

# Quantitative Reasoning Requirement

## Guidelines for Quantitative Reasoning Courses

The Quantitative Reasoning requirement is designed to ensure that students graduate with basic understanding and competency in mathematics, statistics, or computer science. The requirement may be satisfied by exam or by taking an approved course. Coursework used to satisfy Quantitative Reasoning must be completed with a letter grade of C- or higher.

## Satisfying Quantitative Reasoning with an Exam

- SAT Math Section - Minimum Score: 620
- SAT Subject Test, Math Level 2 - Minimum Score: 520
- ACT Math Portion - Minimum Score: 28
- Advanced Placement Exams in Calculus AB or BC - Score: 3, 4, or 5
- Advanced Placement Exams in Calculus BC: AB Subscore - Score: 3, 4, or 5
- Advanced Placement Exam in Computer Science Principles - Score: 3, 4, or 5
- Advanced Placement Exam in Statistics - Score: 3, 4, or 5
- International Baccalaureate Higher Level (HL) Exam in Mathematics, Further Mathematics, Analysis and Approaches, or Applications and Interpretation - Score: 5, 6, or 7
- International Baccalaureate Higher Level (HL) Exam in Computer Science - Score: 5, 6, or 7
- GCE A-Level Mathematics Exam - Score: A, B, or C (or 1, 2, 3)
- Quantitative Reasoning Exam offered by the Department of Mathematics (<https://math.berkeley.edu/programs/undergraduate/>) - Minimum Score: 20

## Satisfying Quantitative Reasoning Requirement with a Berkeley Course

The following Berkeley course options, completed with a letter grade of C- or higher, satisfy the Quantitative Reasoning requirement:

COMPSCI C8	Foundations of Data Science	4
COMPSCI 10	The Beauty and Joy of Computing	4
COMPSCI W10	The Beauty and Joy of Computing	4
COMPSCI 61A	The Structure and Interpretation of Computer Programs	4
COMPSCI 61B	Data Structures	4
COMPSCI 61C	Great Ideas of Computer Architecture (Machine Structures)	4
COMPSCI 70	Discrete Mathematics and Probability Theory	4
DATA C8	Foundations of Data Science	4
INFO C8	Foundations of Data Science	4
MATH 1A	Calculus	4
MATH N1A	Calculus	4
MATH 1B	Calculus	4
MATH N1B	Calculus	4

MATH 10A	Methods of Mathematics: Calculus, Statistics, and Combinatorics	4
MATH N10A	Methods of Mathematics: Calculus, Statistics, and Combinatorics	4
MATH 10B	Methods of Mathematics: Calculus, Statistics, and Combinatorics	4
MATH N10B	Methods of Mathematics: Calculus, Statistics, and Combinatorics	4
MATH 16A	Analytic Geometry and Calculus	3
MATH N16A	Analytic Geometry and Calculus	3
MATH 16B	Analytic Geometry and Calculus	3
MATH N16B	Analytic Geometry and Calculus	3
MATH 32	Precalculus	4
MATH N32	Precalculus	4
MATH 53	Multivariable Calculus	4
MATH H53	Honors Multivariable Calculus	4
MATH N53	Multivariable Calculus	4
MATH W53	Multivariable Calculus	4
MATH 54	Linear Algebra and Differential Equations	4
MATH H54	Honors Linear Algebra and Differential Equations	4
MATH N54	Linear Algebra and Differential Equations	4
MATH W54	Linear Algebra and Differential Equations	4
MATH 55	Discrete Mathematics	4
MATH N55	Discrete Mathematics	4
MATH 74	Transition to Upper Division Mathematics	3
STAT 2	Introduction to Statistics	4
STAT C8	Foundations of Data Science	4
STAT 20	Introduction to Probability and Statistics	4
STAT 21	Introductory Probability and Statistics for Business	4
STAT W21	Introductory Probability and Statistics for Business	4

Be sure to review the course descriptions and prerequisites in the Berkeley Academic Guide (<http://guide.berkeley.edu/>) to ensure adequate preparation before enrolling. The Department of Mathematics also offers an on-line placement exam (<https://math.berkeley.edu/courses/choosing-courses/>) to help students choose between MATH 32, 16A and 1A.

Most students who have not fulfilled this requirement prior to admission enroll in MATH 32 (Pre-Calculus), STAT 2 (Introduction to Statistics) or COMPSCI/INFO/STAT C8 (Foundations of Data Science).

Those students prepared to complete an upper division (courses numbered 100-199) course in lieu of an approved lower-division course (courses numbered 1-99), should contact L&S advising ([asklms@berkeley.edu](mailto:asklms@berkeley.edu)) to confirm approval prior to enrollment. Only courses valued at 3 units or higher, and with a prerequisite of one of the approved lower-division courses will be considered.

## Satisfying Quantitative Reasoning Requirement with a Transfer Course

*All transfer courses pursued for Quantitative Reasoning must be completed with a C- or higher.*

- Students admitted with IGETC Certification or UC Reciprocity have satisfied Quantitative Reasoning. No additional course work is required.

- Students can complete a pre-approved Quantitative Reasoning course at a California Community College. Pre-approved courses can be found on ASSIST (<http://www.assist.org/web-assist/welcome.html>). Refer to the L&S Transfer Credit page (<https://lsadvising.berkeley.edu/progress-planning/transfer-credit/>) for instructions on how to take transfer credit as an L&S student before enrolling at a California Community College.
  - UC Berkeley Extension course STAT X10, Math X11, Math X12 are additional pre-approved transfer course options for Quantitative Reasoning.
- Successful completion of transferable courses from other higher education institutions (i.e. 2-year or 4-year campus in the U.S. or non-UCEAP courses from abroad) may also be considered. Course descriptions and syllabi will be required to make a determination. For more information on pursuing transfer courses for Quantitative Reasoning at another higher education institution, review L&S's Transfer Credit: Other Higher Education Institutions (<https://lsadvising.berkeley.edu/progress-planning/transfer-credit/other-higher-education-institution/>) webpage.