

**University of the Pacific  
Educational Resource Center**

**BASIC SKILLS ASSESSMENT:**

**Reading Skills  
Writing Skills  
Quantitative Analysis (Math) Skills**

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**This handbook is available online:**

<http://schoolofeducation.pacific.edu/docs/pdf/Basic-Skills-Assessment-Booklet-April-2008.pdf>

ERC website: <http://www.pacific.edu/education/erc>

Basic Skills Assessment Webpage (contains sample questions):  
<http://www.pacific.edu/education/erc/basicskillsassessments>

## Contents

Educational Resource Center Mission Statement, Goals, and Objectives	3
Educational Resource Center Course Descriptions	4
General Education Committee's Policy Statement on Assessment in Reading, Writing, and Quantitative Analysis (Math) Skills	5
Pacific Seminar I and II Deferrals	6
Expectations of Students during Course Placement Sessions	6
Accommodations for Students with Disabilities	6
Policy on Course Placement and Assessment	6
Reading Skills Assessment	8
Criteria for Reading Course Placement	8
Writing Skills Assessment	9
Sample Writing Diagnostic Essay	9
Essay Scoring Rubric	10
Criteria for Writing Course Placement	11
Quantitative Analysis (Math) Skills Assessment	12
Role of Math Assessment as a Requirement for Other University Courses	12
Sample Math Exams	13
Guidelines for Math Placement Exams	14
Criteria for Math Course Placement	15

## EDUCATIONAL RESOURCE CENTER

### MISSION STATEMENT

The mission of the Educational Resource Center is to help University of the Pacific students become independent, self-confident, and efficient learners so that they will successfully meet the academic standards of the University, as well as achieve their own educational and personal goals. We promote the cognitive and affective growth of all Pacific students, at all levels of the learning continuum, and we are sensitive and responsive to the individual differences and needs among learners. The services of the ERC are based on a theoretical foundation in developmental psychology and learning theory and are designed to facilitate the refinement, development and/or acquisition of learning skills, as well as the attitudes and behaviors which result in efficient learning at the postsecondary level.

### GOALS

1. to preserve and make possible educational opportunity for each Pacific learner;
2. to develop in each learner the skills and attitudes necessary for the attainment of academic career and life goals;
3. to ensure proper placement by assessing each learner's level of preparedness for college work;
4. to maintain academic standards by assisting learners to acquire competencies needed for success in college courses;
5. to enhance the retention of Pacific students;
6. to promote the continued development and application of cognitive and affective learning theory.

### OBJECTIVES

1. to administer the General Education basic skills assessment for the University in the areas of reading, writing, mathematics, and ESL placement;
2. to conduct University-credited classes in the fundamental basic skills of reading, writing, and mathematics;
3. to provide assistance to students for whom English is not their first language through English-as-a-Second-Language (ESL) courses and summer intensive English programs;
4. to administer the University's Tutorial Program;
5. to provide academic support services and assist with accommodations for students with disabilities;
6. to consult with and advise faculty and University departments with respect to methods of increasing students' learning effectiveness. To provide coordinated instruction in such forms as workshops, seminars, supplemental instruction, presentations to classes or other appropriate presentations.

## Educational Resource Center Course Descriptions

(ERC Courses are listed in the Class Schedule with Benerd School of Education courses)

**MATH 1. *Prealgebra* (3).** This course is designed for students whose Mathematics Placement Assessment score indicates a need to review arithmetic skills and prealgebra material. Topics covered include fractions, decimals, percents, basic area and volume formulas, signed numbers, use of variables in mathematical statements, translating statements in English to mathematical equations, solving linear equations and ratio and proportion. The course is taught using a Personalized System of Instruction. The course credit does not apply toward graduation. Prerequisites: Appropriate score on the Mathematics Placement Assessment and permission of the instructor.

**MATH 3. *Elementary Algebra* (3).** Topics covered include signed numbers, linear equations, polynomials, factoring, algebraic fractions, radicals, quadratic equations, inequalities and systems of linear equations. This is an introductory course for students with limited high school background in mathematics. This course is taught using a Personalized System of Instruction. The course is inappropriate for students who have passed the Elementary Algebra placement exam or any higher-level placement exam. Course credit does not apply toward graduation. Prerequisites: A grade of C- or better in MATH 1 or an appropriate score on the Mathematics Placement Assessment and permission of the instructor.

**MATH 5. *Intermediate College Algebra* (3).** Topics covered in this course include the real number system, solution of linear equations and inequalities, word problems, factoring, algebraic equations, exponents and radicals, quadratic equations, relations, functions, graphs, systems of equations, and logarithmic and exponential functions. This course is not appropriate for students who have passed the Intermediate Algebra placement assessment or any higher-level placement assessment.

A grade of C- or better is required to satisfy the University's Basic Skills Requirement. Prerequisites: A grade of C- or better in MATH 3 or an appropriate score on the Mathematics Placement Assessment and permission of the instructor.

**MATH 7. *Trigonometry* (2).** Topics in this course include angle measure, trigonometric functions, applications of trigonometry, graphs of trigonometric functions, trigonometric identities, inverse functions and complex numbers. This course is designed for students who have not studied trigonometry in high school. Prerequisites include a satisfactory score on the Intermediate Algebra placement assessment. This course is taught using a Personalized System of Instruction and meets three hours per week. (Students who complete MATH 5 and 7 may enroll in Calculus MATH 51). Prerequisites: A grade of C- or better in MATH 5 or an appropriate score on the Mathematics Placement Assessment and permission of the instructor.

**ESL 13. *Advanced ESL: Reading and Grammar Development* (3).** Reading for comprehension, related study skills and vocabulary expansion with particular attention paid to grammatical forms used in the readings. Selections will help prepare students for textbook and journal article reading at the college level. A variety of topics common to a general education curriculum will be covered.

**ESL 15. *Advanced ESL: Writing and Grammar Development* (3).** Training in a variety of academic forms, note taking, outlining, summaries, paraphrasing, reports, a short term paper, essays, and journal writing. Complex grammatical patterns are studied and integrated into the writing assignments. These include verb phrase forms, indirect speech, conditionals, clauses, gerunds and infinitives, and the passive voice. Attention is also paid to correct word formation. Placement in this course is on the basis of ESL assessment or prerequisite of ESL 10 or equivalent.

**WRIT 17. *Writing from Cultural Perspectives* (3).** Concentrates on word formation and sentence-level grammar in the English language used in composing short essays typical of college writing. Placement on the basis of ESL and writing competency assessment results.

**WRIT 19. *Basic Writing* (3).** Concentrates on the practical application of writing theory to develop confidence and competence in written composition skills. The course credit does not apply toward graduation. Placement on the basis of writing competency assessment results.

**WRIT 21. *Writing for College* (3).** Introduction to the types of written assignments required in college courses, including the research paper, expository writing, and argumentation. Weekly writing assignments and individual conferences with instructor. A grade of C- or better is required to satisfy the University's Basic Skills Requirement. Placement on the basis of writing competency assessment results.

**READ 31. *Reading for College* (2).** Examination of the nature of the reading process and of techniques used by successful readers. Development of vocabulary, comprehension, concentration, memory and fluency skills. A grade of C- or better is required to satisfy the University's Basic Skills Requirement. Placement on the basis of basic skills reading assessment.

## General Education Committee's Policy Statement on Assessment in Reading, Writing, and Quantitative Analysis (Math) Skills

Entering students are required to demonstrate competency in the areas of reading, writing, and quantitative analysis (math).<sup>\*</sup> Any student who does not demonstrate these competencies must make progress in one of the following ways:

- To satisfy the University's quantitative analysis (math) basic skills requirement, a student must score 540 or above on the Mathematics Level 1 SAT Subject Assessment; 520 or above on the Mathematics Level 2 SAT Subject Assessment; pass Pacific's Intermediate Algebra assessment; complete MATH 5 (Intermediate Algebra) or MATH 35 (Statistics) at Pacific with a grade of C- or higher; or complete an equivalent course from another college or university with a grade of C or better during his/her first full year of study including summer sessions.
- To satisfy the University's writing basic skills requirement, a student must score 510 on the SAT Verbal<sup>1</sup>; obtain a score of 5 or higher on Pacific's Writing Diagnostic Essay; complete Pacific's WRIT 21 (Writing for College) with a grade of C- or higher; or complete an equivalent course from another college or university with a grade of C or better during his/her first full year of study including summer sessions.
- To satisfy the University's reading basic skills requirement, a student must score 510 on the SAT Verbal; pass the Nelson-Denny Assessment (Form G) with a score of 98 or above<sup>2</sup>; or complete Pacific's READ 31 (Reading for College) with a grade of C- or higher during his/her first full year of study including summer sessions.
- Failure to make progress toward fulfilling Pacific's basic skills requirements during the first year of study will be grounds for being placed on academic probation. Failure to satisfy the basic skills requirements (as summarized in the three points above) by the end of four semesters of full-time study at the University will be grounds for academic disqualification.
- The quantitative analysis (math), writing, and reading requirements in the first three points, above, are part of the University-wide General Education Program that must be met before a student graduates with a bachelor's degree or a first professional degree.
- The following categories of students may seek an extension of the deadline for demonstrating competence:
  - (1) Students with documented disabilities which directly affect their mastery of these skills;
  - (2) Students concurrently enrolled in an approved English-as-a-Second-Language (ESL) Program of instruction in reading and writing.

**\* Entering students are placed into reading, writing and math courses based on information supplied at admission (such as SAT scores). The math placement may be challenged once at Orientation or at scheduled times during the academic year.**

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<sup>1</sup> If a student has not taken the SAT, an ACT English subtest score of 22 or above will satisfy the general education requirements in reading and writing – otherwise, only the SAT verbal score will be utilized for placement purposes.

<sup>2</sup> For Nelson-Denny's Form H – a score of 100 or higher is required to satisfy the reading basic skills requirement

## ***Pacific Seminars I and II Deferrals***

*Pacific Seminars I and II* deferrals are the decision of the General Education Committee. Cut-off scores are recommended by the Educational Resource Center. Students who have any of the following scores on their reading and/or writing placement assessments are **deferred from *Pacific Seminars I and II* until their sophomore year:**

- Placement into WRIT 17, or a lower course – **OR** –
- Placement into an ESL reading class, based on a score of 84 or lower on the *English Placement Assessment*, University of Michigan – **OR** –
- A score of 66 or lower on the Nelson Denny Reading Assessment – **OR** –
- Placement based on SAT score.

## **Expectations of Students during Assessments and Course Placement Sessions**

- All students should bring their University ID number (988-number) to any course placement session.
- Pencils, answer sheets, and assessment materials will be provided by the Orientation staff.
- Dictionaries, calculators, or other aids are not permitted.
- All assessments are timed. Students with documented disabilities, however, may request reasonable accommodations.

## **Accommodations for Students with Disabilities**

Students with documented disabilities may request reasonable accommodations. Such students should identify themselves to the Office of Services for Students with Disabilities and/or Orientation staff during Orientation so that appropriate accommodations can be provided. Each semester, students with documented disabilities should meet with the Coordinator of the Office of Services for Students with Disabilities to determine eligibility for reasonable accommodations and other available services. Please refer to the following website for more information: [www.pacific.edu/education/SSD](http://www.pacific.edu/education/SSD).

## **Policy on Course Placement and Assessment**

### **Assessment:**

Students are placed into basic skills courses based on information supplied at admission (such as SAT scores). Students may challenge math placement once during Orientation or at scheduled times during the academic year.

### **Reassessment during Orientation:**

Because students are placed using SAT scores<sup>3</sup>, they will not be reassessed in **reading** or **writing** during Orientation. Those students whose **math** score indicates that reassessment is necessary will be notified on their computer printout during their advising session. **Math reassessment during Orientation is by invitation only.** Students will also have opportunities to be reassessed in quantitative analysis (math) skills during the regular academic year. Students should contact the Coordinator of Math Assessment in the Educational Resource Center for information regarding the additional assessment dates or to make arrangements for an individual session.

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<sup>3</sup> This policy applies to Freshmen only; ALL transfer students are assessed in the area of reading utilizing the Nelson Denny (see page 8).

## Reassessment during the Academic Year:

- Students will not be reassessed in **reading** and should **not request** reassessment. If any student has questions or concerns about his/her reading scores or course placement, please meet with a reading faculty member or the Director of the Educational Resource Center.
- Students who place into any **writing** course in the Educational Resource Center will complete a **diagnostic writing essay** during the first week of the course. Students should **not request** reassessment in writing. The diagnostic exam administered the first week in all writing courses provides students with a second assessment of their writing skills and will result in one of the following:
  - (1) It will verify that the placement into the writing course is correct;
  - (2) The student will be placed into the next level writing course; or
  - (3) The basic skills writing requirement will be met and the student will be exempt from taking an ERC writing course

Please contact the Coordinator of Writing Assessment in the Educational Resource Center with any additional questions or concerns regarding **writing placements**.

- Students **may** request reassessment in the **quantitative analysis (math)** skills during the regular academic year. Students should contact the Coordinator of Mathematics Assessment in the Educational Resource Center for information regarding reassessment dates or to make arrangements for an individual assessment session.

## Reading Skills Assessment

The SAT Verbal score will be used to place students into READ 31 with a score of 510.

### Criteria for Reading Course Placement

Assessment Score	Placement
510 or above on SAT Verbal <sup>4</sup> –or– 98 or above on Nelson-Denny Reading Assessment – Form G <sup>5</sup>	Meets General Education Requirement
Below 510 on SAT Verbal	READ 31 required
Below 98 on Nelson-Denny Form G	READ 31 required*
66 or lower on Nelson-Denny G <sup>6</sup>	Pacific Seminar-deferred **

\* Freshmen admitted on **Condition** or with **Low SAT scores** who score below 98 on the Reading Placement Examination must take READ 31 their first semester.

\*\* *Pacific Seminars I and II* are deferred for incoming freshman students who score 66 or lower on the Nelson-Denny, but *Pacific Seminar I* must be taken in the Fall Semester of the student's **second** year.

<sup>4</sup> If a student has not taken the SAT, an ACT English Subtest score of 22 or above will satisfy the general education requirement in reading.

<sup>5</sup> A score of 98 on Nelson-Denny's Form G is equivalent to a score of 100 on Form H.

<sup>6</sup> A score of 70 or below on Form H will defer a student from taking Pacific Seminar

## Writing Skills Assessment

Entering students are placed into an appropriate writing course based on their SAT scores. Students placed into writing courses will have the opportunity to be reassessed. They must enroll in the appropriate course then their instructor will administer a Writing Diagnostic Essay during the first week of classes. A sample writing topic is provided below. Different topics are currently being used. The writing diagnostic essay is scored by two readers (see “Scoring Rubric,” p. 9) and then students are placed into the appropriate writing course (see p. 10).

The student who possesses basic writing skills can write well enough to complete undergraduate writing assignments at a passing level. Basic writing skills are further defined as:

- the ability to define a topic, convey a purpose, and formalize a theses and a plan of organization appropriate to the occasion;
- the ability to compose an essay that
  - contains soundly structured sentences of appropriate length and variety,
  - demonstrates an understanding of the function of an introduction, a body, and a conclusion, and
  - adheres to the convention of standard usage and mechanics.

### Sample Writing Diagnostic Essay

You will have 50 minutes to plan and write the essay assigned below. Before you begin writing, read the passage carefully and organize your thoughts about the topic. Write only on this topic; an essay on another topic will not be acceptable. Please write in ink. You should not skip lines.

Be specific in your writing, using examples and details whenever appropriate. How well you write is more important than length for a timed essay, but you’ll probably need to write more than a page or more than 2-3 paragraphs to do well on this topic. If you finish early, proofread your essay and make neat corrections as needed.

#### THE WRITING TOPIC:

Read the following passage, written by Joseph Epstein, and then write your essay in response to the topic given below it:

We do not choose our parents. We do not choose our historical epoch, the country of our birth or the immediate circumstances of our upbringing. But within all this realm of choicelessness, we do choose how we shall live: courageously or in cowardice, honorably or dishonorably, with purpose or in drift. And, as we decide and choose, so are our lives formed. In the end, forming our own destiny is what ambition is about. To discourage ambition is to discourage dreams of grandeur and greatness. All men and women are born, live, suffer, and die; what distinguishes us one from another is our dreams.

First, briefly discuss your understanding of this passage. Then describe how you hope to influence your own destiny; that is, identify an ambition or dream you cherish. Explain fully one or two influences or choices that have led you to hold this dream or ambition.

**UNIVERSITY OF THE PACIFIC**  
**GENERAL EDUCATION WRITING ASSESSMENT**  
**Essay Sample Scoring & Placement Criteria**

Each examinee's essay is read and scored by two readers, their scores averaged to determine placement. Essays that receive discrepant scores (off by two or more points) receive a third reading, the anomalous score nullified. Read the entire essay at a brisk, even pace to form an overall (holistic) impression based on the criteria that best describe the essay.

*Scores & Probable*

Placement:

**6 DEMONSTRATES CLEAR COMPETENCE AT A FIRST-YEAR COLLEGIATE LEVEL:**

- Exempt* (a) Clearly & logically addresses all parts of the writing task;  
(b) Fully developed, given the time limit, and coherently organized;  
(c) Clearly appropriate details and examples support the main idea;  
(d) Consistently fluent, reads smoothly, displays syntactic variety;  
(e) Clearly free of grammar & punctuation errors, though it may have a few minor errors.

**5 DEMONSTRATES ADEQUATE COMPETENCE RHETORICALLY & SYNTACTICALLY:**

- Exempt* (a) Addresses some parts of the task more effectively than others;  
*Tutoring* (b) Adequately developed and organized, with transitions;  
*Recom-* (c) Uses few details or examples, perhaps dwelling on the obvious;  
*mended* (d) Displays some facility with language & some syntactic variety;  
(e) Generally correct, though it may contain some minor errors, but few, if any, that obscure meaning.

**4 DEVELOPING COMPETENCE, BUT FLAWED RHETORICALLY AND/OR SYNTACTICALLY:**

- WRIT 21* (a) Addresses the writing task adequately but simplistically;  
(b) Underdeveloped and/or poorly organized, with few transitions;  
(c) Uses the details or examples, perhaps dwelling on the obvious;  
(d) Inconsistent facility with language and little syntactic variety;  
(e) Some grammar, punctuation, spelling errors that occasionally obscure meaning.

**3 DEMONSTRATES MARGINAL INCOMPETENCE WITH SERIOUS ERRORS:**

- WRIT 19* (a) Fails to address or misunderstands some parts of the task;  
(b) Underdeveloped, unorganized, and/or somewhat incoherent;  
(c) Inappropriate or insufficient details/examples (too general);  
(d) Inappropriate word choice/word forms & little syntactic variety;  
(e) Frequent grammar, punctuation, & usage errors, many that obscure meaning.

**2 DEMONSTRATES INCOMPETENCE RHETORICALLY AND/OR SYNTACTICALLY:**

- WRIT 17* (a) Fails to address or misreads significant parts of the task;  
(b) Seriously underdeveloped, disorganized, incoherent, repetitious;  
(c) Little or no detail, irrelevant specifics, obvious generalities;  
(d) Serious & frequent word form errors & patterns of syntax errors;  
(e) Serious & frequent grammar, punctuation, & usage errors, often obscuring meaning and confusing the reader.

**1 DEMONSTRATES CLEAR INCOMPETENCE RHETORICALLY & SYNTACTICALLY:**

- ESL 15* (a) Clearly fails to address or clearly misunderstands the task;  
(b) Severely undeveloped, unfocused, disorganized and incoherent;  
(c) No detail/examples, irrelevant generalities, prompt repetition;  
(d) Severe & frequent word form and sentence structure errors;  
(e) Severe & persistent grammar, punctuation, & usage errors that obscure meaning, confuse the reader, and force rereadings.

**0 THE ESSAY CLEARLY REJECTS THE TOPIC OR THERE IS NO RESPONSE (REASSESSMENT)**

## Criteria for Writing Course Placement:

The SAT Verbal is used to place students into the writing sequence. Students who place into the writing sequence can challenge their placement by completing the Pacific Writing Diagnostic Essay (one time only prior to the start of the academic year).

Writing Course Placement	SAT Verbal Score	Writing Diagnostic Essay
ESL 15*	n/a	1.0-1.5
WRIT 17*	370 and below	2.0-2.5
WRIT 19	380-430	3.0-3.5
WRIT 21	440-500	4.0-4.5
Meets General Education Requirement <sup>7</sup>	510 and above <sup>8</sup>	5.0-6.0**

Courses:

- ESL 15: *Adv. ESL Writing/Grammar Dev.* (3 units)
- WRIT 17: *Writing from a Cultural Perspective* (3 units)
- WRIT 19: *Basic Writing* (3 units, no credit toward graduation)
- WRIT 21: *Writing for College* (3 units)

- *Pacific Seminars I and II* are deferred for incoming freshman students who place into WRIT 17 or lower; however, *Pacific Seminar I* must be taken in the Fall of the student's **second** year.

\*\* Writing Sample scores of 5.0, 5.5, or 6.0 indicate a student has clearly met Pacific's first year writing requirement; other General Education courses can be recommended to develop proficiency. Transfer students can satisfy the General Education requirement if they have completed an equivalent, **college-level** writing course from another postsecondary institution with a grade of C or higher.

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<sup>7</sup> If a student has not taken the SAT, an ACT English Subtest score of 22 or above will satisfy the general education requirement in writing. If a student receives an English Subtest score below 22, he/she should complete the Writing Diagnostic Essay to determine the appropriate writing course placement.

<sup>8</sup> Although Pacific is not currently using the SAT Writing score for placement purposes, the Educational Resource Center recommends that students who obtain an SAT Writing score of 520 or below would benefit from completing a Writing Diagnostic Essay during the first week of classes. Please contact the ERC directly for more information: [erc@pacific.edu](mailto:erc@pacific.edu)

## Quantitative Analysis (Math) Assessment

Entering students are placed into an appropriate math course (up to Calculus I) based on their SAT Subject Assessment score in Mathematics Level 1 or Level 2 score. Students may challenge this placement once during Orientation by participating in a math course placement session. Students wishing to enroll in Calculus II (Math 53) or Calculus III (Math 55) must take and pass a one-hour **Calculus** examination, or have an appropriate score on the AP exam. Level of Calculus placement is determined by an assessment score and/or possible AP credit in consultation with a faculty adviser. Successfully passing this assessment also satisfies the General Education requirement in quantitative analysis (math) described above. Entering transfer students will need to participate in math placement assessment unless they have a passing grade (C or higher) in an acceptable college level mathematics course.

In order to successfully complete the requirements for graduation, all students must either score 540 or above on the Mathematics Level 1 SAT Subject Assessment, 520 or above on the Mathematics Level 2 SAT Subject Assessment, pass Pacific's Intermediate Algebra assessment, complete Pacific's Math 5 (Intermediate Algebra) or Math 35 (Statistics) with a grade of C- or higher; or complete equivalent course work at another college or university with a grade of C or higher. This requirement must be completed within the first year of enrollment (including summer school) or the student will be subject to academic probation. The student is subject to disqualification after the second year if the requirement has not been met. Transfer students have their first year at Pacific to satisfy this quantitative analysis (math) requirement. The Director of Math Assessment and the Math Lab staff in the Educational Resource Center administer these assessments. Students may retake the math assessment if they feel that their initial score or placement does not truly reflect their quantitative analysis (math) skills. (see "Policy on Course Placement and Assessment," p. 6.)

### The Role of Math Assessment as a Requirement for Other University Courses

The University of the Pacific Mathematics Department as well as other University departments requires placement information that indicates a student is eligible to enroll in certain introductory courses.

Students wishing to enroll in Calculus II (Math 53) or Calculus III (Math 55) must take and pass Pacific's one-hour **Calculus** examination. Level of Calculus placement is determined by an assessment score and/or possible AP credit in consultation with a faculty adviser. Successfully passing this assessment also satisfies the General Education quantitative analysis (math) requirement described above.

Students wishing to enroll in Calculus I (Math 51), General Physics (PHYS 23), or Hydrogeology (GEOG 148) must score 590 or above on the Mathematics Level 2 SAT Subject Assessment or take and pass Pacific's one-hour **Precalculus** examination. Successfully passing this assessment also satisfies the General Education quantitative analysis (math) requirement described above.

Students wishing to enroll in Chemistry (CHEM 25), Computers and Information Processing (COMP 25), Fundamentals of Mathematics and Computer Science (COMP 47), Introduction to Computer Science (COMP 51), Introduction to Microeconomics (ECON 53), Introduction to Macroeconomics (ECON 55), Economic Statistics (ECON 61), Trigonometry (MATH 7), Elements of Calculus (MATH 33), Elementary Functions (MATH 41), or Introduction to Finite Mathematics and Calculus (MATH 45) must either score 540 or above on the Mathematics Level 1 SAT subject assessment, 520 or above on the Mathematics Level 2 SAT subject assessment, take and pass an **Intermediate Algebra** assessment or have completed Pacific's Intermediate Algebra (MATH 5) with a grade of C- or higher<sup>9</sup>. Successfully passing this assessment also satisfies the General Education quantitative analysis (math) requirement described above.

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<sup>9</sup> If a student completes an equivalent course at another college or university, he/she must complete the course with a grade of C or higher.

Students wishing to enroll in Intermediate Algebra (MATH 5), Elementary Statistical Inference (MATH 35), Elementary Concepts of Mathematics I (MATH 161), Quantitative Methods (POLS 133), or Statistical Inference in Behavioral Sciences (PSYC 103) must score at least 480 on the Mathematics Level 1 SAT subject assessment, 430 on the Mathematics Level 2 SAT subject assessment, pass an **Elementary Algebra** examination, a higher level examination or complete Pacific's Elementary Algebra (MATH 3) with a grade of C- or higher. The Elementary Algebra examination does **not** meet the General Education quantitative analysis (math) requirement described above. However, completing a college-level Statistics or Intermediate Algebra course at another institution with a grade of C or higher does satisfy the general education requirement in quantitative analysis (math).

Courses are available through the Benerd School of Education's Educational Resource Center in Trigonometry (MATH 7), Intermediate Algebra (MATH 5), Elementary Algebra (MATH 3) and Prealgebra (MATH 1) to assist students in meeting or preparing to meet the quantitative analysis (math) requirement or course prerequisites. Courses in Elementary Algebra or Prealgebra do **not** count towards graduation, are not calculated in a student's GPA but are used to calculate enrollment status as well as eligibility for financial aid.

## Sample Math Placement Exams

In order to assist students in preparing for the math placement assessments, we have prepared five short sample assessments, which indicate the level of material covered in each assessment. Fifteen questions have been provided for each level. If a student scores ten or above on a sample assessment level, they will probably pass the mathematics placement assessment at that level. Students should take each practice assessment up to and including the level, which they plan on taking. Please remember that these sample assessments are only a guideline to topics covered on the actual standardized assessments used in course placement sessions. Practice assessments may be accessed on our website: <http://www.pacific.edu/education/erc/basicskillsassessments> .

## Assessment Guidelines for Mathematics Placement Examinations

Form	Assessment (Time Allowed)	Suggested Prior Math	Passing Meets General Education Skill	Passing Allows Admission to These Courses
A	Prealgebra (30 minutes)	No Algebra	No	MATH 3-Elementary Algebra
B	Elementary Algebra (30 minutes)	1 year Algebra	No	MATH 5-Intermediate Algebra MATH 35-Elem Stat Inference MATH 161-Elem Concepts Math 1  POLS 133-Quantitative Methods PSYC 103-Stat Infer/Behav Sci
C	Intermediate Algebra (30 minutes)	2 or more years Algebra (Trigonometry not required)	Yes	CHEM 25-General Chemistry  COMP 25-Computers & Info Proc COMP 47-Fund of Math /Comp Sci COMP 51-Intro to Comp Science  ECON 53-Intro to Microeconomics ECON 55-Intro to Macroeconomics ECON 61-Economic Statistics  MATH 33-Elements of Calculus MATH 41-Elementary Functions MATH 45-Finite Math/Calculus
D	Precalculus (1 hour)	2 or more years Algebra, plus Trigonometry	Yes	MATH 51-Calculus I  PHYS 23-General Physics
E	Calculus (1 hour)	1 year high school Calculus	Yes	(Consult Faculty Adviser) MATH 53-Calculus II or MATH 55-Calculus III

**Skills Requirement Note:** If the student does not pass the Intermediate Algebra exam, he/she must complete Pacific's MATH 5, MATH 35, POLS 133 or PSYC 103 with a grade of C- or higher to satisfy the general education requirement in Quantitative Analysis (Math). If a student completes an equivalent course at another college or university, he/she must complete the course with a grade of C or higher.

## Mathematics Course Admission Guidelines

Placement Into MATH:	Math SAT Level 1	Math SAT Level 2	Form A: Prealgebra	Form B: Elementary Algebra	Form C: Intermediate Algebra	Form D: Precalculus	Form E: Calculus
1	<400	N/A	0-72%	N/A	N/A	N/A	N/A
3	400-470	<430	72-100%	34-56%	N/A	N/A	N/A
5, 35, 161	480-530	430-510	N/A	57-100%	34-55%	N/A	N/A
7,33,35,41, 45,161	>530	520-580	N/A	N/A	56-100%	N/A	N/A
51	N/A	>580	N/A	N/A	72-100% and 50-100%		34-59%
53	N/A	N/A	N/A	N/A	N/A	N/A	60-100%

Students scoring 33% or below on the Elementary Algebra, Intermediate Algebra, or Calculus placement exam should see the mathematics staff of the Educational Resource Center for a reassessment before enrolling in a math course.

**NOTE:** If a student does not place beyond MATH 5, that student must complete Pacific's MATH 5, MATH 35, POLS 133, or PSYC 103 with a grade of C- or higher in order to satisfy the General Education requirement in Quantitative Analysis (math). If a student completes an equivalent course at another college or university, he/she must complete the course with a grade of C or higher.