Cengage Learning’s Financial Algebra is the only textbook aligned with this newly-approved UC a-g course. Advanced Algebra with Financial Applications is a ‘c’ level mathematics course.

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The authors worked closely with a California high school to receive UC approval for “Advanced Algebra with Financial Applications” using Cengage Learning’s FINANCIAL ALGEBRA textbook.
THE FINANCIAL ALGEBRA AUTHORS

Experienced high school mathematics teachers and high school mathematics textbook authors!

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www.cengage.com/community/financialalgebra
What is Advanced Algebra with Financial Applications?

- It is a **mathematically rigorous, advanced algebra** course. (Not an arithmetic-based personal finance course).
- It includes selected topics from **Algebra 2, Precalculus, Statistics, Probability and Geometry** that are taught at an ability-appropriate level for the Algebra 1-prerequisite audience.
- It has **Algebra 1** as a prerequisite, and Algebra 1 skills are reinforced throughout.
- It is **technology-dependent** and **applications-oriented**.
- It has received **NCAA approval** for mathematics credit.

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Selected Mathematics Topics Covered

There is an abundance of rich, rigorous, and relevant mathematics content in *Financial Algebra* from Algebra 2, Precalculus, Statistics, Calculus and Geometry, all with an Algebra 1 prerequisite.

- Exponential functions
- Linear regression
- Quadratic-linear systems
- Expected value
- Piecewise functions
- Quadratic regression
- Probability
- Areas of regular polygons
- Functions
- Graphing
- Modified boxplots

- Greatest-integer function
- Limits
- Natural logarithms
- Rational Functions
- Polynomial Functions
- Correlation
- Literal Equations
- Spreadsheets
- Irrational Functions
- Monte Carlo Method
- Moving Averages
**FINANCIAL ALGEBRA** is aligned with the **NATIONAL COMMON CORE STATE STANDARDS**

<table>
<thead>
<tr>
<th>Financial Algebra Chapter &amp; Section</th>
<th>Financial Algebra Page Numbers</th>
<th>Common Core Standard</th>
</tr>
</thead>
</table>
| C1 1-1                             | Pages 5-9                     | Mathematics | High School Modeling ★
Modeling Standards Modeling is best interpreted not as a collection of isolated topics but rather in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific modeling standards appear throughout the high school standards indicated by a star symbol (★). |

**CHARTER 1**

<table>
<thead>
<tr>
<th>C1 1-2 (continued on next page)</th>
<th>Pages 10-15</th>
<th>Number and Quantity - Quantities ★ N-Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Reason quantitatively and use units to solve problems</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number and Quantity - Quantities ★ N-Q</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reason quantitatively and use units to solve problems</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Define appropriate quantities for the purpose of descriptive modeling.</td>
</tr>
</tbody>
</table>

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Financial Topics Covered

- Investments
- Starting Your Own Business
- Banking
- Credit
- Automobile Ownership
- Employment Basics
- Income Taxes
- Home Ownership
- Retirement
- Budgeting
Who is the target audience?

- Students in need of a **third or fourth-year math credit** that is UC a-g approved.

- Students looking to take a **math elective**.

- Students who may have experienced difficulty in Algebra 1 and/or Geometry and may **not be ready for Algebra 2 or Precalculus**.

- Students needing critical financial literacy skills they will need as adults—this is really **all** students!
Why should students take Advanced Algebra with Financial Applications?

- It is a chance for students who struggled in algebra and/or geometry to gain confidence in, and an appreciation for, mathematics.

- It allows solid mathematics students to use their mathematics savvy on a daily basis.

- All students *need* this material.

- It offers a mathematics course that addresses a current “hot topic” in education.

- It allows departments to graduate all students with 3 and 4 years of mathematics, and as a result could increase math enrollment.
Where can this course fit in the sequence?

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Sophomore</th>
<th>Junior</th>
<th>Senior</th>
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</thead>
<tbody>
<tr>
<td>Algebra 1</td>
<td>Financial Algebra</td>
<td>Geometry</td>
<td>Algebra 2</td>
</tr>
<tr>
<td>Algebra 1</td>
<td>Geometry</td>
<td>Financial Algebra</td>
<td>Algebra 2</td>
</tr>
<tr>
<td>Geometry</td>
<td>Algebra 2</td>
<td>PreCalc/Financial Alg.**</td>
<td>Calculus</td>
</tr>
<tr>
<td>Geometry</td>
<td>Algebra 2</td>
<td>Financial Algebra</td>
<td>Precalculus</td>
</tr>
<tr>
<td>Algebra 1</td>
<td>Geometry</td>
<td>Algebra 2</td>
<td>Financial Algebra*</td>
</tr>
<tr>
<td>-------TWO YEAR ALGEBRA------</td>
<td>Geometry</td>
<td>Financial Algebra</td>
<td></td>
</tr>
<tr>
<td>Algebra 1</td>
<td>-------TWO-YEAR GEOMETRY----------</td>
<td></td>
<td>Financial Algebra</td>
</tr>
</tbody>
</table>

*Customize your senior course—a fall semester of matrices, polar coordinates, limits, etc., and then a spring semester of five chapters of Financial Algebra—Automobiles, Employment, Income Taxes, Credit and Banking.

**Financial Algebra can be taken concurrently with Geometry, Algebra 2, or Precalculus, and it can be taken as an ELECTIVE.
We Can Help With Your UC a-g Approval!

Use this link to familiarize yourself with the UC a-g course approval process:

www.ucop.edu/a-gGuide/ag/course_submissions/
What UC a-g approval resources do we offer?

Go to the Financial Algebra Community website:

www.cengage.com/community/financialalgebra

Click on the UC a-g Approval Resources tab to find these items which will help you fill out your submission.

- Course Catalog Description
- Recommended Textbook Citation
- Supplementary Resources
- Course Purpose
- Course Outline
- Key Assignments
- Instructional Methods and Strategies
- Assessment Methods
Any questions? Your Cengage Learning rep can put you directly in touch with the authors!

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