Angelina College – Division of Science and Mathematics
MATH 1314 – College Algebra
Instructional Syllabus – Fall 2023 (Online)

The instructor may modify the provisions of the syllabus to meet individual class needs by informing the class in advance as to the changes being made.

BASIC COURSE INFORMATION
MATH 1314 – College Algebra: In-depth study and applications of polynomial, rational, radical, exponential, and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included. Three lecture hours each week. Prerequisite: Meet TSI college readiness standard for Mathematics or equivalent.

Instructor: Kelly Ward   Office Location and Hours: Meeting location and time by appointment
Phone: 409-224-0272   Email Address: kward@angelina.edu or kward@brookelandisd.net

INTENDED STUDENT OUTCOMES
Core Objectives Required for this Course (assessed with embedded test questions and other assignments)
   ✓ Critical Thinking: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
   ✓ Communication: to include effective development, interpretation and expression of ideas through written, oral and visual communication
   ✓ Empirical and Quantitative Skills: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

Course Learning Outcomes for all Sections (assessed with embedded test questions)
   ✓ Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
   ✓ Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
   ✓ Apply graphing techniques.
   ✓ Evaluate all roots of higher degree polynomial and rational functions.
   ✓ Recognize, solve and apply systems of linear equations using matrices.

MATERIALS
   ✓ *College Algebra*, Jay Abramson (OpenStax), ISBN: 978-1-938168-38-3; Free online at
     https://openstax.org/details/books/college-algebra
   ✓ Access to Edfinity (code purchased online or at AC bookstore)
   ✓ Graphing calculator: A graphing calculator is required. The TI-84 graphing calculator will be used by the instructor in classroom demonstrations. You may NOT use a calculator with CAS (such as TI-89, TI-92) on tests.

ATTENDANCE
MATH 1314 is fully online. To receive credit for attendance, you must log into MATH 1314 in Blackboard at least once per week and spend at least 30 minutes in Edfinity each week. Attendance is required per Angelina College Policy and will be recorded every week. Any student who misses 2 or more "weeks" of work (as described above) may be dropped from the class.

CLASS CONNECTION

We will use Blackboard Collaborate to connect the Apple Springs, Brookeland, Crockett, and Huntington Classrooms at least once during the semester.

EVALUATION AND GRADING

Your grade will be assessed by the following:

- ✓ Four tests which account for 75% of the final average (the 4th test is the comprehensive final exam)
- ✓ Test Helper Sheet: You may bring 1 piece of regular size notebook/printer paper with anything written on it (front and back) to use during the test. You may use all previous Test Helper Sheets along with one additional piece of paper during your Final Exam.
- ✓ No make-up tests without prior arrangement will be allowed. The grade on the final exam can replace any one missed test or the lowest test grade during the semester.
- ✓ Homework on Edfinity which accounts for 20% of the final average
- ✓ Core Assessment administered in Blackboard which counts for 5% of the final average
- ✓ Missing 2 weeks of assignments is considered lack of participation and may result in an instructor drop.
- ✓ Reviewing the material in your online textbook before class will not directly affect your grade but is highly recommended for your success in the course.

STUDENT CONDUCT

- ✓ A positive environment for learning will be maintained by students being courteous to each other and to the instructor. Behavior that distracts from the learning environment will result in a warning and will result in further action if continued.
- ✓ Regular attendance is expected as per college policy.
- ✓ Cheating on tests is not tolerated as per Angelina College policy and may result in expulsion from the course. Plagiarism is not tolerated and will result in a zero for any assignment in which it is detected. AI programs such as ChatGPT, Bard, Snapchat AI, and Photomath may be used to aid in learning the material but cannot be used during tests.
- ✓ Students may not access cell phones at all during tests. Accessing your phone in any way during a test will be regarded as cheating.

INSTITUTIONAL POLICIES

This course conforms to the policies of AC as stated in the Angelina College Handbook. For detailed information on Angelina Institutional Policies, see the Concourse Syllabus in Blackboard. You will find information on Institutional Attendance Policy, Educational Accommodations, Notice of Non-Discrimination, Technology Requirements, Password Management, Syllabus Modification, Academic Integrity, Course Assistance, Technical Support, Tutoring, Testing Center, Roadrunner Central, Roadrunner Market, Grade Appeals, Student Handbook, AC Library, MyAC Portal, and Campus Security.

MATH 1314 COURSE OUTLINE

Please review the material in the online textbook for each assigned section BEFORE watching the lecture video and completing assigned problems. The lecture videos were recorded live so they are the length of a face-to-face course; feel free to watch them in chunks if the full length feels intimidating.

Lesson	Date	Sections	Description
Week 1	8.28 – 9.3.23	Setup 1.2 1.3	Syllabus, TI-84s, OpenStax, Edfinity, Blackboard, Collaborate Exponents and Scientific Notation Radicals and Rational Exponents Due 9.10.23; Late by 10.1.23
Week 2	9.5 – 9.10.23	1.4 1.5	Polynomials Factoring Polynomials Due 9.10.23; Late by 10.1.23
Week 3	9.11 – 9.17.23	2.2 2.3 2.7	Linear Equations Linear Inequalities Due 9.17.23; Late by 10.1.23
Week 4	9.18 – 9.24.23	2.4 2.5 **Project**	Complex Numbers Quadratic Equations Due 9.24.23; Late by 10.1.23 **Project Discussion Project Due 10.8.23**
Week 5	9.25 – 10.1.23	2.6 1.6 2.2	Other Types of Equations Rational Expressions and Equations Due 10.1.23
Week 6	10.2 – 10.8.23	**Test 1** 2.1 2.2	**Test 1 (Sections 1.2-1.6, 2.2-2.7); One page test helper sheet allowed** **Test 1 Due 10.8.23** Coordinate System and Linear Equations in Two Variables Operations with Functions and Composition Due 10.8.23; Late by 10.29.23
	10.9 – 10.15.23		Huntington Fall Break extended to all students
Week 7	10.16 – 10.22.23	3.1 3.2, 3.3 3.4	Functions and Function Notation Domain and Range; Increasing and Decreasing Operations with Functions and Composition Due 10.22.23; Late by 10.29.23
Week 8	10.23 – 10.29.23	3.5 3.7	Transformations Inverse Functions Due 10.29.23
Week 9	10.30 – 11.5.23	**Test 2** 5.1	**Test 2 (2.1-2.2, 3.1-3.5, 3.7); One page test helper sheet allowed** **Test 2 Due 11.5.23** Quadratic Functions Due 11.5.23; Late by 11.12.23
Week 10	11.6 – 11.12.23	5.2 5.3 5.4 5.5	Power Functions and Polynomials Dividing Polynomials and Zeros of Polynomials Due 11.12.23
Week 11	11.13 – 11.19.23	5.6 **Test 3**	Rational Functions Due 11.19.23 **Test 3 (5.1-5.6); One page test helper sheet allowed** **Test 3 Due 11.19.23**
	11.20 – 11.26.23		Thanksgiving Break
Week 12	11.27 – 12.3.23	6.1 6.2 6.3 6.4	Exponential Functions and Their Graphs Log Functions and Their Graphs Due 12.3.23; Late by 12.10.23
Week 13	12.4 – 12.10.23	6.5 6.6 7.7	Log Properties Exponential and Log Equations Solving Systems of Equations Using Matrices Due 12.10.23
Week 14	12.11 – 12.12.23	**Final Exam**	**Comprehensive Final Exam; Four page test helper sheet allowed** **Due 12.12.23**