

Requisite Request

Definitions

Recent regulations require the Curriculum Committee to separately review and approve any of the following:

Prerequisite
Corequisite
Recommendation for Preparation Statement
Limitation on Enrollment

The words Prerequisite, Corequisite or Recommended Preparation are printed in the class schedule and catalog. It is important for you to understand the definitions of these terms.

Prerequisite means a condition of enrollment that a student is required to meet in order to demonstrate current readiness for enrollment in a course or educational program. A prerequisite represents a set of skills or a body of knowledge that a student must possess prior to enrollment and without which the student is highly unlikely to succeed in the course or program. Students will not be permitted to enroll in such courses and programs without the appropriate prerequisite.

Corequisite means a condition of enrollment consisting of a course that a student is required to take simultaneously in order to enroll in another course. A corequisite represents a set of skills or a body of knowledge that a student must acquire through concurrent enrollment in another course and without which the student is highly unlikely to succeed. Students must concurrently enroll in the corequisite course.

Recommended Preparation means a condition of enrollment that a student is advised, but not required, to meet before or in conjunction with enrollment in a course or educational program. Recommended preparation represents a set of skills or a body of knowledge with which a student will achieve a greater depth or breadth of knowledge of course material but without which the student is still likely to succeed in the course or program.

Limitation on Enrollment is a restriction on access to a class which may be placed as part of an enrollment management strategy that may or may not depend upon the academic preparation of the student--these limitations are described below.

Types of Prerequisites Established by the Board of Governors

Standard prerequisite or corequisite--a requirement commonly found in three or more CSU or UC locations for transfer courses identical to ours, often a circumstance in which the University will not accept the course for transfer unless it carries a specific prerequisite. For example, CHEM 1A requires MATH 130, Intermediate Algebra.

Sequential courses within and across disciplines--a requirement associated with a course which is part of a sequence (within the same discipline) or crosses the discipline lines, is the most common form of prerequisite. The Subcommittee expects that Long Beach City College courses will be listed rather than using phrases such as "basic programming skills". For example, AVPLT 61 requires AVPLT 50; ADN 12A requires BIO 60L.

Courses in communications or computational skills--these cases pertain to departments other than English or Math where the faculty propose to require a communications or computational skill competency as a prerequisite. For example, R/TV 30AD requires eligibility for ENGL 1.

Cut scores on assessment procedures--these requirements demand that a student receive an appropriate placement recommendation based upon an assessment process which, according to state guidelines, must involve multiple measures. For example, ENGL 1 requires qualification through the English assessment process.

Program prerequisite--a requirement that students must complete one or more courses of study before they can begin a program such as the registered nursing (ADN) program. The prerequisite courses must be related to one of the required courses in the program and the expectation is that once into the program sequence the student would not be able to take the prerequisite course because the program is too time demanding.

Health and Safety--a requirement that students must not pose a risk to themselves or to others in the course. For example, ADN 12AL requires a CPR card. Usually these requirements arise from contracts with outside agencies where we place our students. When that is the case, a Content Review is not required.

Recency or other measures of readiness--a requirement that students demonstrate a readiness to learn which has been achieved in a designated period of time before their proposed enrollment in the course or that a certain level of competency be established such as swimming proficiency certified by the Red Cross before taking the Lifeguard class at LBCC.

Some of the different types of prerequisites or corequisites require a different review process. However, the first step in all cases, except a Limitation on Enrollment and Health and Safety, is to prepare a **Content Review** using the [Requisite Section on the web outline](#).

Limitations on Enrollment is an audition or try-out requirement associated with public performance or intercollegiate competition, honors or blocks of courses intended for a cohort of students who will become a learning community. These are not prerequisites per se, but are addressed in the same sections of public administrative regulation. A different type of content review is required. For example, MUSIC 38AD requires an audition and POLSC 1H requires qualification for the honors program.

Content Review Procedures

The purpose of Content Review is to clarify the skills and concepts developed in a course, to identify possible gaps in skill development between a course and any requisite or recommended preparation, and to assure smooth transition between the two courses.

The goal of Content Review is to identify entrance skills and knowledge the faculty anticipate a student will have before s/he enter the "target course" to which a requisite is being attached and then to make a comparison with the exit competencies from the proposed prerequisite or corequisite course. The purpose is to determine the extent to which the entrance skills and knowledge are **essential** to the student's success. That is to say, without the entrance skills and knowledge, is a student highly unlikely to succeed in the "target" course?

The goal for a statement of recommended preparation is to identify entering skills and knowledge which would help a student but without which the student could still succeed in the "target" course.

The general steps in a Content Review are as follows:

Step 1. Define entrance expectations in the "target" course (the course for which a prerequisite is being requested).

- Faculty who teach the "target" course should review the course outline, syllabus, texts and reading assignments, tests, and any other course materials used.
- Each instructor should compile a list of "entering skills" that they anticipate students must have mastered.
- For a **prerequisite**, the entering skills are those without which, in the professional judgment of the instructor, the student will not likely succeed in the course.
- For a **corequisite** course, these skills are those without which, in the professional judgment of the instructor, it is highly unlikely that the student will succeed in the course.
- For a **recommended preparation**, the entering skills are those which will enrich or deepen the student's knowledge obtained from the course but without which the student will still succeed in the course.
- Those instructors, who teach the course should then meet, discuss their lists of anticipated entering skills and knowledge, resolve any differences, and compile a final list by consensus.

Step 2. Identify the means of obtaining abilities, skills and knowledge.

Once entrance expectations are clarified, the faculty should then suggest how the necessary abilities, skills, and knowledge can be obtained or assessed. Courses in the college's curriculum or assessment processes should be identified that provide the exit skills needed for the target course. For courses in the curriculum, these exit skills are listed in the "Student Outcomes" section of the course outline of record ("Upon completion of the course the student should be able to....").

Step 3. Compare the exit skills anticipated from the requisite course and the entering skills expected for the target course.

- To compare the exit skills of the requisite course with the entering skills of the "target" course, it is suggested that a matrix be formed with entering skills across the top and exit skills down the side. At the points where the two match, a notation can be made in the matrix. The faculty should then examine the matrix to determine if the entering skills are met by the requisite course. The question to be raised is, "are the exit skills of the requisite course much lower, about the same, or much greater than the entering skills of the outcome course?"
- If the entering skills of the "target" course are substantively the same as the exit skills for the requisite course, then the choice is a good one. If the requisite exit criteria are greater or more diverse than the entering expectations of the outcome course, the faculty should carefully consider whether requiring the course as a requisite is justified or whether an alternative approach might be better.
- If the exit skills do not clearly match the needs listed by the faculty of the "target" course, a discussion between the groups may be helpful. It may be that differing perceptions about the curriculum can be resolved, or that gaps which have been identified in the students' preparation can be corrected by modifying the curriculum of either the requisite course or the outcome course.
- Upon completion of the Content Review by the discipline faculty, the Requisite Section in the web outline is prepared. List the subject and catalog number of the identified requisite then list four to six exit skills.

Limitation on Enrollment

In a limited number of cases, the faculty may propose a Limitation on Enrollment. However, their proposal must be supported by the following:

- Curriculum guide(s) to identify the ways in which the course for which the limitation is being requested can be used for a degree or certificate;
- Annotations on the curriculum guide indicating another course or courses which meet the same field of concentration requirements.

Limitation on Enrollment for public performance or intercollegiate competition classes will be subjected to an assessment to determine whether the limitation has a disproportionate impact on any historically underrepresented student group.

Scrutiny

Before final approval can be granted, the prerequisite, corequisite or recommended preparation proposal must be scrutinized by the Course Evaluation Subcommittee. Scrutiny for most types of prerequisites or corequisites and a statement of recommended preparation involves a review of the completed Requisite Section information.

However, prerequisites described above as being communications or computational skills, recency or other measures of readiness require a systematic data collection and analysis effort beyond the normal committee review. Please inquire with the Dean for Academic Services. Intense scrutiny and state approval are required for any assessment process used as a prerequisite. (Please inquire with the [Coordinator for Matriculation Services.](#))

A program prerequisite will involve the type of scrutiny appropriate to the provisions of the prerequisite. In some cases the scrutiny can be an inspection of the Content Review materials or may be a data collection and analysis effort. All requisites must be reassessed once every six years.

What does the Course Evaluation Subcommittee look for in the Content Review and Analysis of data?

The task of the Course Evaluation Subcommittee is to scrutinize the requisite request on behalf of the Curriculum Committee. As such, the Subcommittee is looking at the Requisite Section on the web course outline document.

Most commonly, the Subcommittee may compare the target course outline and supporting materials to the statement of presumed skills and knowledge. The question to be answered is how representative and reasonable are the presupposed skills and knowledge, given what the outline indicates to be the demands of the target course.

The Subcommittee will compare the list of exit skills to the course outline for the proposed prerequisite. In this comparison the Subcommittee is seeking to validate the representativeness of the outcomes listed on the form with the outcomes identified in the course outline of record.

Finally, the Subcommittee will compare the lists of presupposed skills and knowledge and the prerequisite course outcomes. They will seek to determine the extent to which the two lists overlap or match.

For a communications and computational skills prerequisite, the Subcommittee will look for all of the points mentioned above with particular attention to the work in the target course which is evaluated. Key concerns are to determine the extent to which communications or computational skills are essential to the completion of that work and the relative weight of that work in the overall evaluation strategy in the target course.

In addition, the [Office of Institutional Effectiveness](#) will develop and analyze empirical data which will be shared with the Subcommittee. Therefore, the Subcommittee will be interested in the actual experience of students who are enrolled in or who have completed the target course. They will seek to determine the extent to which students without the requested prerequisite are successful in the target course and the extent to which students who have satisfied the prerequisite are nevertheless unsuccessful in the target course.

For an assessment/placement recommendation prerequisite, the Subcommittee will be guided by the results of research work done locally and an approval by the Chancellor's Office of the evaluation instrument used in the assessment process. The English, ESL and Mathematics curriculum sometimes uses a placement process which depends upon an assessment of the student. The assessment must include multiple measures which are designed to facilitate appropriate placement within the sequence of English, ESL and Mathematics classes.

The Multiple Measures Assessment is broad in scope. No list of factors that may be included in a multiple measures assessment is exhaustive; however, some general categories and examples can be outlined. Student factors may include cognitive skills which may be inferred from test scores, GPA and transcripts; emotional well-being, motivational level and educational goals which may be elicited in an interview or self-reported; social factors, such as life experiences, family responsibilities and social support for educational effort; economic factors, such as job demands and financial resources; and physical factors. Factors associated with the instructor, the institution, and the community can often interact with student factors to further indicate the potential for success in a given course. Part of the research effort is to identify the several specific multiple measures that best predict success in curriculum when combined with test scores.

For a program prerequisite, the Subcommittee will be guided by the nature of the program prerequisite. The issues of interest will be determined by the nature of the program prerequisite which could be a course, an assessment process or a measure of readiness. These prerequisites need to link with a specific course in the program.

For a health and safety prerequisite, the Subcommittee will look at the description of the potential health or safety hazard in light of the nature of the activities and equipment used in the target course. The Subcommittee

will then compare the list of skills and knowledge essential to ensure that no one is endangered to the description of how the student might demonstrate that they possess those skills and knowledge.

For a readiness prerequisite, the Subcommittee will compare the target course outline and supporting materials to the statement of recency or other measure of readiness requested. The question to be answered is how representative and reasonable is the recency or other measure of readiness requirement, given what the outline and course supporting materials indicate to be the demands of the target course.

In addition, the Institutional Effectiveness Office will develop and analyze some empirical data which will be shared with the Subcommittee. Therefore, the Subcommittee will be interested in the actual experience of students who are enrolled in or who have completed the target course. They will seek to determine the extent to which students without the requested prerequisite are successful in the target course and the extent to which students who have satisfied the prerequisite are nevertheless unsuccessful in the target course.

On the whole, the Course Evaluation Subcommittee is required independently to assess the appropriateness and necessity of the proposed pre or corequisite. To conclude that the pre or corequisite is appropriate and necessary the Subcommittee and the departmental faculty must independently conclude that a student is highly unlikely to succeed in the course without having completed the prerequisite or having concurrent enrollment in the corequisite. In contrast, a recommended preparation statement requires the Subcommittee and the departmental faculty to conclude that it would be desirable for a student to have completed the preparation before enrolling in the course. In these cases the student is expected to be able to succeed without having accomplished the recommended preparation.

Basic Skills Requisite Establishment and Guide

REQUISITE

LBCC must be explicit about identifying the knowledge, skills and abilities that students must have to be successful, and establishing the linkages between attaining those skills and enrollment into program courses. If all necessary and appropriate requisites have been established (Title 5 §55003(b)(1)) 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 pre- and corequisite courses to truly reflect the knowledge, skills and abilities that program faculty have investigated and determined students need to be successful. If it develops that many students are actually failing or dropping out, then something is seriously wrong. Either additional requisites 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.

PREREQUISITE

Prerequisites are conditions of enrollment that students are required to meet prior to enrollment in a particular course. The assignment of a prerequisite to a course signifies that the course's 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 (Title 5 §55003(c)(2)).

COREQUISITE

The levels of scrutiny to be applied to a corequisite are the same as those for a prerequisite. Corequisites are to assure "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" [Title 5 §55003(c)(3)]. The basic concept involved in corequisites is that content in the two corequisite courses is so intertwined that a student cannot reasonably pass either class without the other.

BASIC SKILLS REQUISITE APPROVAL PROCESS

The College's curriculum approval process for the establishment of basic skills requisites on non-basic skills courses will provide guidance in identifying courses for which a new pre- or corequisite should be submitted and approved through the established curriculum approval process (Title 5 Section 55003(e) and (g)). Basic skills are those foundation skills in reading, writing, mathematics, and English as a Second Language, as well as learning skills and study skills, which are necessary for students to succeed in college-level work. If, for example, a philosophy course outline identifies the requirements of extensive essays and research papers, it would be reasonable for the department faculty to investigate the need for an English composition course prerequisite. However, options to address this perceived need are still open to the faculty. They include 1) teaching the skills within the course itself, such as instituting a unit on writing a research paper for the social sciences; 2) providing necessary support such as tutorials, special reviews, access to the Writing Success Center, or even block enrollment in an English course, so that students can achieve the expected outcomes even without a high level of previously acquired skills; and 3) reducing the level of expectation in the course to the point that students would not be highly unlikely to succeed without the prerequisite. (This latter option is the least attractive, resulting in a lowering of course standards.) If the course remains at a level that the department faculty continues to see as needing prerequisite skills, this decision would initiate the appropriate level of scrutiny to ascertain whether or not, indeed, these perceptions are supported by that scrutiny. In the above philosophy course example, a historical look-back study may show that students have been succeeding in the course even without specified English composition skills.

BASIC SKILLS RESEARCH REQUEST FORM

The College has a procedure for initiating a basic skills course requisite. The Basic Skills Research Request Form includes all of the initial components required to assist faculty in determining if the research requirements in this process is feasible. This form can be downloaded from the [Curriculum Forms website](#). Submission to the Office of Academic Services should follow all published protocols and calendars.

Initially an empirical review of the course outlines of record is required to provide documented purpose and intent of the various requirements and aspects of the courses in question. Identification of relevant assignments, evaluation standards, textbooks and course materials will be necessary to illustrate the preliminary linkage between basic skills and the "target" course. Further, course assessment of Student Learning Outcomes (SLOs) should be cited as further evidence of the requisite needs for the target course. Moreover, some investigation as to if other regional community colleges are addressing the basic skills needs for similar courses are required.

A documented content review will also need to be done by discipline faculty reviewing the materials, syllabi, and course outlines (outcomes and objectives, content, assignments, evaluations, texts, etc.) to establish the need for basic skills for without which the student would be highly unlikely to succeed (in the professional opinion of instructors in the discipline). This provides discipline faculty an opportunity to develop informed conclusion about suspicions/inclinations of student skill basic skill needs for a non-basic skills course. A documented content review is part of the presentation of evidence that the identified pre- or corequisite skills are covered in the proposed pre- or corequisite course. The content review matrix on the Basic Skills Requisite Research Request Form represents an outline to assist faculty in the development of a documented content review, which will establish the content relationship between a target course and its respective pre or corequisite course. Please consult with the discipline's curriculum representative or designee to assist in the completion of this matrix. Basically this process is the analysis of entrance expectations for a target course along with the exit skills for the prerequisite course or the interrelated nature of exit skills for both courses in a corequisite situation. A minimum of 50% alignment between these two entities is needed to determine either requisite correlation.

Once the faculty group has established through the content analysis that one course is necessary as a pre- or corequisite for another, statistical data can be collected to substantiate this. The necessary goal of this process is to provide empirical data demonstrating that the prerequisite is "necessary for success" or students without the required prerequisite course are "highly unlikely to obtain a satisfactory grade" [Title 5 § 58106(e)]. Or for a corequisite situation to assure "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" [Title 5 §55201(c)(3)]. This determination will be based on the signed and submitted Basic Skills Research Request Form and will be jointly made by the Office of Institutional Effectiveness and the Course Evaluation Subcommittee.

RESEARCH ANALYSIS

At this juncture a research project will commence through the Office of Institutional Effectiveness, which will follow the research design for data collection and analysis, required for basic skills requisite (Title 5 §55003(h) and §55500), as this is the highest level of scrutiny for a requisite. The basic premise is that the college must demonstrate, using sound research practices that students are highly unlikely to succeed without these skills. The Model District Policy, II.A.1.g.(3), states, "The research design, operational definition, and numerical standards, if appropriate, shall be developed by research personnel" and faculty representatives (locally through the Course Evaluation Subcommittee). The College has established a procedure for developing such research designs and it is noted in the 'Statistical Analysis Procedures and Standards' portion of this section.

ASSESSMENT RESULTS

It is good practice to use the assessment result in concert with the equivalent course when listing the prerequisite in the course description. For example, an electronics class might have a math prerequisite listed in the catalog as "Prerequisite: Math 101 or equivalent skills demonstrated through the math placement process." This allows students the alternative of placing into the course through assessment, or, if starting the math course sequence at a lower entry point, to take electronics after passing the appropriate math course.

Typically, the Course Evaluation Subcommittee establishes the assessment as an alternative to the course. Justification of the prerequisite is then based on the level of scrutiny applied to the course. Evidence that the assessment result is appropriate to include along with the course listing consists of the research needed to validate the assessment process (on Chancellor's Office list, appropriate cutoff scores, justified multiple measures, lack of disproportionate impact) for the prerequisite course in the discipline sequence.

OFFICE OF INSTITUTIONAL EFFECTIVENESS STATISTICAL ANALYSIS PROCEDURES AND STANDARDS

1) The minimum required data collection sample size for statistical analysis to establish a prerequisite or co-requisite for a specific course should be at least 100 students, including at least 20 students in the data collection research sample who did not meet the prerequisite or co-requisite requirement. This sample size guideline means that it may be necessary to collect data from multiple sections of the same courses for a period of more than one semester or collect data from a single section offering over several semesters.

2) Analysis of data collected through appropriate prerequisite research design procedures should indicate a statistically significant difference between students that have met the prerequisite or co-requisite for the course and students that have not met prerequisite or co-requisite with respect to the selected "student success" outcome measure.

3) In order to evaluate the statistical significance of the observed differences between the two groups of students, a data table comparison matrix will be examined to determine evidence as to the impact of the proposed prerequisite or co-requisite. Results may indicate at least one or a combination of the following:

- a correlation coefficient using "Pearson r" indicating 0.35
- a matrix or four-cell table and accompanying chi-square coefficient of 3.84

4) In order to evaluate the practical significance of observed statistical differences between the two groups of students, the data table comparison matrix will be examined to determine direct evidence as to the actual practical impact of the proposed prerequisite or co-requisite. Results may indicate at least one or a combination of the following:

- less than 1/3 of students who did not meet the prerequisite or co-requisite were successful in the outcome

course (grade of "C" or better), while more than 2/3 of students *with* the prerequisite or co-requisite were successful. The proportion of success of students who have met the prerequisite to students who have not met the prerequisite should be greater than "2-to-1".

- the overall success rate of the outcome course increases by at least 10% after the prerequisite or co-requisite is set.

These two conditions concerning course success rates represent the operational definition or statistical equivalent of the regulation criterion of "highly unlikely to succeed" that is to be used to demonstrate the necessity and appropriateness of a prerequisite or co-requisite.

5) If data analysis results for either final grade or alternative "student success" outcome measure selected indicate:

- a statistically significant difference between students that have met and students that have not met the proposed prerequisite or co-requisite with respect to the selected outcome measure, and
- practical impact of the proposed prerequisite or co-requisite, the necessity and appropriateness of the prerequisite or co-requisite will have been demonstrated and justified (data analysis results for second outcome measure should provide "supportive" evidence).

Under these conditions, data analysis results will be presented to the Course Evaluation Subcommittee by the institutional researcher with a recommendation for approval of the proposed prerequisite or co-requisite.

If observed data analysis results for final grade and alternative "student success" outcome measure are seriously "divergent" with respect to statistical significance or practical impact, the institutional researcher will present all data analysis results to the Course Evaluation Subcommittee for review and evaluation without a specific recommendation concerning approval of the proposed prerequisite or co-requisite.

6) If the data analysis for either final grade or alternative "student success" outcome measure selected indicates a statistically significant difference between students that have met and students that have not met the proposed prerequisite or co-requisite, but a sufficient degree of practical impact is not indicated, data analysis results will be presented to the Course Evaluation Subcommittee by the institutional researcher with a recommendation that the proposed prerequisite or co-requisite be considered for approval only as recommended preparation for the course.

7) Responsibilities of [Institutional Effectiveness Office](#)

- Prioritize requests for research in a specific semester, if necessary
- Provide forms for data collection of measures other than final grades
- Obtain student data from computer files on presence of pre/co-requisite, assessment placement recommendation, and final grades.
- Determine presence of minimum sample size for analysis
 - Minimum of 100 total students, across sections or semesters
 - Minimum of 20 students who have not met the pre/co-requisite

8) Statistical Analysis Standards

Using [RP Group](#) definitions that have been adopted by the Chancellor's Office, success rate is defined as all students who earned an A,B,C or CR grade on record in the target course

References:

Academic Senate of the California Community Colleges. [Establishing Prerequisites](#) (1992) This paper defines the various levels of pre- and co-requisites as well as advisories. This is an excellent place to start.

Academic Senate of the California Community Colleges. [The Model District Policy for Prerequisites, Co-requisites, Advisories on Recommended Preparation, and Other Limitations on Enrollment](#) (1993) This paper has more specific instructions on the research protocols.

Academic Senate of the California Community Colleges. [Good Practice for the Implementation of Prerequisites](#) (1997) This paper has easy to read, step by step examples of how to establish prerequisites.

Chancellor's Office of the California Community Colleges. [Standards, Policies and Procedures for the Evaluation of Assessment Instruments Used in the California Community Colleges](#) (2001)