

SOUTHERN CALIFORNIA UNIVERSITY OF HEALTH SCIENCES
Accelerated Sciences Division

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COURSE INFORMATION

Course Number (Prefix Code): MATH111

Course Name: College Algebra

Course Description:

This course prepares science majors for the calculus sequence and algebra based physics emphasizing basic concepts of algebra and is also suitable as a general education elective for non-science majors. Concepts to be covered in this course include: basic concepts of algebra, equations, and inequalities along with functions and graphs, polynomial and rational functions, exponential and logarithmic functions, systems, matrices and determinants, linear programming, conic sections, sequences, series, and combinatorial.

Course Delivery Model(s): Online

Time Requirement:

Lecture Hours per term:	60
Laboratory Hours per term:	0
Total Hours per term:	60
Course Duration (weeks):	5
Credits:	4

Credit Hour Verification:

This list represents the average amount of time a student is expected to spend to successfully complete this course.

	Activity Type	Online (Self-paced) Hrs/wk
Course Time	Lecture	0 hours
	Discussion forums	1 hour
	Audio/Video recordings	15 hours
	Quizzes (outside of class)	3 hours
	Homework	3 hours
Preparation and Study	Study (assessment prep)	6 hours
	Reading	5 hours
Other	Exams (outside of class)	3 hours
Total	Total per week	36 hours
	Total per course	180 hours

Prerequisites: None

Co-requisites: None

This course may be taken again for credit the following number of times (repeatable): 5

LEARNING OUTCOMES, OBJECTIVES, & ALIGNMENT

Student Learning Outcomes

In successfully completing this course, students will be able to:

SLO
1. Demonstrate a thorough knowledge and understanding of the fundamental principles and core concepts of algebra.
2. Apply knowledge to appraise scientific and technical literature in algebra.
3. Assess algebraic problems and develop solutions or strategies to solve those problems based on logic and the knowledge acquired during this course.

TEXTBOOKS & MATERIALS

Required Textbook(s): College Algebra Enhanced by Miller, 2nd edition (Connectmath©)

Required Materials: Working computer with a strong internet connection. Scientific calculator.

Scientific Calculator**

*** Graphics or text-memory calculators are not allowed for use during quizzes or exams. If a student brings one, they will have to take the quiz without a calculator! Students are encouraged to obtain a scientific calculator with exponents and logarithms immediately, rather than the day before a quiz or an exam. It is important to be comfortable with the calculator being used, rather than to be struggling to locate the keys for certain mathematical operations. For example, a TI-30X IIS is acceptable.*

Provided Materials: The following materials will be provided:

Homework and quizzes platform (ALEKS).

Technology Requirements

External resources: ALEKS

Learning Management System: Canvas. If a student is unfamiliar with the Canvas learning management system, please visit the manuals and learning guides available in the Canvas Student Guide. It is important that students are comfortable and competent in using this system, as all course material and communication will be done via Canvas.

Navigating Canvas – the Canvas site has a large set of [Canvas tutorials and videos for students](#).

Browser and Computer Requirements for Canvas: This course requires that students have access to Google Chrome or Microsoft Edge.

Suggestions for completing online coursework: Save work often; this includes backing it up on multiple devices or cloud applications. When submitting final papers on the Canvas learning management system (LMS), ensure that all files have been uploaded properly. Also make sure to keep a hard copy of all papers/projects in case of an unforeseen technological failure or outage.

EVALUATION OF STUDENT LEARNING

Grading scale:

Letter grade

A = 90% - 100%

B = 80% - 89.99%

C = 70% - 79.99%

D = 60% - 69.99%

F = 0.0% - 59.99%

Assessments:

Assessment Name	# of assignments	Weight	SLO Linkage
Participation	5	15%	1-3
Videos	6	15%	1-3
Homework	6	30%	1-3
Exams	2	40%	1-3

Course Topics:

Week	Module	Topic	Assessment Activity	SLO Linkage
1	R	Review of Prerequisites	Homework, Watch assignment	1-3
2	1	Equations and Inequalities	Homework, Watch assignment	1-3
3	2	Functions and Relations	Homework, Watch assignment	1-3
4	3	Polynomial and Rational Functions	Homework, Watch assignment	1-3
	4	Exponential and Logarithmic Functions	Homework, Watch assignment	1-3

5	5	Exponents and Polynomials	Homework, Watch assignment	1-3
	6	Matrices, Determinants, Sequences, and Series	Homework, Watch assignment	1-3

UNIVERSITY POLICIES

All university policies apply to this course and all others. For full policy information please consult the SCU Catalog. Additionally, program policies apply to students in each program as described in the Catalog and in SCU Health Handbook for clinical courses.

Drop Date: It is a student’s responsibility to understand when to consider unenrolling from a course. Refer to the [SCU Academic Calendar](#) for dates and deadlines for registration. Also refer to SCU Academic Policies for [information about the drop period](#).

Incomplete Policy: Under emergency/special circumstances, students may petition for an incomplete grade. See the [SCU Catalog for Policies about Incomplete Grades](#)

Academic Integrity: Students at this university are expected to maintain the highest degrees of professionalism, a commitment to active learning, and display integrity both in and out of the classroom. See the SCU [SCU Academic Integrity Code](#).

Accessibility Services and Accommodations: The Office of Student Services provides support to students with disabilities requiring accommodation in concert with the lead faculty for this course. All students are encouraged to request accommodation as far in advance of when the accommodation will be required to allow the University to process the request and provide approved accommodation. To begin the process please request a consultation with the designated Accessibility Services Officer as soon as possible. Once the Office of Student Services approves the request, the letter of accommodation will be provided to the student and lead faculty member via email. The student should be certain to follow-up with the lead faculty member to plan for the specific accommodation needs for the course. Program requirements cannot be modified to accommodate a disability. Please see the catalog for details regarding [Accessibility Services and Accommodations](#).

[A complete list of University Services](#) is available through MySCU, including:

- Tech Support information
- Veterans Support Services
- Resources for Title IX support through the Campus Safety tab
- Student Advocacy and Accountability resources

[Learning Resource Center:](#) Students can use the library’s resources which provide students with an excellent collection of books, journals, electronic databases, and websites as well as consult with the librarian to help with the course.

Online Etiquette: In general, behavior in an online classroom should emulate the professional behavior expected in an on-ground classroom with a few additional requirements:

- Avoid using text slang and abbreviations such as “u” (instead of “you”), “TLDR” (Too Long, Didn’t Read) or “TBH” (To Be Honest) - not everyone knows what they are. Do not use ALL CAPS for entire sentences or

posts - this is seen as yelling at someone.

- Any form of personal attack or inappropriate response with other students or faculty is unacceptable. We will remove any discussion posts showing this and warn the author.
- If a student disagrees with someone's comments, they should do so respectfully and collegially and provide legitimate examples to support their side.
- Before pressing the submit button review comments, making sure nothing is coming across as defensive, too "know-it-all" or critical, or academically inappropriate. It is easy for someone to misinterpret the meaning when they cannot see facial expressions or hear the tone of voice.
- Avoid short, generic replies such as "I agree!", "I like it!" or "Funny!" – explain why, add another point in support of the idea, or raise a question to continue constructive dialogue.

Attendance: [SCU policy](#) defines attendance for all courses and specifies online courses as active, weekly participation in the course as described in the syllabus. Examples of activities could include, but are not limited to:

- Participating in weekly online chats or discussions
- Submitting or completing assignments
- Commenting on other student contributions
- Actively logged on and participating in class at least three times per week

See the Academic Policies page in the [SCU Catalog](#) for more details on Attendance Policy.

Accelerated Sciences Course Recommendations

- Read before and after each class. Skim the chapter before it is covered in lecture to become comfortable with some of the terms associated with each topic. Review each chapter after it is covered in class to enhance understanding of the material.
- Do not wait until the night before homework is due to start the assignment. Understanding of concepts will be enhanced if the time is taken to learn them beforehand and later review the material without being rushed.
- Stay focused by finding an environment to study with few distractions.
- Participate during class by taking notes and looking over them afterwards.
- Any topics covered in the course could be presented in subsequent examinations, so it is critical to prepare and learn all presented material.
- Remember that procrastination in an accelerated course can quickly prove disastrous! Failure to learn foundational principles can make all future material seem nearly incomprehensible, so make sure to budget time wisely over the next five weeks.

Specifically for synchronous courses:

- Ask questions for clarification when not understanding the material being covered.
- *Do not skip class, arrive late, or leave early.* Given the accelerated nature of our courses, every minute of class missed can have a real impact on student success in a course.
- Work on assigned problems as close to the time as when the topic is covered in class to increase understanding of specific concepts.
- Find a group of students to study with. This makes studying more fun and helps learning of the material by teaching to and learning from peers. Explaining these concepts to other students aids in mastery of what is covered.

Teaching Methods & Instruction

The course will follow a linear format, meaning students will complete all of the modules in sequence. The material in each module will include a combination of readings, videos, and written and interactive assignments. Students will also complete an exam at the end of each module. Please read about each of the course components below. Each module takes approximately 8-10 hours to finish.

Note: The course requires a significant time commitment from students. In the five weeks of classes, we will cover seven chapters of the book. Not every topic will be covered in great depth, however students are expected to study each topic in detail.

Read

These sections are created on Canvas using the power points divided by sections. They improve reading productivity and provide students with better knowledge retention since they focus on each section separately.

Watch

Its content helps students gain a deeper understanding of the concepts presented in the learning modules and in the textbook. These assignments contain lecture, animations, and exercise sections and also feature interactive learning resources on ConnectMath/ALEKS.

Homework

On practice sections, students will practice the module content covered using interactive study tools. These interactive study tools will help students assess regular progress and identify areas for improvement. Additionally, interactives give students an opportunity to review and apply information presented in this course and in the online textbook before taking exams. All students have 3 attempts to finish the practice sections and the best score will be considered as the final score.

Exams

There will be 2 exams given. There will be questions that come directly from the textbook chapters, activities, and videos. Questions may come in the form of multiple choices, free response, or fill in the blank. These exams are all on Connect. Please pay attention to the due dates. Students will have 120 minutes to finish each exam.

Keys to Success

Although the course requires no face-to-face meetings, it is not self-paced. To be successful in this course, students will need to log in regularly and plan ahead to manage the workload.

Self-Directed-Learning

Online courses require motivation, time management, and self-discipline on the part of the learner. Creating a self-directed learning plan will help independent study skills. Creating a routine weekly study schedule and a quiet working space will help students keep pace with the accelerated nature of this course.

