

College Algebra

MAT-1243 Algebraic Reasoning & Modeling

Course Overview

MAT-1243 Algebraic Reasoning & Modeling

Credit Hours: 3hrs

Course Description

This course explores the use of algebra in the real world. This exploration takes place by examining the concept of function. Conceptual understanding of linear, exponential, logarithmic, quadratic, and other polynomial functions is grounded in the collection and statistical analysis of real world data. Functions will be used to solve real world problems using modeling techniques. The concept of function is also explored in detail using analytic geometry.

Learning Outcomes

By the end of this course, you will be able to:

1. Apply algebraic concepts to solve real-world problems.
 2. Utilize algebraic equations used in making financial decisions.
 3. Use algebra to interpret and analyze data in various contexts.
 4. Display critical thinking and problem-solving skills through algebraic reasoning.
 5. Express the practicality and relevance of algebra in daily life.
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Instructor Information

Name: Rebecca Wakeman

Contact Information: rwakeman@campusedu.com

Bio:

Resources

Algebra for Life (course materials)

Selected Khan Academy videos

zyBooks, Algebra

Course Outline

Note: If you have had significant experience with algebra previously, you may choose to go straight to the third chapter so that you can go deeper into the subject. You should especially consider this option if you plan to continue with additional math in college. Feel free to consult the professor.

PRIMER A: ALGEBRA AT THE STORE			
Title	Type	Duration	Points
Read and Watch	Input	1hr	--
zyBooks Homework	Completion	2hrs	20
Pre-quiz part 1	Quiz	1hr	--
	Totals	4hrs	20

PRIMER B: ALGEBRA IN THE KITCHEN			
Title	Type	Duration	Points
Read and Watch	Input	1hr	--
zyBooks Homework	Completion	2hrs	20
Quizzes	Quiz	1hr	30
	Totals	4hrs	125

MODULE ONE: ALGEBRA ON THE ROAD			
Title	Type	Duration	Points
Read and Watch	Input	4hrs	--
Discussion Forum	Discussion	2hrs	25
Q & A Session	Discussion	1hr	10
zyBooks Homework	Completion	5hrs	40
Graphing Calculator	Submission	1hr	20
Road Trip	Submission	3hrs	30
	Totals	16hrs	125

MODULE FOUR: ALGEBRA AROUND THE HOUSE			
Title	Type	Duration	Points
Read and Watch	Input	4hrs	--
Discussion Forum	Discussion	2hrs	25
Q & A Session	Discussion	1hr	10
zyBooks Homework	Completion	5hrs	40
Systems of Equations	Quiz Problems	3hrs	30
The Chicken Coop	Submission	2hrs	20
	Totals	17hrs	125

MODULE FIVE: ALGEBRA ON THE BASEBALL DIAMOND			
Title	Type	Duration	Points
Read and Watch	Input	4hrs	--

Discussion Forum	Discussion	2hrs	25
Q & A Session	Discussion	1hr	10
zyBooks Homework	Completion	5hrs	40
Problem Set	Quiz	3hr	50
	Totals	15hrs	125

MODULE SIX: ALGEBRA AT THE AMUSEMENT PARK			
Title	Type	Duration	Points
Read and Watch	Input	4hrs	--
Discussion Forum	Discussion	2hrs	25
Q & A Session	Discussion	1hr	10
zyBooks Homework	Completion	5hrs	40
Rational Escape Room	Quiz	1hr	50
	Totals	15hrs	125

MODULE SEVEN: ALGEBRA AT THE BANK			
Title	Type	Duration	Points
Read and Watch	Input	4hrs	--
Discussion Forum	Discussion	2hrs	25
Q & A Session	Discussion	1hr	10
zyBooks Homework	Completion	5hrs	40
Kingdom Investing	Quiz	1hr	50
	Totals	15hrs	125

MODULE EIGHT: ALGEBRA IN A PANDEMIC

Title	Type	Duration	Points
Read and Watch	Input	4hrs	--
Discussion Forum	Discussion	2hrs	25
Q & A Session	Discussion	1hr	10
zyBooks Homework	Completion	5hrs	40
Module Quiz	Quiz	1hr	50
Totals		15hrs	125

The following modules are for those who skipped one or more of the first two modules. You must complete eight consecutive modules.

MODULE NINE (optional): ALGEBRA AT CONIC LAND			
Title	Type	Duration	Points
Read and Watch	Input	5hrs	--
Discussion Forum	Discussion	2hrs	25
Q & A Session	Discussion	1hr	10
zyBooks Homework	Completion	5hrs	40
Graph it!	Submission	2hrs	50
Totals		15hrs	125

MODULE TEN (optional): ALGEBRA IN THE DECK			
Title	Type	Duration	Points
Read and Watch	Input	5hrs	--
Discussion Forum	Discussion	2hrs	25
Q & A Session	Discussion	1hr	10
zyBooks Homework	Completion	5hrs	40

Final Quiz	Quiz	2hrs	50
	Totals	15hrs	125

Live Sessions

This course has live meetups for Q & A, typically one hour every other week. If you cannot attend, you can recoup the points for the session by watching the recording and submitting a 300-word summary/response. Since these sessions will be audio-visually recorded, those who participate with their camera engaged are agreeing to have their video, image, or voice recorded.

Grading

Discussions: 280 points
Homework: 320
Assessments: 400 points

Each student will earn a grade that is reflective of what they have achieved in this course. Learning is paramount to the educational process. If learning is to take place, there is no alternative but to work. There are no shortcuts.

Each student will receive a grade for this course that is determined by the total number of points earned. Since grades are based upon what a student earns, it is possible for each student to receive an "A" letter grade.

Letter grades will be assigned according to the following scale:

Course Grading Scale

90-100 A
80-89 B
70-79 C
60-69 D
Below 60 F

Policy/Procedures

The following are the academic policies and procedures for Southwest Baptist University, the university providing academic credit for this course:

ACADEMIC DISHONESTY STATEMENT

The University maintains a strict policy concerning academic dishonesty, which includes cheating, plagiarism, giving assistance on an examination or paper when expressly forbidden by the instructor, and any other practices which demonstrate a lack of academic integrity. Cheating occurs any time a student uses deception in order to avoid fulfilling the specific requirements of an assignment or course and/or in order to receive a higher grade than he/she might otherwise receive. Using artificial intelligence software (such as ChatGPT) to generate writing and passing it off as one's own is also considered cheating. Plagiarism occurs when a student appropriates passages or ideas from someone else's writing into his/her own without providing proper documentation and/or without using quotation marks to indicate when he/she is directly quoting from a source. It is the responsibility of the student to know and to adhere to principles of academic honesty. A student found guilty of academic dishonesty will be subject to academic sanctions ranging from failure on the assignment to failure in the course to, in cases of repeated or flagrant violation, suspension or dismissal from the University. Records of academic dishonesty cases will be kept in a confidential file with the VP for Student Life. More information concerning this policy can be found on pages 61-63 in the 2023-24 SBU Undergraduate Catalog located at: <https://www.sbuniv.edu/resources/documents/catalog/undergrad-catalog-23-24.pdf>.

INCOMPLETE GRADE

A temporary neutral mark "I" is given at the discretion of an instructor when, for a legitimate reason, a student is unable to complete course requirements in a given semester. Typical instances might be absence from a final examination due to illness or inability to complete a term project because of extenuating circumstances. A contract signed by the instructor and the student must accompany this grade to indicate the nature of the work to be completed. An Incomplete Grade (I) may not be used as an alternative to a grade of F. The student is responsible for completing satisfactorily all of the course requirements within 120 days of the posting of the incomplete grade. If the grade is not made up by the deadline, it will be changed to a failing grade (F) on the transcript. More information concerning this policy can be found on pages 54-55 in the 2023-24 SBU Undergraduate Catalog at: <https://www.sbuniv.edu/resources/documents/catalog/undergrad-catalog-23-24.pdf>.

DISABILITY STATEMENT

Southwest Baptist University is committed to equal educational opportunities for students

with disabilities in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act as amended (ADA). Students requesting academic accommodations must submit a Disclosure of Disability form (located on the SBU website or directly from the Special Services Coordinator). The Special Services Coordinator will then communicate with the student regarding the process of obtaining academic accommodations. Please note that academic accommodations are not retroactive and require advance notice to implement. For further details, contact the Special Services Coordinator (Office: Success Center; Phone: 417-328-1741; Email: disabilityservices@sbuniv.edu). For additional information visit <https://www.sbuniv.edu/academics/academic-resources/disability-services.php>

COURSE WITHDRAWAL

There may be instances when a student considers withdrawing from a course. Information related to withdrawals can be found on pages 59-60 of the 2023-24 SBU Undergraduate Catalog at: https://www.sbuniv.edu/_resources/documents/catalog/undergrad-catalog-23-24.pdf.

LIBRARY RESOURCES

Library information is available at <https://library.sbuniv.edu/>

CREDIT HOUR POLICY - EXPECTATION OF WORK

In compliance with federal regulations (34CFR 600.2), Southwest Baptist University requires all courses in all formats including, but not limited to, traditional classroom courses, online courses, internships, practica, and independent studies require a total workload of at least 2250 minutes per credit hour for the typical student. This workload may be comprised of time allocated to direct faculty-student interaction, assigned readings, independent or group assignments, expected study time, or other course related activities as appropriate to the specific course and determined by the faculty of record.

GRADE APPEALS

In the case of a grade appeal, the student shall be considered to have an authentic grievance when he/she can demonstrate his/her course grade has been adversely affected due to certain actions by a faculty member. A grade appeal must be initiated within six weeks of the start of the succeeding regular academic semester (fall or spring) from the end of the course that is being appealed.

More information concerning this policy and the steps for resolution can be found on pages 63-64 in the 2023-24 SBU Undergraduate Catalog at: https://www.sbuniv.edu/_resources/documents/catalog/undergrad-catalog-23-24.pdf

UNIVERSITY DIRECTORY

<https://www.sbuniv.edu/about/employee-directory/>

CAMPUS EDU PRIVACY POLICY

<https://www.campusedu.com/privacy-policy>