

**LOS ANGELES COMMUNITY COLLEGES
OFFICE OF THE CHANCELLOR
ADMINISTRATIVE REGULATIONS**

INDEX NUMBER E-10

REFERENCE: Education Code, section 76020,
Title 5, C.C.R., section 55201, 55202, 58106
Board Rule 1202, 6403, Chapter IX, Article
VIII, 91101 et seq.

TOPIC:
Registered Nursing Program Standards

ISSUE DATE:
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INITIATED BY:
Educational Services

CHANGES: Section 5
Sections 2, 11 and Appendix A;
Section 11,

DATES OF CHANGES: 2-1-77; 12-1-80; 2-1-
98; 8-26-02; 7-30-05; 8-1-06; 4-30-09

1. Non-Discrimination Policy

All persons, who are able to perform satisfactorily the responsibilities and tasks required in an educational and training program, should be provided an opportunity to succeed. The non-discrimination policy of the Los Angeles Community College District requires all programs and activities to be operated in a manner which is free of discrimination on the basis of race, color, national origin, ancestry, religion, creed, sex, pregnancy, marital status, medical condition (cancer-related), sexual orientation, age, disability or veteran status.

Qualified disabled applicants, who are admitted to the program, may request academic accommodations and/or auxiliary aides under Section 504 of the Rehabilitation Act. Reasonable academic accommodations will be made and/or auxiliary aides will be given, unless academic requirements are demonstrated to be essential to the program of instruction or are directly related to licensing requirements. However, academic requirements that the college can demonstrate are essential to the program of instruction being pursued by such student, or to any directly related licensing requirement, will not be regarded as discriminatory, even if they have an adverse effect on persons with disabilities.

2. Admission Requirements

a) Applicants to District Nursing programs must successfully complete established admission requirements. Each nursing program will utilize a pre-determined, non-evaluative selection procedure to admit students to the program when there are more applicants than there are available openings in the program.

b) Program Prerequisites

The following prerequisites must be satisfied prior to admission to the Registered Nursing Program (R.N.). Each Program Prerequisite must be validated in accordance with the provisions of Title 5, California Code of Regulations, section 55201 and *The Los Angeles Community College District Policy on Prerequisites, Corequisites and Advisories*, and must be required for at least one course in the

program. All required courses must be completed with a grade of “C” or better prior to admission to the Registered Nursing program.

1. Core Courses

Course	Minimum Requirements	District Courses	Units
Chemistry***	4 semester units	Chemistry 51	5
Anatomy	4 semester units with lab	Anatomy 1 * or Physiology 8*	4
AND		AND	
Physiology	4 semester units with lab	Physiology 1 * or Physiology 9*	4
OR		OR	
Combined Anatomy & Physiology	8 semester units with lab	Biology 20	8
Microbiology	4 semester units	Microbiology 1 or Microbiology 20	5 4
General Psychology	3 semester units	Psychology 1	3
Life-Span Psychology **	3 semester units	Psychology 41	3
College Reading and Composition	3 semester units	English 101	3

***Student must take Anatomy 1 and Physiology 1, OR Physiology 8 and Physiology 9.**

****Nursing programs that did not require a Life Span Psychology course prior to the adoption of this regulation may exempt students from this requirement during the 1998 - 1999 school year.**

*****Students who can demonstrate that they successfully completed one year of high school Chemistry (with lab) with a grade of C or better are exempt from this prerequisite.**

2. Mathematics

One course in Mathematics, or appropriate placement level is a prerequisite to the program. This prerequisite must be validated in accordance with the provisions of Title 5, California Code of Regulations, section 55201 and *The Los Angeles Community College District Policy on*

Prerequisites, Corequisites and Advisories. The mathematics course or placement level must be a prerequisite to at least one course in the Nursing Program.

3. Additional Prerequisites

In accordance with the provisions of Title 5, California Code of Regulations, section 55201 and *The Los Angeles Community College District Policy on Prerequisites, Corequisites and Advisories*, each college may include up to nine (9) units of additional validated prerequisites to courses in the program. Each course must be a prerequisite to at least one course in the Nursing Program at that college.

3. Health and Safety Prerequisites

Each college may establish health and safety prerequisites for courses in the Registered Nursing program in order to protect the health and safety of the students, consumers and/or others. Such prerequisites will be established and validated in accordance with the provisions of Title 5, California Code of Regulations section 55201 and *The Los Angeles Community College District Policy on Prerequisites, Corequisites and Advisories*.

4. Health Requirements

The student must be free from communicable diseases, infection, psychological disorder, and other conditions that would present a threat to, or negatively impact the well being of faculty, students or consumers, or would prevent the successful performance of the responsibilities and tasks required in the education and training program of the college. Any condition described above which is developed by the student after admission to the program, may be considered sufficient cause for suspension from the program.

The Director of a Nursing Program may require a student to be examined by a licensed health care provider and to have laboratory tests, as needed, to determine physical and mental fitness. The Director is authorized to require that records of any such examination be released to the Director. Such records may be used only to determine fitness for the program, and except for such use, the confidentiality of such records shall be maintained.

a) Physical Examinations:

Each nursing student shall be required to have a complete physical examination prior to admission to the program. The physical examination shall be repeated every two years unless otherwise specified (e.g., hospital or other affiliating facility requirements). Students must bear the cost of such examination and tests.

b) Laboratory Tests:

Nursing students are required to have the following tests: complete blood count, VDRL or RPR, urinalysis, TB skin test and/or chest x-ray. Evidence of polio vaccination must be provided.

Additionally, students must demonstrate by titers immunity from rubella, rubeola, varicella, hepatitis B and mumps. Copies of all laboratory results must be submitted with the completed Health Record. Students will be notified if tests, other than those listed above are required by a hospital or other affiliating facility.

c) Immunizations:

Immunizations are necessary in clinical settings and training facilities to protect the health and welfare of students, consumers and the community. Students must obtain the immunizations listed in Section 4b prior to being admitted into a Nursing Program. Copies of all immunization results must be submitted to the Nursing Department as specified. If additional tests or immunizations are required by a hospital or other affiliating facility, students will be notified.

5. Leave of Absence:

- a) A student, who has not been suspended from the Nursing program under the provisions of section 7 of this regulation, may request a leave of absence from the Nursing program for up to one year (two semesters) because of “extenuating circumstances.” “Extenuating circumstances” may include, but are not limited to, verified cases of accidents, illness, or other circumstances beyond the control of the student.
- b) Requests for a leave of absence shall be reviewed by the *Nursing Suspension and Readmission Committee* (consisting of one Nursing faculty member selected by the Nursing Department, the Vice President of Academic Affairs or designee), and a counselor selected by the College Academic Senate, and the Committee will reach a decision by majority vote and their decision shall be final.
- c) If the leave of absence is granted, the student will be readmitted to the program on a space available basis, which will be determined based on the number of slots available after continuing and newly admitted students have been accommodated. However, the student will be readmitted within one (1) semester after the leave ends.
- d) If the leave of absence is not granted and the student withdraws from one or more of the following subjects: NURSING (Subject Code 669), NURSING SCIENCE (Subject Code 671), NURSING, REGISTERED (Subject Code 673), the student shall be subject to the provisions of section 7(c) of this regulation.
- e) The student will only be granted one leave of absence from the Nursing Program.

6. **Exclusion/Suspension/Expulsion:**

a) Health Reasons

Nursing Students may be excluded from a Nursing Program if the student has a physical or mental disability, which is inimical to the welfare of other students pursuant to Education Code section 76020. Exclusion from a Nursing program for health reasons will be on a case-by-case basis and shall be reviewed by the Director of Nursing, in consultation with the College Compliance Officer, the Director of the Disabled Student Programs and Services (DSP&S) and the College DSP&S Specialist in compliance with Section 504 of the Rehabilitation Act, Title II of the Americans with Disabilities Act, the Vocational Education Act, and the Carl Perkins Act, as appropriate. If possible, such student may be counseled to enter a more appropriate program. If the student presents an immediate threat to public health, the student may be immediately suspended pending the outcome of the process delineated above.

b) Safety and Other Reasons

Nursing students may also be suspended or expelled from the Nursing Program for reasons not related to the student's health -- e.g., Violations of the Standards of Conduct (LACCD Board Rules Chapter IX, Article VII – CONDUCT ON CAMPUS). This includes "Unsafe Conduct" as defined in LACCD Board Rule 9806 (a) which includes "Unsafe conduct in connection with a Health Services Program (e.g., Nursing, Dental Hygiene, etc.)." Such suspensions or expulsions will be conducted in keeping with the procedures contained in Board Rule 91101 et seq. If the student's conduct presents threat to his or her own safety or the safety of others (e.g., patients, fellow students, faculty, or hospital staff), the Nursing Department Chair may immediately suspended the student under the immediate suspension provisions of Board Rule 91101.11 (b)(6). Within twenty-four (24) hours of the suspension, the Nursing Department Chair shall send the Chief Student Services Officer a written report of the suspension. The suspension shall remain in effect until the conclusion of all disciplinary action(s) on this matter.

All discipline, including suspension and expulsion, will be done in accordance with the District's Student Discipline Procedure (LACCD Board Rule 91101 et seq.).

c) **SUSPENSION, READMISSION AND DISQUALIFICATION**

1) Academic Disqualification During the First Semester

a) Disqualification

- i) A student in the Nursing program who, during the first semester of the program, receives one "substandard grade" ("D," "F," or "NP") in courses in any of the following

subjects: NURSING (Subject Code 669), NURSING SCIENCE (Subject Code 671), NURSING, REGISTERED (Subject Code 673), shall be disqualified from the program.

b) Readmission

- i) To be readmitted the student must be admitted to the program in keeping with the requirements of LACCD Administrative Regulation E-10.

2) Academic Suspension, Readmission, and Disqualification After First Semester

a) Suspension

- i) A student in the Nursing program, who completes the first semester of the program and subsequently receives one “substandard grade” (“D,” “F,” or “NP/NCR”) in a Nursing or Nursing Science courses in any of the following subjects: NURSING (Subject Code 669), NURSING SCIENCE (Subject Code 671), NURSING, REGISTERED (Subject Code 673), will be suspended from the program.
- ii) The suspension will be effective for the semester or term following the semester or term in which the substandard grade was received.
- iii) A student suspended from the Nursing program will be provided with an Individual Remediation Plan by the Director of the Nursing Program or the Director’s designee.

b) Readmission

- i) Upon documented completion of the student’s Individual Remediation Plan within the time specified in the plan, the student may apply for readmission to the Nursing Program.
- ii) The student will be readmitted based on the space available, which will be determined based on the number of slots available after continuing and newly admitted students have been accommodated. However, the student must be readmitted within two (2) semesters after the completion of the Individual Remediation Plan.

c) Disqualification

- i) A student in the Nursing program will be disqualified from the program, if the student receives a subsequent

“substandard grade” (“D,” “F,” or “NP/NCR”) in more than one Nursing or Nursing Science course.

3) Progress Disqualification During the First Semester

a) Disqualification

- i) Pursuant to Board Rule 6701 (which allows limitations on course repetition within specific programs) a student in the Nursing program, who withdraws from a Nursing or Nursing Science course during the first semester of the program, will be disqualified from the program, unless the *Nursing Suspension and Readmission Committee* determines that there were “extenuating circumstances.” “Extenuating circumstances” may include, but are not limited to, verified cases of accidents, illness, or other circumstances beyond the control of the student. The Committee will reach a decision by majority vote and their decision shall be final.
 - (1) If the *Nursing Suspension and Readmission Committee* determines that the withdrawal was due to “extenuating circumstances,” the student will be permitted to continue in the Nursing program, based on the space available. Available space will be determined based on the number of slots available after continuing and newly admitted students have been accommodated. However, the student must be provided space in program within two semesters of the semester in which the withdrawal occurs.

If the student does not return to the program within two semesters of the withdrawal, the student will be disqualified from the program. However, the student may extend his or her absence from the program beyond two semesters by mutual agreement between the student and the *Nursing Suspension and Readmission Committee*.
- ii) The suspension will be effective for the semester or term following the semester or term in which the substandard “W”.
- iii) Students who withdraw because of military service are not subject to suspension for withdrawing and, upon separation from military service, must be provided with a placement in the program.

4) Progress Suspension, Readmission, and Disqualification after the first semester of the Nursing Program.

a) Suspension

i) Pursuant to Board Rule 6701 (which allows limitations on course repetition within specific programs) a student in the Nursing program, who withdraws from a Nursing or Nursing Science course during the first semester of the program, will be disqualified from the program, unless the *Nursing Suspension and Readmission Committee* determines that there were “extenuating circumstances.” “Extenuating circumstances” may include, but are not limited to, verified cases of accidents, illness, or other circumstances beyond the control of the student. The Committee will reach a decision by majority vote and their decision shall be final.

(1) If the *Nursing Suspension and Readmission Committee* determines that there were “extenuating circumstances,” the student will be permitted to continue in the Nursing program, based on the space available. Available space will be determined based on the number of slots available after continuing and newly admitted students have been accommodated. However, the student must be provided space in program within two semesters of the semester in which the withdrawal occurs.

If the student does not return to the program within two semesters of the withdrawal, the student will be disqualified from the program. However, the student may extend his or her absence from the program beyond two semesters by mutual agreement between the student and the *Nursing Suspensions and Readmission Committee*.

ii) The suspension will be effective for the semester or term following the semester or term in which the substandard “W”.

iii) Students who withdraw because of military service are not subject to suspension for withdrawing and, upon separation from military service, must be provided with a placement in the program.

iv) Students who withdraw because of military service are not subject to suspension for withdrawing and, upon separation

from military service, must be provided with a placement in the program.

b) Readmission

- i) Upon documented completion of the student's Individual Remediation Plan within the time specified in the plan, the student may apply for readmission to the Nursing Program.
- ii) The student will be readmitted based on the space available, which will be determined based on the number of slots available after continuing and newly admitted students have been accommodated. However, the student must be readmitted within two (2) semesters after the completion of the Individual Remediation Plan.

c) Disqualification

- i) Pursuant to Board Rule 6701 (which allows limitations on course repetition within specific programs) a student in the Nursing program, who withdraws from a Nursing or Nursing Science course during the first semester of the program, will be disqualified from the program, unless the *Nursing Suspension and Readmission Committee* determines that there were "extenuating circumstances." "Extenuating circumstances" may include, but are not limited to, verified cases of accidents, illness, or other circumstances beyond the control of the student. The Committee will reach a decision by majority vote and their decision shall be final.

5) Re-admission following academic or progress disqualification.

- a) A student may reapply to the Nursing Program after one (1) academic year.
- b) The students application for readmission will be reviewed *Nursing Suspension and Readmission Committee*, which will make a determination as to whether there are factors that increase the likelihood of the student succeeding, if the student were to be readmitted to the Nursing Program. The factors considered in program will include, but are not limited to the following:
 - i) Steps taken to remediate deficiencies.
 - ii) Extenuating circumstances the may have affected the students previous academic performance. "Extenuating circumstances" may include, but are not limited to, verified

cases of accidents, illness, or other circumstances beyond the control of the student.

- c) If the *Nursing Suspension and Readmission Committee* determines that the student should be considered for readmission, the application and admission procedures will be in keeping with the requirements of this regulation.

7. **Admission of Licensed Vocational Nurses (“LVN”) to the Registered Nursing Program**

- a). Career Ladder Option

Career Ladder candidates (LVN to RN) must have completed all of the prerequisites listed in section 2 (b) above, plus transition courses (mandated by the Board of Registered Nursing). Applicants must also have a current California Vocational Nursing license.

- b). 30 Unit Option

The 30-unit option is mandated by the Board of Registered Nursing and is open to applicants who possess a current California Vocational Nursing license. To be eligible for this program applicants must have completed courses in Physiology (4 units) and Microbiology (4-5 units), as well as one or more transition courses. The program includes second year courses in nursing intervention in acute, preventive, remedial, supportive, rehabilitative and teaching aspects of nursing. The program’s theory courses and courses with concurrent clinical practice include advanced medical-surgical, mental health, psychiatric nursing and geriatric nursing.

Completion of this option allows students to become eligible for the examination for licensure as a registered nurse, however **completion of this program does not meet the requirements for the Associate of Arts degree in Nursing.** Students completing this program will not be a graduate of the college’s nursing program and cannot receive the program’s nursing pin. Additionally, several states in the United States will not recognize persons completing this option as being a Registered Nurse even though they have successfully completed the NCLEX examination. The Board of Registered Nursing requires that applicants for this option receive individual counseling and evaluation prior to admission. Information on the program, as well as assistance for students seeking admission under this option will be made available through the college office responsible for the Registered Nursing program.

8. **Selection of Eligible Applicants to be admitted to the Registered Nursing Program**

In the event the number of applicants who meet Program Prerequisites, Health and Safety Prerequisites and Health Requirements exceed the number of positions in the program, the college will utilize a predetermined, non-evaluative selection procedure to select students for the program. Such procedures will be approved

by the College President and shall be established in keeping with the provisions to Title 5, California Code of Regulations, section 58106 – *Limitations on Enrollment*, and LACCD Board Rule 8603 – *Prerequisites and Other Limitations on Enrollment*. Approval by the college President or designee will be kept on file in the College office of Academic Affairs and the District Office of Instruction.

9. Appeal Procedures

A student or applicant, who is denied admittance or is suspended from a Registered Nursing Program due to his/her inability to meet an admission requirement or to comply with the rules and/or regulations of the program, may appeal in accordance with the Student Grievance Procedures (Adm. Reg. E-55).

10. Publication of Admission Requirements

Each college will publish admission procedure information for its particular Registered Nursing Program. This information will contain the regulations established in this Administrative Regulation, other information needed by the student to complete an application and all other actions required for admission. This information will be available to each person upon his/her request.

11. Additional Admissions Requirements

In addition to the admission requirements listed in section 2 of this regulation, a college may limit admission to students by means of the criteria in either section “a” OR section “b” below:

- a. Limiting admission to students who achieve a satisfactory “cut score” established and validated in accordance with the provisions of this section.

- 1. Background

- On July 16, 2003, Dona Boatright, Interim Vice Chancellor, Educational Services in the California Community Colleges Chancellors Office, issued an advisory (Memo 03-23) to assist colleges that are considering adopting the measures that resulted from the *ADN Model Prerequisites Validation Study*. This study was conducted under a grant from the Chancellor's Office in response to concerns about the success and retention rates of students in community college registered nursing programs.

- The advisory stated that the essential finding of the study was that four factors best predict student success in completing nursing programs: overall college grade point average (GPA), English GPA, Core Biology GPA (Anatomy, Physiology, Microbiology), and Core Biology course repetitions. (Students with fewer repetitions have a higher probability of success.) The researchers, who conducted the study, developed a composite formula model that demonstrates an improvement in current success rates of ADN program students.

The advisory went on to state that districts may voluntarily choose to adopt the measures recommended in the study as a prerequisites to Nursing programs. But, if the district makes the decision to adopt the measures as a prerequisite, and to set cut scores that will result in defined program completion rates, then districts must analyze and monitor the possibility of disproportionate impact on particular groups of students defined in terms of race, ethnicity, gender, age, or disability in accordance with the provisions of Title 5, Section 55201[e][2][B]).

2. Implementation

Colleges that choose to implement the measures proposed by this study, selecting students for enrollment on the basis of a mathematical cut score, determined in accordance with procedures detailed in section c of this regulation, should do the following:

- Analyze the data provided by the study to identify an enrollment score that improves performance in the program.
- Use historical data about students who have been enrolled in the program in the past to determine if the identified score would have caused disproportionate impact on the student population had it been in place. If the score results in disproportionate impact, take action to ameliorate it, as discussed below under “Addressing Disproportionate Impact.” Or refer to 4th bullet below.
- Identify new enrollment criteria in college publications, which are available to students, well in advance of implementation. Advertise new enrollment criteria over a period of a year prior to implementation to allow students enough time to know what they need to do to enroll in the nursing program.
- Use a prospective approach to studying disproportionate impact. If a study of the historical data results shows disproportionate impact, a future implementation date should be set and the criteria for entrance advertised (as stated in bullet # 3). Monitor student performance during this time and do a second test for adverse impact.
- Conduct recruitment and outreach activities to increase the pool of diverse applicants.
- Provide sufficient student support activities, such as mentoring and tutoring, to ensure successful completion of the program. Refer students to well-established supportive services that already exist on campus, such as learning assistance centers, counselor-led workshops, and peer support groups.
- Once the new prerequisite system is implemented, monitor student performance to determine whether there is disproportionate impact. If disproportionate impact occurs, take action to ameliorate it, as discussed below under “Addressing Disproportionate Impact.”

3. Using the Predicted Probability of Success Formula to Select ADN Program Students

In June 2002, the Center for Student Success completed a study to determine the most effective prerequisites in predicting Associate Degree Nursing (ADN) program completion. Using historical data from 20 community colleges, a total of 5,007 records were analyzed and the following factors were associated with ADN completion:

- Overall college grade point average
- English courses grade point average
- Composite grade point average of core Biology courses (Anatomy, Physiology and Microbiology)
- Number of repeats in core Biology

The following formula is used to determine a predicted probability of success.

$$\frac{\exp(-1.3907 + .3465(\text{College GPA}) + .3139(\text{English GPA}) + .267(\text{Biology GPA}) - 1.0279(\text{Biology Repeats}))}{1 + \exp(-1.3907 + .3465(\text{College GPA}) + .3139(\text{English GPA}) + .267(\text{Biology GPA}) - 1.0279(\text{Biology Repeats}))}$$

This is a logistic regression formula; therefore, numeric weights are attached to each factor. Moreover, the “exp” function above enables the output to display a predictive probability of success between 0 and 1. Thus, colleges using the formula can view a predicted probability of success based on an easily understood statistic – a percentage.

To use the formula, colleges need to collect the above data from college transcripts or their own management information system and enter the relevant information into a computer system that contains the algorithm above. The data elements that need to be entered into system are as follows:

- Student – college student identification name or number
- College GPA – the GPA earned by the student in all courses at or above the collegiate level (basic skills courses are not included)
- Core Biology GPA – the combined GPA of the student’s grades in Anatomy, Physiology and Microbiology
- Biology repetitions – taken as a fraction or whole number and computed as follows: if a student attempts three core biology courses and has to repeat one, then the number entered would be .33 or one over three. The numerator is the number of repeats and the denominator is the number of core biology courses (usually two or three). In another example, if a student repeats all three core biology courses once, a college would enter “1” representing three divided by three. If a student has no repeats of core biology courses, then the college would enter a “0”.

Once data entry is complete, a predicted probability of success is displayed. This predicted probability represents the point at which the colleges can set their probability of completion and cut scores (See appendix A for guidelines for applying these procedures).

4. Addressing Disproportionate Impact

If a college decides to use the nursing program enrollment measures, Title 5 regulations require that the college conduct an evaluation to determine whether its use in program enrollment has a “disproportionate impact” on particular groups of students described in terms of race, ethnicity, gender, age or disability, as defined by the Chancellor” (Section 55201[e][2][b]).

Title 5 describes disproportionate impact as occurring “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 education setting (Title 5, Section 55502[e]).” Although Title 5 does not contain a specific definition of “disproportionate impact” for this purpose, the State Chancellor’s Office advises that the standard to be applied is the one generally used in nondiscrimination guidelines for employment. Under this standard, disproportionate impact occurs if the selection rate for a particular group is less than 80 percent of the selection rate for the group with the highest selection rate (4/5 rule).

If a college’s analysis of the results of applying the nursing program enrollment measures shows that its application causes disproportionate impact, the college must take action to address the problem. Since the proposed measures result in calculating a numerical score for each applicant, the college may adjust the “cut-off score” used for enrollment in the nursing program, to arrive at a level that would eliminate statistical disproportionate impact as described above, while still significantly enhancing nursing program completion rates. This approach requires careful balancing of equity and outcome considerations, but it is the best approach when a college concludes that it is feasible.

If statistically disproportionate impact on a group continues to occur, the college is required by law to develop and implement, in consultation with the Chancellor’s Office, a plan setting forth steps it will take to correct the disproportionate impact. While there are many possible types of corrective action, some examples of elements that might be included in such a plan are:

- All groups should be made comfortable and welcome on campus, and in the nursing program, by fostering sensitive attitudes on the part of students, faculty, and staff.

- Increased contact between students and faculty outside of the classroom, such as mentoring, tutoring, counseling, advising, and student activities should be encouraged.
 - Rewards and recognitions should be established for nursing faculty who take multicultural training or training in teaching methodologies shown to increase student success.
 - Community colleges should increase their cooperative efforts with high schools to prepare students for college work, including the use of summer "bridge" programs. Such programs could include a component designed especially for high school students who have a desire to enter nursing as a career.
 - More tutorial assistance should be provided, and tutorial programs should be designed with the involvement of faculty.
 - Special recruitment materials for the nursing program should be targeted to promote diversity.
- b. Limiting enrollment to students who have met all course requirements in section 2 and have met the following non-course prerequisites.
1. An overall grade point average of 2.5 for the Human Anatomy, Human Physiology, and Microbiology prerequisite courses with no grade less than "C" for each course and no more than one repetition of any of these courses. Course repetitions that are allowed pursuant Board Rule 6701.10 – Course Repetition Special Circumstances – are exempt from this restriction. In calculating the student's grade point average for admission to the Nursing program, the higher grade of the courses repeated under this provision shall be used.
 2. College level, transferable English, minimum of three (3) semester units with a grade no less than a "C".
 3. A cumulative grade point average (GPA) of 2.5 for all college coursework taken.

Implementation of 1 and (b) 3 above require that the college conduct an evaluation to determine whether the use of either prerequisite in program enrollment has a disproportionate impact "on particular groups of students described in terms of race, ethnicity, gender, age or disability." (Title 5, Section 55512 [a] and Section 55202 are also pertinent).

According to a memo from the California Community Colleges System Office, dated July 7, 2005, these selection criteria have been justified by the prerequisite validation study conducted by the Center for Student Success in 2002 as well as by other individual college districts. Colleges were notified in an advisory memo from the Chancellor's Office dated July 16, 2003 regarding the findings of their Associate Degree Nursing Model Prerequisites Validation Study.

APPENDIX A

Guidelines to Evaluate Effectiveness of Selection Model – Section 11(a)

A college can evaluate the effectiveness of the selection model: First the college must calculate the four parts of the ADN selection formula. These parts are:

- College GPA
- College English GPA
- Core Biology GPA (Anatomy, Physiology, and Microbiology)
- Core Biology Repetitions

Calculate each part as follows:

College GPA - use the GPA as it appears on the student's transcript, excluding non-credit and not-for-credit courses.

College English GPA - use all credit English course grades, regardless of the level of English course.

Core Biology GPA - include all microbiology, anatomy and physiology classes the student has taken at the college (or at other colleges since the formula works with transcript data for students who may have taken these classes elsewhere). Compute the GPA in the usual way. Divide grade points by units ($30/13 = 2.31$).

Core Biology Repetitions - count the number of times the student has taken a Core Biology course and divide by the number of courses taken. For example – a student has taken the same microbiology course three times with grades of W, F and C. For the computation of GPA, take only the last course and note that the student repeated the class twice. Do this for all microbiology classes. So the college might have the following:

Course	Grade	Units	Repetitions	Grade Points
Microbiology 50	C	5	2	10
Anatomy 1	B	4	0	12
Physiology 1	C	4	1	8
Total		13	3	30

Compute Repetitions. Divide repetitions by the number of courses. In this case there were three repetitions of three microbiology courses so the repetitions are $3/3 = 1$.

Compute college and English GPA in a similar way. Let's say that when the college does this for a given student the college GPA is 2.5 and the English GPA is 2.2.

Insert these three numbers in the formula below. Use the Microsoft Excel spreadsheet provided:

$$\text{xp}(-1.3907+.3465(\text{CoIGPA})+.3139(\text{EngGPA})+.267(\text{BioGPA})-1.0279(\text{BioReps}))$$

$$(1+\text{exp}(-1.3907+.3465(\text{Co1GPA})+.3139(\text{EngGPA})+.267(\text{BioGPA})-1.0279(\text{BioReps})))$$

As shown below, here are the inserted values.

$$\frac{\exp(-1.3907 + .3465(2.5)+.3139(2.2)+.267(2.31) - 1.0279(1))}{1 + \exp(-1.3907 + .3465(2.5)+.3139(2.2)+.267(2.31) - 1.0279(1))}$$

$$1 + \exp(-1.3907 + .3465(2.5)+.3139(2.2)+.267(2.31) - 1.0279(1))$$

When the calculation is performed, the result is .60662. Round to 60% and this is the predicted probability of the student completing the college’s nursing program - that is if the college’s nursing program is like the average nursing program in the consortium of twenty nursing programs examined in the ADN prerequisite study. However, taking nothing for granted, the validity and reliability (consistency) of this formula should be checked for the college’s program.

Analyzing the college’s results

Validate the formula by applying it to some former students. Use a sample of at least 60 students who ENTERED the college’s program at least two years ago, and calculate their formula components and probability of success and then place the students into three groups. These groups are the students who have a predicted probability of success below 60%, those who have a predicted probability of 60% to 80% and those with a predicted probability of 80% to 100%. The college may have 20 or so students in each group.

Example

Group	Number
<60%	18
60%-80%	24
80% and above	18
Total	60

Since these are past students who have already completed or dropped out of the college’s program, the college needs to associate each program outcome with the predicted completion outcome. Below is an example of students whose predicted probability of success is below 60%.

Student	Predicted probability of success	Program Completion
1	59%	Yes
2	48%	No
3	45%	Yes
4	55%	Yes
5	40%	No
6	49%	No
7	50%	Yes
8	55%	Yes
9	38%	No
10	54%	No

Predicted probabilities of success range from 38% to 59%, so the average of approximately 50%. Next, look at how many students complete the program. Note that five out of the ten are program completers. There appears to be some alignment – 50% average predicted probability of success and 50% actually complete the program. This kind of intuitive correspondence between predicted success and actual success is a good indicator that this formula works for the college's program.

The college needs to apply the same procedures to students in the higher ranges as well. Do greater percentages of students in the higher cohorts actually complete the college's programs? If they do, then this is additional evidence that the formula works for the college's program.

The formula will not work invariably well for all students. As with any model predicting some future outcome, there is some degree of error. Students will always be a surprise. Some students with very high predicted probabilities will drop out while others with low predicted probabilities will stay in, however, in general, prior research has shown students at the lower predicted probabilities tend to be retained less well than students at the higher ranges.

How to set the cut score

There are many considerations for setting cut scores. Below are several examples.

1. Set a cut score that will maximize correct identifications of students who will succeed and fail (using the group of former students for whom the college have computed predicted probabilities of success and compare these probabilities with their actual success rates).
2. Set the cut score that seems appropriate (e.g.. a student should have at least a 70% chance of success).
3. Determine the cut score so as to deny entrance to only those students who are highly unlikely to succeed. First the college must define "highly unlikely to succeed." For instance, if the nursing faculty, in conjunction with other interested parties at the college, believe that students with less than a 50% chance of success are highly unlikely to succeed. The college may use this as the college's cut score.

Disproportionate Impact

One of the goals of any selection criteria is to minimize disproportionate impact on identified populations that is not due to varying levels of educational preparation and performance found among applicants to a program.

A common way of computing disproportionate impact is the "80% rule." The rule says that the percentage of all subpopulations selected must be within 80% of the selection rate for the group with the highest selection rate. For example: If the college set a cut score that selects 90% of White students in the college's applicant pool, the percentages of all subgroups selected must be higher than 72% (or .80 multiplied by .90). So, if the college has 10 Latino/a students applying for the college's program and the selection formula identifies fewer than 7 (approximately 70%) students with a higher likelihood for success, then under the 80% rule, this could be an indicator of disproportionate impact.

If disproportionate impact is detected, the college can change the cut score at which the college selects students into the college's program. Remember the college can set the cut score anywhere the college wants. The college might set it low so that the college only excludes people highly unlikely to succeed, e.g. 50%; or the college might set the cut score higher because of the intuitive appeal of 70% predicted probability of success; or the college might set it quite high at 85% because the college has an impacted program; yet have low rates of retention and successful program completion.

At each cut-score point the percentage of each subpopulation being selected will change. The college needs to check the major score points to see their effect on disproportionate impact. The college may very well need to choose a score point that does not violate the 80% rule. The 80% rule may be violated more easily at higher cut scores so be sure to check these. For example, the college may check the disproportionate impact of cut scores that excludes the bottom 10% of applicants, the bottom 25% of applicants and the bottom half of applicants. One of these should conform to the 80% rule.

Other Issues

Assume the college chooses a very low cut score - one that excludes only 10% of the college's entering applicant pool. Further, assume that the college only has spots for one in four students. There are still too many students for the seats in the program. The remaining slots in the program will need to be allotted to students who meet all prerequisites based on some nonevaluative selection method such as a lottery or a first-come-first-served basis.

It is important to keep in mind that prerequisites must be applied uniformly to all students. For example, it would be inappropriate to allocate 80% of program seats to students who meet the cut score while allocating the remaining 20% of seats through a lottery to everyone who does not achieve the required score. If the proposed prerequisite has been properly validated and does not produce adverse impact, it must be applied to all students and if it has not been validated and tested for adverse impact, it can't be used for any students.

Another problem that may arise is that the college sets a cut score so high that the college doesn't have enough students to fill the college's seats. The college may need to lower the cut score. If this happens the college may want to use the formula only as an advisory to students who are coming in under-prepared. It is always important to attempt to provide the necessary support services, such as tutoring, counseling and other accepted methods when students fall into academic difficulty.