College Algebra for Business and Social Science, MTH 109-004
Spring 2020
Sugar Grove, BDE243
TTh 9:30am-10:45am

Instructor

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Website: http://stevekifowit.com
Office Location: Sugar Grove, BDE 249

Office Hours:
Sugar Grove Campus, BDE 249, MW 9:30am-11am, TTh 2:15pm-3:15pm

Course Materials

Required Materials	Cost
Text: ALEKS access for College Algebra, 2nd edition, Miller & Gerken	About $126
Calculator: TI-83/84 Graphing Calculator	About $100

Disclaimer

This course syllabus and schedule are subject to change. Updates and other revisions to course policies will be communicated in class, on the class website, in Blackboard, and/or via college (waubonsee.edu) email.

Course Description

This course is designed to provide the Business, Nursing, Education, or other non-STEM student with basic algebraic concepts necessary to continue in non-STEM related mathematics courses. Topics include: real numbers, solutions of inequalities and equations, coordinate systems, functions, radicals, polynomials, rational functions, exponential, and logarithmic functions, graphing and transformations of functions, and systems of equations. While there may be overlap with topics from Precalculus I, this course develops these topics in a non-rigorous manner and does not meet the prerequisite requirement for MTH 131 Calculus with Analytic Geometry I.

Important Course Notes

Students wishing to take Calculus With Analytic Geometry I (MTH131) should NOT register for this course. This course does not fulfill the mathematics requirement in some Associate degree programs. Please check with your counselor.
Prerequisite: MTH 072 (Intermediate Algebra II) and MTH 075 (Elementary Geometry), both with C's or better, or placement by appropriate measures.
Recommended Corequisite: None
Course Delivery Mode: Face-to-face
Course IAI Code: None
Credit Hours: 3.0

Course Objectives

Throughout this course, the student will learn to:
1) define the domain and range of a function;
2) calculate and interpret the slope of a linear function;
3) solve linear equations;
4) perform regression for the purpose of mathematical modeling;
5) identify properties of basic functions such as domain, range, increasing, decreasing, and symmetry;
6) perform transformations of the basic functions;
7) apply factoring and the quadratic formula to solve quadratic equations;
8) analyze the graph of a quadratic function including its intercepts, vertex, and end behavior;
9) solve equations involving polynomial, rational, radical, exponential, and logarithmic functions;
10) analyze the end behaviors of functions;
11) identify key features of the graphs of rational functions including asymptotes, intercepts, and end behavior;
12) define and identify the key graphical features of exponential and logarithmic functions;
13) apply exponential and logarithmic functions to a variety of real-world problems;
14) solve systems of equations involving two and three variables;
15) perform algebraic operations on matrices; and
16) use matrices and matrix inverses to solve systems of equations.

Course Outcomes

Upon successful completion of this course, the student will be able to:
1) solve systems equations using algebraic methods, and
2) explain the behavior of polynomial, rational, radical, exponential, and logarithmic functions.

College Learning Outcomes

This course contributes to the following college learning outcomes:

☑ Critical Thinking

Examine information in order to purpose or develop solutions or construct arguments.

☐ Communication

Use clear language to communicate meaning appropriate to various contexts and audiences.

☑ Quantitative Literacy

Make judgments or draw appropriate conclusions based on the quantitative analysis of data.

☐ Global Awareness

Describe the interconnectedness of issues, trends or systems using diverse perspectives.

☐ Information Literacy

Use technology to ethically research, evaluate or create information.

Course Grade Calculation

Total Points: 500 points

Grading Components	Score	Quantity	Subtotal	Percent
Tests	100	3	300 points	60%
Weekly ALEKS Homework	varies	16	100 points	20%
Comprehensive Final Exam	100	1	100 points	20%

Grading Scale

A --- 90% and above
B --- 80% - 89%
C --- 70% - 79%
D --- 60% - 69%
F --- below 60%

You may estimate your current grade at any time during the semester by computing the following percentage: 100% * (Total points accumulated) / (Total points possible). Please feel free to discuss your grade at any time during the semester. **Final percentages will be rounded to the nearest whole number.** Throughout the semester, grades will be posted online in Blackboard.

Attendance, late work, and make-up policy

Regular class attendance is an essential component of successful learning. Students are responsible for prompt attendance and participation in all class meetings. If you miss class, you will not be allowed to make up any tests, quizzes, or assignments that you may have missed (**but you may reschedule a test or quiz, or submit an assignment, in advance of a missed class period**). All material covered in class is the student's responsibility.

Withdrawal

Waubonsee Community College reserves the right to administratively withdraw students who are not actively attending. Students may withdraw themselves from this course up through April 27. Visit the Tuition Refunds page of the WCC website for more details.

ALEKS Homework

We will be using the ALEKS web-based learning system for this course. Using this system, you will be doing most of your serious learning outside of the classroom. In class, we will have typical discussion, lecture, and problem solving, but you are responsible for using the ALEKS program (outside of class) to determine your initial knowledge base and to work through your "pie".

Work on your ALEKS Topics ("pie") is worth 20% of your grade (a total of 100 points). Weekly ALEKS work is due on Monday evenings at 11:59pm (except for week 16). **There will be no extensions. Past-due work must be completed in order for you to make progress, but you will not get credit for it.**

You must obtain your ALEKS access code, register, and complete the Initial Knowledge Check as soon as possible. Week 1 Topics are due Monday, Jan 27. If you cannot immediately purchase your access code, you can obtain a Financial Aid Access Code for temporary (2-week) access to ALEKS. (Request the code from your instructor.) Temporary access cannot be extended, and it does not lengthen the term of your normal access.

Tests

Test problems will be similar to class examples, textbook problems, and ALEKS problems. In addition to computational problems, tests may include multiple choice, true/false, short answer, and/or writing problems. You must show all work on all tests to receive full credit. **You must work individually on all tests.** No make-up tests will be given (unless scheduled prior to the test). At the end of the semester, your lowest test score will be replaced by your final exam score (if this helps you).

Final Exam

The final exam is comprehensive and will be worth 100 points toward your final grade. The final exam counts for 20% of your grade. Please take it seriously. The final exam is scheduled for our last class period.

Calculators

The TI-83/84 graphing calculator is required for this course. There are graphing calculator emulators available for smart phones and tablets--you may you these during class periods, but not during tests.

Phones/Tablets/Laptops

Electronic devices may be used for taking notes and computing during lectures, but they may not be used on in-class tests. These devices must be silenced and put away during tests. Students in special circumstances who require their phones to be readily available must discuss their situations with the instructor.

Important Institutional Policies

Diversity and Disability Statement

Accessibility is a value of our institution. We are committed to creating environments that are welcoming and that support all students' learning. If you experience barriers to your learning in this course please notify the instructor as soon as possible to discuss options. Students who experience barriers due to disability may contact the Access Center for Disability Resources to begin this conversation or establish accommodations.

Academic Integrity

Waubonsee Community College believes that all members of the community (students, faculty, staff, and administrators) have a responsibility to participate in learning with honesty, respect, and integrity. We must commit to engage in learning both in and out of the classroom, value each member in our learning community, demonstrate original thought, and help foster ethical, open, safe learning environments for all. For more information, please see the Waubonsee Community College Plagiarism Statement section in the Student Handbook.

Cheating/Plagiarism Policy

Waubonsee firmly upholds sound principles of academic integrity and responsibility. Plagiarism and cheating are serious infractions of academic integrity, and, as such, are considered breaches of the Code of Student Conduct. If a student has violated this policy, I will report the infraction to the Dean for Student Success and Retention and the student may fail the assignment or the course, depending on the severity or the number of infractions.

*** Please see the Student Handbook for other course policies and procedures.

Resource Links

The following are useful resources that are available to students at Waubonsee Community College:

- Access Center for Disability Resources
- Bursar
- Campus Police and Authority
- Career Development Center
- Counseling, Advising and Transfer Center
- Financial Aid and Scholarships
- Learning Assessment and Testing Services
- Library
- Online Support for Students
- Registration and Records
- TRIO/Student Support Services
- Tutoring Centers

Class Website

Course information, including tests, quizzes, answer keys and homework problems, can be found on the class website at http://stevekifowit.com/classes/m109.htm.

Grades will be posted in Blackboard. All other course information will be available on the class website.

Course Schedule

Week 1	Jan 21 & Jan 23	Course Information, Sections 1.1, 1.2, & 1.7	Linear equations and inequalities (ALEKS Topics due 1/27.)
Week 2	Jan 28 & Jan 30	Sections 1.1, 1.4, & 1.6	Rational and quadratic equations (ALEKS Topics due 2/3.)
Week 3	Feb 4 & Feb 6	Sections 1.1 & 1.6	Quadratic and radical equations (ALEKS Topics due 2/10.)
Week 4	Feb 11 & Feb 13	Sections 2.4, 2.5, & 2.6; **Test 1**	2-variable linear eqn's and graphs, Parabolas (ALEKS Topics due 2/17.) Test 1 covers weeks 1 through 3.
Week 5	Feb 18 & Feb 20	Sections 2.4 & 2.5	Linear eqn's (ALEKS Topics due 2/24.)
Week 6	Feb 25 & Feb 27	Section 2.3, 2.5, & 2.8	Functions (ALEKS Topics due 3/2.)
Week 7	Mar 3 & Mar 5	Sections 2.4-2.8	Functions, graphs, and modeling (ALEKS Topics due 3/9.)
Week 8	Mar 10 & Mar 12	Sections 2.3, 2.6, 2.7, & 3.1; **Test 2**	More on functions and graphs (ALEKS Topics due 3/23.) Test 2 covers weeks 4 through 7.
Week 9	Mar 17 & Mar 19	Spring Break	**No class** (ALEKS Topics due 3/23.)
Week 10	Mar 24 & Mar 26	Sections 2.3, 2.6, 2.8, 3.1, & 3.5	Operations on functions, Transformations (ALEKS Topics due 3/30.)
Week 11	Mar 31 & Apr 2	Sections 1.4-1.5 & 3.1-3.3	Quadratic equations and polynomial zeros (ALEKS Topics due 4/6.)
Week 12	Apr 7 & Apr 9	Sections 2.3, 3.2, & 3.5	Polynomial zeros, Rational functions (ALEKS Topics due 4/13.)
Week 13	Apr 14 & Apr 16	Sections 1.4, 2.3, 3.5, & 3.6; **Test 3**	Rational functions, asymptotes, and inequalities (ALEKS Topics due 4/20.) Test 3 covers weeks 8 through 12.
Week 14	Apr 21 & Apr 23	Sections 4.1 & 4.2	Inverse functions, Exponential functions (ALEKS Topics due 4/27.)
Week 15	Apr 28 & Apr 30	Sections 4.2-4.5	Exponentials and logarithms (ALEKS Topics due 5/4.)
Week 16	May 5 & May 7	Sections 5.1 & 5.2	Systems of linear equations (ALEKS Topics due 5/15.)
Week 17	May 12 & May 14	Review, **Final Exam**	Final exam is comprehensive with emphasis on course objectives

April 27 is the last day for students to withdraw themselves. Please check the current Waubonsee Academic Calendar for other important dates.

Waubonsee Community College Campus Information:

Sugar Grove Campus
Route 47 at Waubonsee Drive
Sugar Grove, IL 60554-9454
(630) 466-7900

Aurora Downtown Campus
18 South River Street
Aurora, IL 60506-4178
(630) 801-7900

Aurora Fox Valley Campus
2060 Ogden Avenue
Aurora, IL 60504-7222
(630) 585-7900

Plano Campus
100 Waubonsee Drive
Plano, IL 60545-2276
(630) 552-7900