been updated to correct regulatory citations and to reflect the new changes to California Code of Regulations, title 5, section 55003 adopted by the Board of Governors in March 2011 that allow colleges the option of establishing prerequisites by content review with statistical validation or content review only.

In a collegial effort to fully inform colleges regarding the development and implementation of prerequisites, corequisites, and advisories on recommended preparation, the state Chancellor's Office and the System Advisory Committee on Curriculum are issuing this and a companion guidelines document that discuss these issues in greater detail.

1. What are prerequisites?

Prerequisites are conditions of enrollment that students are required to meet prior to enrollment in particular courses and programs. The assignment of a prerequisite to a course signifies that the courses, skills, or body of knowledge described in the prerequisite are **essential** to the success of the student in that course and that it is **highly unlikely** that a student who has not met the prerequisite will receive a satisfactory grade in the course (or at least one course in the program) for which the prerequisite has been established.

2. When must a course have a prerequisite or corequisite?

There are several purposes for which districts may choose to adopt policies for establishing prerequisites or corequisites. Title 5, section 55003(d) states that prerequisites or corequisites may be established for any of the following purposes:

- a) The prerequisite or corequisite assures that students without specified skills, concepts, or information necessary for success in the "target" course are highly unlikely to receive a satisfactory grade without meeting the prerequisite or corequisite. There are at least two situations in which to apply this principle: One would rest upon the students' communication or computational skills and their application in the course for which the prerequisite is established; and the other would rest upon the students' subject knowledge or mastery derived from previous courses or experiences. Faculty in the discipline under review and the curriculum committee must play major roles in the establishment of prerequisites and corequisites as well as the determination of the factors affecting a student's likelihood of succeeding in a course without the specified prerequisite or corequisite.
- b) **The prerequisite or corequisite is necessary to protect the health and safety of a student or the health and safety of others.** Some courses include forms of student participation that require significant vigilance to assure that no harm comes to the student or others. In many cases, the course design and teaching methodology may successfully address any health and safety issues so that they need not be stated as prerequisites. Sometimes, however, the course design cannot ensure that students will consistently learn safe practices because of time constraints or circumstances that make learning these skill

problematic. In this situation, it may be necessary to establish a safety demonstration as a prerequisite to enrollment, consistent with title 5, sections 55003(d)(4) and 58106(b).

This provision for establishing a link between safety and prerequisites and corequisites should not be used as a means for barring a student from courses because the student's primary language is not English, or because of fears or stereotypes concerning problems that may result from a student's disability. If language is an issue and a college (and district) wishes to establish a communication prerequisite, colleges must meet the levels of scrutiny described in title 5, section 55003(a) and (g).

Additional discussion of the prudent use of health and safety prerequisites occurs in the Academic Senate document, *Good Practices for the Implementation of Prerequisites* (pp. 9-10).

However, a district governing board is **required** to establish prerequisites in the following circumstances:

- a) The district and/or college curriculum committee(s) has determined that a student is highly unlikely to receive a satisfactory grade in a course without knowledge or skills acquired outside the course.
- b) **The prerequisite is expressly required by statute or regulation.** It is often the case that accrediting or licensing bodies with oversight responsibilities for particular subject matter curricula in community college courses have specific statutory or regulatory requirements for enrollment in some courses.

3. Does establishing a prerequisite or corequisite for a course mean that colleges must restrict the enrollment in the course to students who meet the prerequisite or corequisite?

Yes, it does. A course that has a prerequisite or corequisite signifies that a district has carefully reviewed course content and requirements, entrance and exit skills, and the knowledge necessary for the student to achieve a satisfactory grade in the course for which the prerequisite or corequisite is obligatory. On the basis of this review, a determination has been made that a student without this prerequisite or corequisite would not have a high expectation of success in the course. Moreover, the very definitions of the terms "prerequisite" and "corequisite" make clear that it is a condition of enrollment that a student is required to meet. Consequently, once a prerequisite or corequisite has been established, it must be uniformly enforced. Students who believe that they are able to meet the prerequisite or corequisite in a different manner should be informed of the district's procedures for challenging the prerequisite or corequisite.

4. Should instructors be responsible for assuring that students in their courses have met established prerequisites or corequisites?

This is not the preferred practice. In the beginning, when the colleges are initializing their enforcement procedures, while it may be necessary to utilize instructors in this manner, the obligation to assure that prerequisites and corequisites have been met is an institutional one, and individual instructors should not be solely expected to bear responsible for this function except, perhaps, on an interim basis while the colleges' computer systems are upgraded to address this responsibility electronically. Additionally, although many colleges have elected to implement

automated computer prerequisite/corequisite checks, it should be kept in mind that while a computer check is surely a convenient method for the prerequisite/corequisite check activity, there is no requirement that colleges **must** rely upon computers if they do not choose to do so. Please see the Academic Senate document, *Good Practices for the Implementation of Prerequisites* (p. 19) for another discussion of this subject.

5. Who is responsible for implementing prerequisites and corequisites, once they've been established in accordance with title 5 and our district policy?

The intent of establishing prerequisites and corequisites is to help to assure student success; therefore, all college staff who work directly with students have a responsibility to be knowledgeable about the district's prerequisite and corequisite policy and its implementation, at least to a degree commensurate with their level of contact with students. This can be made most effective by having prerequisite and corequisite policies and procedures, descriptions, and definitions written in clear, understandable language and widely distributed to the student body in catalogs, schedules of classes, student handbooks, flyers, signs, etc.

This "whole campus community" approach to prerequisite and corequisite information should be reinforced by staff and faculty training so that staff to whom students turn for information on courses (e.g., admissions and registration staff, assessment staff, orientation providers, counselors, instructors, and faculty advisors) can explain the concept of prerequisites and corequisites and how they are applied at the college, the manner in which challenges may be made, and where students can go for more detailed information. This type of staff training also helps to ensure that information provided to students on prerequisites and corequisites will be consistent. Consistency in the implementation of prerequisites and corequisites is crucial if students are to take the need for academic preparation seriously and realize their responsibility in the overall success of the prerequisite and corequisite process.

6. Can a staff or faculty member "waive" an enrollment requirement for a student who wishes to enroll in a course that has an established prerequisite or corequisite?

No they cannot. Once a prerequisite or corequisite has been legally established and adopted for a course, all students wishing to enroll in that course must meet the prerequisite or corequisite, and this requirement must be applied consistently. As mentioned above, title 5 [§ 55003(b)(5) and (p)] requires colleges to establish procedures by which students may challenge prerequisites and corequisites and describes the grounds on which such challenges may be based. If the challenge is subsequently upheld, the student will be permitted to enroll in the course.

7. If a college uses content review with statistical validation to establish a prerequisite or corequisite, does a college have two years to collect data for a new prerequisite or corequisite for an established course, and can students be required to meet the new prerequisite or corequisite during this time period?

No, it does not. Districts and colleges wishing to add a new prerequisite or corequisite to an **existing** course do not have a two-year "window of opportunity" for affixing a new condition of enrollment here. The research showing this prerequisite or corequisite to be necessary for student success must be conducted **prior** to students being expected to meet it. This may be done by using the college's historical data on student performance and student completion/non-completion of the proposed prerequisite and correlated with student performance and

completion/non-completion of the “target” course. These data should be available in the college’s database and other student records. Note that when colleges in at least six different districts have previously satisfied the data collection requirements of this subdivision with respect to the same prerequisite or corequisite for the same program, the data collection requirement does not apply.

It may be discovered that the new prerequisite can be met by the college’s assessment and placement processes. If this appears to be a viable approach, instructional faculty in the discipline(s) should meet with the counseling faculty to identify with them the student attributes and abilities to be used as complementary, appropriate multiple measures in union with an approved testing instrument to determine a student’s readiness for entrance into a target course. Additionally, cut scores or ranges would need to be reviewed to ensure that they remain useful in determining skill levels for meeting prerequisites. For a new prerequisite, these may be initially arrived at through a well-documented empirical or judgmental approach by faculty in the discipline as described in *Standards, Policies and Procedures for the Evaluation of Assessment Instruments Used in the California Community Colleges*.

Data analysis is not required when prerequisites or corequisites are subject to approval by a state agency other than the Chancellor’s Office.

8. Do courses without prerequisites, corequisites or advisories on recommended preparation have to undergo a content review?

No, they do not. Title 5 does not require content review for courses without a prerequisite, corequisite, or advisory.

9. What is a minimal description of the process for performing a content review?

The content review process should, at a minimum, be comprised of the following steps:

- a) Faculty in the discipline should review the course;
- b) The process should be based on the examination of the course outline of record, course syllabi, texts, tests, and other grading criteria;
- c) The body of knowledge or skills determined as necessary and appropriate for a student to be successful in the “targeted” course should be documented;
- d) A course that develops the substantive skills or body of knowledge required by the target course should be identified, then reviewed for exit knowledge and skills; or an assessment process should be identified that could measure the necessary skills or body of knowledge; and,
- e) A systematic matching of the knowledge and skills between those required in the targeted course and those developed or measured by the proposed prerequisite or corequisite should be documented to determine whether a rational basis exists for requiring the course or assessment procedure as a prerequisite or corequisite.

10. What requirements must a college satisfy in order to establish prerequisites or corequisites using a “content review only” methodology?

The Board of Governors adopted title 5 changes in March 2011 that allow colleges to establish reading, written expression and mathematics prerequisites and corequisites for college level courses not in a sequence using content review only. In addition to the policies required for

either level of scrutiny – content review with statistical validation or content review only – for content review only, a college’s governing board must also first adopt a plan that specifies:

- the method used to determine which courses might be the most compelling candidates for new prerequisites or corequisites
- the provision of appropriate numbers of prerequisite or corequisite course sections
- the assurance that other degree applicable courses are available such that student progress toward their educational goals is not unnecessarily impeded
- training for the curriculum committee, and
- the use of research to evaluate the effect of new prerequisites on student success, with particular attention to disproportionate impact.

In addition, colleges must ensure they meet the following general requirements that are applicable to both the establishment of prerequisites and corequisites using content review only or content review with statistical validation methodologies:

- Adopt policies on how the college plans to adopt only those prerequisites, corequisites, and advisories on recommended preparation that the college determines are “necessary and appropriate for achieving the purpose for which it is established;” [§ 55003(b)(1)]
- Adopt procedures to assure that “courses for which prerequisites or corequisites are established will be taught in accordance with the course outline of record;” [§ 55003(b)(2)]
- Adopt policies to ensure that “each section of the prerequisite or corequisites is to be taught by a qualified instructor” and in accordance with the course outline of record; [§ 55003(b)(3)]
- Adopt a process for the review of prerequisites and corequisites at least once every six years and periodic review of advisories to assure they remain necessary and appropriate. For vocational courses or programs, title 5 requires prerequisites and corequisites to be reviewed every two years; [§ 55003(b)(4)]
- Establish the basis and process for students to challenge the application of a prerequisite or corequisites consistent with 55003(p). [§ 55003(b)(5) and (p)]
- Prerequisites establishing communication or computational skill requirements may not be established across the entire curriculum unless established on a course-by-course basis; [§ 55003(j)]
- Determination of whether a student meets a prerequisite shall be based on successful completion of an appropriate course or on an assessment using multiple measures; [§ 55003(k)]
- Ensure that courses and sections designed to teach the requisite precollegiate skills in reading, written expression, or mathematics are available with reasonable frequency based on the number of students who are required to meet the prerequisites or corequisites; [§ 55003(l)(1)]
- For precollegiate courses in reading, written expression or mathematics, conduct an evaluation to determine the impact on student success and whether there is any disproportionate impact; Where there is disproportionate impact, develop and

implement a plan, in consultation with the Chancellor's Office, to correct the disproportionate impact; [§ 55003(l)(2)(A) and (B)]

- Ensure that, no exit test be required to satisfy the prerequisite or corequisite unless incorporated into the grading for the course; [§ 55003(n)]

Note: *the above also applies for establishing prerequisites for courses in a sequence, with the exception of having to evaluate disproportionate impact.*

11. How should colleges monitor prerequisites and corequisites for any disproportionate impact?

Title 5, section 55003(l)(2) ties the establishment of prerequisites with the student equity plan provisions of section 54220 to ensure that prerequisite requirements in precollegiate reading, written expression or mathematics do not have a disproportionate impact on particular groups of student in terms of race, ethnicity, gender, age, or disability. Section 54220 delineates the requirements for college student equity plans and identifies five broad areas that colleges are required to address: (1) access, (2) retention, (3) degree and certificate completion, (4) ESL and basic skills completion, and (5) transfer. The Chancellor's Office plans to issue further guidance on this issue in the future. The Academic Senate's paper *Student Equity: From Dialog and Access to Action* provides a thoughtful approach regarding data collection and analysis to address this question.

12. Are there any reporting requirements that colleges need to meet in the title 5 regulations adopted by the BOG in March 2011?

Yes, there are. Title 5, section 55003(i) requires colleges to report by August 1st of each year all prerequisites, corequisites, or advisories established during the prior year. Districts are also required to specify the level of scrutiny used to establish the prerequisite, whether content review only or content review with statistical validation. The CCCCO Curriculum Inventory is being updated to allow colleges to report this information annually. This information will also be used to update the BOG on the impact of the prerequisite regulatory changes.

13. If a college uses content review only to establish reading, written expression or mathematics prerequisites or corequisites for one course in a program, does the college have to establish all courses in the program using the content review only methodology?

No, it does not. Title 5, section 55003 allows colleges to use either content review only or content review with statistical validation to establish prerequisites or corequisites for courses or programs. If one approach is used to establish prerequisites or corequisites in one course, it does not prohibit the college from using the second approach as long as title 5 requirements are met for the use of the applicable methodology.

14. What is the relationship between assessment test cut scores or ranges, and prerequisites?

Colleges justify their assessment test(s) cut scores or ranges for placement recommendations with data that are collected and analyzed for this purpose. Subsequently, these data are relevant to the continued use of prerequisites for these or subsequent courses in that they indicate students' relative expectancy of success in the course(s) for which the data have been analyzed.

Test instruments' cut scores or ranges, are established on the basis that students who score above the identified cut score have a relatively greater expectancy of success in the course for which the placement is recommended than those who score below it. If the cut score validation does not demonstrate this, then the prerequisite(s) must be set aside until the validation difficulties are identified and resolved. Any prerequisites for that course would have to be removed from subsequent catalogs and schedules and could not be enforced until the problems were resolved.

This action would be necessary because the predictive "power" of the prerequisite's completion would be predicated upon the acquisition of a skill or skill level not substantiated by the data collected and reviewed for this effort. Such prerequisites could be changed to advisories on recommended preparation during this time.

15. Can an assessment test score be used as a prerequisite if it is from an approved test and has been locally validated for placement into that course?

Not on its own. A single test score (or any other single assessment measure) cannot be used as a prerequisite. However, one or more test scores may be used as part of a broader multiple-measures approach for determining a student's readiness for a course. In the event that a college or district chooses to use multiple **instrument** scores for meeting prerequisites, they must all be assessment instruments on the Chancellor's approved instrument list, and have locally validated cut scores or ranges, and not be highly correlated (i.e., they may not have a correlated value of .75 or higher). Any single test score listed in catalogs, course schedules, or any other college documents as a prerequisite cannot be enforced and such descriptions need to be removed at the next publishing opportunity.

16. Can a college require a grade of "B" or better as the standard for successful completion of a prerequisite course?

No, it cannot. Title 5, section 55023 defines "satisfactory grade" as A, B, C, or P. Therefore, since "C" is a satisfactory grade, a college should not establish "B" as the lowest grade for determining satisfactory completion of a course serving as a prerequisite. This standard applies to courses that do not function as prerequisites as well. If faculty members suspect that students who receive a "C" are less prepared to do well in a succeeding course, then a solution would appear to be that faculty re-examine the academic rigor and standards of the prerequisite course(s) as well as the exit skills and knowledge they maintain to be necessary to ensure student success in the "target" course(s).

But other considerations are in play here too. Section 55040 discusses course repetition and permits students to repeat **only** courses for which a "substandard" grade of "D," "F," or "NP" has been recorded. Consequently, if the grade of "B" is established as a prerequisite, a student with a "C" could not progress further in the respective course sequence because the "C" grade would not allow repetition of the course, so there would be no way for the student to meet the prerequisite.

17. Do title 5 regulations require a lottery?

No, they do not. Enrollment in a program or block of courses via a "lottery" is not required by title 5. But, if you cannot accommodate all the students who meet prerequisites for your program, then you will need to use some nonevaluative student selection technique. **A lottery system is**

one option, but it is certainly not the only one and it may be the least desirable possibility. For example, a simple first-come-first-served system with a waiting list has the virtue of ensuring that students who are not accepted for a particular term are at least given some assurance that, if they meet established prerequisites, they will get in at some known point in the future.

18. How do we make certain that the best students will enroll in our programs if everyone enrolled in the college is eligible and we have limited slots for admission?

With the increased focus on outcomes, there is the danger that colleges will in turn focus their attention on students who are perceived as the most likely to succeed, on the “best” students. Therefore, we approach this question from a different perspective.

Colleges must be explicit about identifying the skills and abilities that students **must** have to be successful, and establishing the linkages between attaining those skills and enrollment into program courses. This may be done by having curriculum committees and discipline faculty who establish prerequisites, corequisites and advisories and identify entrance and exit skills work closely with counselors and faculty advisors.

As discussed above, it can and often does happen that the number of students who meet all appropriate prerequisites or corequisites still exceeds the numbers of available slots in a program; however, this does not mean those slots will be “taken up” by students who will drop out of the programs because of their poor academic preparation. If all necessary and appropriate prerequisites have been established and enforced, all students eligible for enrollment will be highly likely to succeed. This would mean that consistent and evenly applied grading criteria and teaching methodologies be used in prerequisite and corequisite courses to truly reflect the skills and abilities that program faculty have researched and determined students need to be successful. If this has been properly done, then using nonevaluative criteria to further limit enrollment is merely a way of fairly and equitably deciding which of the well-qualified students will have the opportunity to enroll in any given term.

Just as importantly, counseling faculty and faculty advisors must be aware of the student attributes (e.g., desire, motivation, study skills) that would help to assure students would be able to succeed and persevere. A true symbiosis of desire and qualification as identified and recognized by faculty and staff is necessary for ensuring student success. If it develops that many students are actually failing or dropping out, then something is seriously wrong. Either additional prerequisites are necessary and should be established, supportive services may not be sufficiently available to mitigate circumstances where students need assistance with circumstances that affect their academic performance (e.g., financial aid, tutoring, child care, etc.) or the matriculation process may not be effectively assisting students to realistically identify attainable goals; or some combination of all these.

Appendix B

§ 55003. Policies for Prerequisites, Corequisites and Advisories on Recommended Preparation.

- (a) The governing board of a community college district may establish prerequisites, corequisites, and advisories on recommended preparation, but must do so in accordance with the provisions of this article. Nothing in this subchapter shall be construed to require a district to establish prerequisites, corequisites, or advisories on recommended preparation; provided however, that a prerequisite or corequisite shall be required if the course is to be offered for associate degree credit and the curriculum committee finds that the prerequisite or corequisite is necessary pursuant to sections 55002(a)(2)(D) or 55002(a)(2)(E). Unless otherwise specified in this section, the level of scrutiny required to establish prerequisites, corequisites, and advisories on recommended preparation shall be based on content review as defined in subdivision (c) of section 55000 or content review with statistical validation as defined in subdivision (f) of this section. Determinations about prerequisites and corequisites shall be made on a course-by-course or program-by-program basis.
- (b) A district governing board choosing to establish prerequisites, corequisites, or advisories on recommended preparation shall, in accordance with the provisions of sections 53200-53204, adopt policies for the following:
- (1) the process for establishing prerequisites, corequisites, and advisories on recommended preparation. Such policies shall provide that in order to establish a prerequisite or corequisite, the prerequisite or corequisite must be determined to be necessary and appropriate for achieving the purpose for which it is being established.
 - (2) procedures to assure that courses for which prerequisites or corequisites are established will be taught in accordance with the course outline of record, particularly those aspects of the course outline that are the basis for justifying the establishment of the prerequisite or corequisite.
 - (3) the process to ensure that each section of the prerequisite or corequisite is to be taught by a qualified instructor and in accordance with a set of objectives and with other specifications defined in the course outline of record, as required in section 55002 for all courses.
 - (4) the process, including levels of scrutiny, for reviewing prerequisites and corequisites to assure that they remain necessary and appropriate. These processes shall provide that at least once each six years all prerequisites and corequisites established by the district shall be reviewed, except that prerequisites and corequisites for vocational courses or programs shall be reviewed every two years. These processes shall also provide for the periodic review of advisories on recommended preparation.
 - (5) the bases and process for an individual student to challenge the application of a prerequisite or corequisite.
- (c) A district governing board choosing to use content review as defined in subdivision (c) of section 55000 to establish prerequisites or corequisites in reading, written

expression or mathematics for degree-applicable courses not in a sequence shall first adopt a plan specifying:

- (1) the method to be used to identify courses to which prerequisites might be applied;
 - (2) assurance that courses are reasonably available to students when prerequisites or corequisites have been established using content review as defined in subdivision (c) of section 55000. Such assurance shall include sufficient availability of the following:
 - (A) appropriate courses that do not require prerequisites or corequisites, whether basic skills or degree-applicable courses; and
 - (B) prerequisite or corequisite courses;
 - (3) provisions for training for the curriculum committee; and
 - (4) the research to be used to determine the impact of new prerequisites based on content review.
- (d) Prerequisites or corequisites may be established only for any of the following purposes:
- (1) the prerequisite or corequisite is expressly required or expressly authorized by statute or regulation; or
 - (2) the prerequisite will assure, consistent with section 55002, that a student has the skills, concepts, and/or information that is presupposed in terms of the course or program for which it is being established, such that a student who has not met the prerequisite is highly unlikely to receive a satisfactory grade in the course (or at least one course within the program) for which the prerequisite is being established; or
 - (3) the corequisite course will assure, consistent with section 55002, that a student acquires the necessary skills, concepts, and/or information, such that a student who has not enrolled in the corequisite is highly unlikely to receive a satisfactory grade in the course or program for which the corequisite is being established; or
 - (4) the prerequisite or corequisite is necessary to protect the health or safety of a student or the health or safety of others.
- (e) Except as provided in this subdivision, no prerequisite or corequisite may be established or renewed unless it is determined to be necessary and appropriate to achieve the purpose for which it has been established. A prerequisite or corequisite need not be scrutinized using content review as defined by subdivision (c) of section 55000 or content review with statistical validation as defined by subdivision (f) of this section, if:
- (1) it is required by statute or regulation; or
 - (2) it is part of a closely-related lecture-laboratory course pairing within a discipline; or
 - (3) it is required by four-year institutions.; or
 - (4) baccalaureate institutions will not grant credit for a course unless it has the particular communication or computation skill prerequisite.
- (f) Content review with statistical validation is defined as conducting a content review (as defined in subdivision (c) of section 55000) and the compilation of data according to sound research practices which shows that a student is highly unlikely to succeed in the course unless the student has met the proposed prerequisite or corequisite.

- (g) If the curriculum committee, using content review with statistical validation, initially determines, pursuant to section 55002(a)(2)(E), that a new course needs to have a communication or computation skill prerequisite or corequisite, then, despite subdivision (e) of this section, the prerequisite or corequisite may be established for a single period of not more than two years while the research is being conducted and the final determination is being made, provided that all other requirements for establishing the prerequisite or corequisite have been met. The requirements of this subdivision related to collection of data shall not apply when the prerequisite or corequisite is required for enrollment in a program, that program is subject to approval by a state agency other than the Chancellor's Office and both of the following conditions are satisfied:
- (1) colleges in at least six different districts have previously satisfied the data collection requirements of this subdivision with respect to the same prerequisite or corequisite for the same program; and
 - (2) the district establishing the prerequisite or corequisite conducts an evaluation to determine whether the prerequisite or corequisite has a disproportionate impact on particular groups of students described in terms of race, ethnicity, gender, age or disability, as defined by the Chancellor. When there is a disproportionate impact on any such group of students, the district shall, in consultation with the Chancellor, develop and implement a plan setting forth the steps the district will take to correct the disproportionate impact.
- (h) Prerequisites, corequisites, and advisories on recommended preparation must be identified in college publications available to students as well as the course outline of any course for which they are established.
- (i) By August 1 of each year districts choosing to establish prerequisites, corequisites or advisories shall submit to the Chancellor's Office in the manner specified by the Chancellor the prerequisites and corequisites that were established during the prior academic year. Districts shall also specify the level of scrutiny, i.e., content review as defined in subdivision (c) of section 55000 or content review with statistical validation as defined in subdivision (e) of this section, used to determine whether the prerequisite or corequisite was necessary and appropriate for achieving the purpose for which it was established.
- (j) Prerequisites establishing communication or computational skill requirements may not be established across the entire curriculum unless established on a course-by-course basis.
- (k) The determination of whether a student meets a prerequisite shall be based on successful completion of an appropriate course or on an assessment using multiple measures, as required by section 55521(a)(3). Any assessment instrument shall be selected and used in accordance with the provisions of subchapter 6 (commencing with section 55500) of this chapter.
- (l) If a prerequisite requires precollegiate skills in reading, written expression, or mathematics, the district shall:
- (1) ensure that courses designed to teach the required skills are offered with reasonable frequency and that the number of sections available is reasonable given the number of students who are required to meet the associated skills prerequisites and who diligently seek enrollment in the prerequisite course.

- (2) monitor progress on student equity in accordance with section 54220. Monitoring shall include:
 - (A) conducting an evaluation to determine the impact on student success including whether the prerequisite or corequisite has a disproportionate impact on particular groups of students described in terms of race, ethnicity, gender, age or disability, as defined by the Chancellor.
 - (B) where there is a disproportionate impact on any such group of students, the district shall, in consultation with the Chancellor, develop and implement a plan setting forth the steps the district will take to correct the disproportionate impact.
- (m) Whenever a corequisite course is established, sufficient sections shall be offered to reasonably accommodate all students who are required to take the corequisite. A corequisite shall be waived as to any student for whom space in the corequisite course is not available.
- (n) No exit test may be required to satisfy a prerequisite or corequisite unless it is incorporated into the grading for the prerequisite or corequisite course.
- (o) The determination of whether a student meets a prerequisite shall be made prior to his or her enrollment in the course requiring the prerequisite, provided, however, that enrollment may be permitted pending verification that the student has met the prerequisite or corequisite. If the verification shows that the student has failed to meet the prerequisite, the student may be involuntarily dropped from the course. If the student is dropped, the applicable enrollment fees shall be promptly refunded. Otherwise a student may only be involuntarily removed from a course due to excessive absences or as a result of disciplinary action taken pursuant to law or to the student code of conduct.
- (p) Any prerequisite or corequisite may be challenged by a student on one or more of the grounds listed below. The student shall bear the initial burden of showing that grounds exist for the challenge. Challenges shall be resolved in a timely manner and, if the challenge is upheld, the student shall be permitted to enroll in the course or program in question. Grounds for challenge are:
 - (1) The prerequisite or corequisite has not been established in accordance with the district's process for establishing prerequisites and corequisites;
 - (2) The prerequisite or corequisite is in violation of this section;
 - (3) The prerequisite or corequisite is either unlawfully discriminatory or is being applied in an unlawfully discriminatory manner;
 - (4) The student has the knowledge or ability to succeed in the course or program despite not meeting the prerequisite or corequisite;
 - (5) The student will be subject to undue delay in attaining the goal of his or her educational plan because the prerequisite or corequisite course has not been made reasonably available; or
 - (6) Such other grounds for challenge as may be established by the district governing board.
- (q) In the case of a challenge under subdivision p)(3) of this section, the district shall promptly advise the student that he or she may file a formal complaint of unlawful discrimination pursuant to subchapter 5 (commencing with section 59300) of chapter 10 of this division. If the student elects to proceed with the challenge, completion of

the challenge procedure shall be deemed to constitute an informal complaint pursuant to section 59327.

- (r) District policies adopted pursuant to this section shall be submitted to the Chancellor's Office as part of the district's matriculation plan pursuant to section 55510.

Note: Authority cited: Sections 66700 and 70901, Education Code. Reference: Sections 70901 and 70902, Education Code.

Appendix C

References

Content Review for Communication and Computation Prerequisites (Academic Senate for California Community Colleges, 2011). Accessed from <http://www.asccc.org/resolutions/adopt-implementing-content-review-communication-and-computation-prerequisites-paper>.

The Model District Policy on Prerequisites, Corequisites, and Advisories on Recommended Preparation (Board of Governors, 1993). Accessed from <http://www.asccc.org/node/174979>

Multiple Measures and Other Sorrows (Chancellor's Office, 1998). Accessed from <http://www.cccco.edu/LinkClick.aspx?fileticket=Ye5cJyiAySA%3d&tabid=628&mid=1718>

Student Equity: From Dialog and Access to Action (Academic Senate for California Community Colleges, 2010). Accessed from <http://www.asccc.org/papers/student-equity-dialog-and-access-action>.