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. Course work 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 Exam in Computer Science Principles - Score: 3, 4, or 5
- Advanced Placement Exam in Statistics - Score: 3, 4, or 5
- International Baccalaureate Higher Level Exam in Mathematics or Computer Science - Score: 5, 6, or 7
- GCE A-Level Mathematics Exam - Score: A, B, or C
- Quantitative Reasoning Exam offered by the Department of Mathematics (https://math.berkeley.edu/programs/undergraduate) - Minimum Score: 26

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:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPSCI C8</td>
<td>Foundations of Data Science</td>
<td>4</td>
</tr>
<tr>
<td>COMPSCI 10</td>
<td>The Beauty and Joy of Computing</td>
<td>4</td>
</tr>
<tr>
<td>COMPSCI W10</td>
<td>The Beauty and Joy of Computing</td>
<td>4</td>
</tr>
<tr>
<td>COMPSCI 61A</td>
<td>The Structure and Interpretation of Computer Programs</td>
<td>4</td>
</tr>
<tr>
<td>COMPSCI 61B</td>
<td>Data Structures</td>
<td>4</td>
</tr>
<tr>
<td>COMPSCI 61C</td>
<td>Great Ideas of Computer Architecture (Machine Structures)</td>
<td>4</td>
</tr>
<tr>
<td>COMPSCI 70</td>
<td>Discrete Mathematics and Probability Theory</td>
<td>4</td>
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<tr>
<td>INFO C8</td>
<td>Foundations of Data Science</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1A</td>
<td>Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1B</td>
<td>Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH 10A</td>
<td>Methods of Mathematics: Calculus, Statistics, and Combinatorics</td>
<td>4</td>
</tr>
<tr>
<td>MATH 10B</td>
<td>Methods of Mathematics: Calculus, Statistics, and Combinatorics</td>
<td>4</td>
</tr>
<tr>
<td>MATH 16A</td>
<td>Analytic Geometry and Calculus</td>
<td>3</td>
</tr>
<tr>
<td>MATH 16B</td>
<td>Analytic Geometry and Calculus</td>
<td>3</td>
</tr>
</tbody>
</table>
### Quantitative Reasoning Requirement

- **MATH 32** ([http://guide.berkeley.edu/search/?P=MATH%2032](http://guide.berkeley.edu/search/?P=MATH%2032))
  - Precalculus
  - 4 units

- **MATH N32** ([http://guide.berkeley.edu/search/?P=MATH%20N32](http://guide.berkeley.edu/search/?P=MATH%20N32))
  - Precalculus
  - 4 units

- **MATH 53** ([http://guide.berkeley.edu/search/?P=MATH%2053](http://guide.berkeley.edu/search/?P=MATH%2053))
  - Multivariable Calculus
  - 4 units

- **MATH H53** ([http://guide.berkeley.edu/search/?P=MATH%20H53](http://guide.berkeley.edu/search/?P=MATH%20H53))
  - Honors Multivariable Calculus
  - 4 units

- **MATH W53** ([http://guide.berkeley.edu/search/?P=MATH%20W53](http://guide.berkeley.edu/search/?P=MATH%20W53))
  - Multivariable Calculus
  - 4 units

- **MATH 54** ([http://guide.berkeley.edu/search/?P=MATH%2054](http://guide.berkeley.edu/search/?P=MATH%2054))
  - Linear Algebra and Differential Equations
  - 4 units

- **MATH H54** ([http://guide.berkeley.edu/search/?P=MATH%20H54](http://guide.berkeley.edu/search/?P=MATH%20H54))
  - Honors Linear Algebra and Differential Equations
  - 4 units

- **MATH 55** ([http://guide.berkeley.edu/search/?P=MATH%2055](http://guide.berkeley.edu/search/?P=MATH%2055))
  - Discrete Mathematics
  - 4 units

- **MATH 74** ([http://guide.berkeley.edu/search/?P=MATH%2074](http://guide.berkeley.edu/search/?P=MATH%2074))
  - Transition to Upper Division Mathematics
  - 3 units

- **STAT 2** ([http://guide.berkeley.edu/search/?P=STAT%20202](http://guide.berkeley.edu/search/?P=STAT%20202))
  - Introduction to Statistics
  - 4 units

- **STAT C8** ([http://guide.berkeley.edu/search/?P=STAT%2020C8](http://guide.berkeley.edu/search/?P=STAT%2020C8))
  - Foundations of Data Science
  - 4 units

- **STAT 20** ([http://guide.berkeley.edu/search/?P=STAT%202020](http://guide.berkeley.edu/search/?P=STAT%202020))
  - Introduction to Probability and Statistics
  - 4 units

- **STAT 21** ([http://guide.berkeley.edu/search/?P=STAT%202021](http://guide.berkeley.edu/search/?P=STAT%202021))
  - Introductory Probability and Statistics for Business
  - 4 units

- **STAT W21** ([http://guide.berkeley.edu/search/?P=STAT%20W2021](http://guide.berkeley.edu/search/?P=STAT%20W2021))
  - Introductory Probability and Statistics for Business
  - 4 units

### Satisfying Quantitative Requirement with a Transfer Course

All transfer courses ([https://ls.berkeley.edu/advising/planning/transfer-credit](https://ls.berkeley.edu/advising/planning/transfer-credit)) 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.
- **Continuing Berkeley students** who have already completed course work at Berkeley may pursue a pre-approved course for Quantitative Reasoning at a California Community College during the summer, or while not enrolled at Berkeley during a fall or spring term. To identify pre-approved courses for Quantitative Reasoning, use ASSIST.org.
  - UC Berkeley Extension course STAT X10 - Introduction to Statistics is an additional pre-approved transfer course option, completed with a C- or higher, and for Quantitative Reasoning through Spring 2019.
  - Other Pre-Calculus, Calculus or Introduction to Statistics transfer courses from accredited higher education institutions may also be considered. Talk to an L&S College Adviser or email (AskLnS@berkeley.edu) for more information.