Angelina College – Division of Science and Mathematics
MATH 1314 – College Algebra
Instructional Syllabus – Fall 2020 (TRF 8:00-9:20am)

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. **Students are required to have a graphing calculator.** Three lecture hours each week. The intended audience is any student needing the fundamentals of college algebra, including but not limited to students preparing for the study of higher mathematics.

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
  ✓ 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
  ✓ 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.

ASSESSMENT MEASURES
Assessments for the Core Objectives
  ✓ Critical thinking: For a given project, students will analyze given information, evaluate methods for solving the problem, calculate results, and analyze the solution. A rubric will be used to assess critical thinking skills and correctness of the solution.
  ✓ Communication: Students will solve an assigned problem, discuss the solution in a group setting and present the solution and reasoning. A rubric will be used to assess written, oral, and visual communications skills.
  ✓ Empirical and Quantitative Skills: Students will be given data, organize it into systems of equations and use matrices to solve the systems within the given constraints. A rubric will be used to assess the empirical and quantitative skills.

Assessments for Course Learning Outcomes
- ✓ Students will demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses within imbedded test questions.
- ✓ Students will recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations within embedded test questions.
- ✓ Students will apply graphing techniques within embedded test questions.
- ✓ Students will recognize, solve and apply a system of linear equations using matrices within an embedded test question.

INSTRUCTIONAL PROCEDURES
The course is taught using a combination of lectures, discussions, and practice exercises. The amount of time spent using any one technique will vary from class to class and from lesson to lesson.

COURSE REQUIREMENTS AND POLICIES
Required Textbooks and Recommended Readings, Materials and Equipment
- ✓ *College Algebra*, Paul Sisson (Hawkes Learning System), 2nd ed.
- ✓ Access to Hawkes Learning System (included with new book bought 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 on exams.

Course Policies: This course conforms to the policies of AC as stated in the Angelina College Handbook.
- ✓ Educational Accommodations: If you have a disability (as cited in Section 504 of the Rehabilitation Act of 1973 or Title II of the Americans with Disabilities Act of 1990) that may affect your participation in this class, you may fill out the Educational Accommodations application within your AC Portal (students tab > access & inclusion > educational accommodations application). An Access & Inclusion team member will contact you once the application is received. At a post-secondary institution, you must self-identify as a person with a disability in order to receive services; for questions regarding the application process you can visit the Office of Access and Inclusion in Roadrunner Central or email access@angelina.edu. To report any complaints related to accommodations, you should contact Annie Allen, Director of Access & Inclusion, in Roadrunner Central. You may also contact Ms. Allen by calling (936) 633-4509 or by emailing aallen@angelina.edu. To report discrimination of any type, contact Tifini Whiddon, Director of Human Resources, at (936) 633-4555 or twhiddon@angelina.edu.
- ✓ Notice of Non-Discrimination: Angelina College prohibits discrimination and harassment against individuals on the basis of sex, gender, race, color, religion, national origin, disability, age, or any other basis prohibited by law. For more information, contact Tifini Whiddon, Director of Human Resources, at (936) 633-4555 or twhiddon@angelina.edu.
- ✓ Technology Requirements: Students are expected to have basic computer skills including the ability to navigate the Internet, access and send email from their AC email account (available at mail.student.angelina.edu), and access class materials in Blackboard (angelina.blackboard.com). Some classes may require use of Microsoft Word, Excel, and/or PowerPoint and may also require students to create and save documents that may be attached to emails or assignments in Blackboard. A webcam and/or microphone may be required for online classes.
- ✓ Course Format and COVID-19: Angelina College continues to monitor the evolving COVID-19 situation and aligns the College planning with local, state, and CDC guidelines. If the President declares a crisis or an emergency requiring the College to move instruction fully online, you will receive notification within two business days of the change. We commit to you, the student, that we will also communicate any changes to the course assignments, schedule, and examinations within the same two business days of the declaration via Blackboard and/or your official College email. If an emergency is declared and you are unable to complete your required work, you will have the

option of asking your instructor for an Incomplete in the course and will be allowed to finish the course within a prescribed timeframe.

✓ Attendance: Attendance is required per Angelina College Policy and will be recorded every day. Any student with 3 consecutive or 4 cumulative absences or who misses 12% or more of course's scheduled meeting time may be dropped from the class. Records will be turned in to the Registrar's Office at the end of the semester. Do not assume that non-attendance in class will always result in an instructor drop. You must officially drop a class or risk receiving an F.

Additional Policies Established by the Instructor

✓ Make-Up Exams: No make-up exams will be allowed. The grade on the final exam can replace any one missed test or the lowest test grade during the semester.

✓ Student Conduct: A positive environment for learning will be maintained by students being courteous to each other and to the instructor. Behavior (such as sleeping, conversing loudly, or tardiness) 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.

✓ Cell phones must be turned off or on silent mode during class instruction. Students may not access cell phones at all during tests. Accessing your phone in any way during a test will be regarded as cheating.

EVALUATION AND GRADING

Your grade will be assessed by the following:

✓ Five tests which account for 80% of the final average (the 5th test is the comprehensive final exam)

✓ Homework on Hawkes Learning System which accounts for 20% of the final average; check Hawkes for due dates

✓ Core Assessment administered in Blackboard and included in the homework category

✓ Completing the "Learn" portion of Hawkes Learning System before class will not directly affect your grade but is highly recommended for your success in the course.

Homework will be completed on Hawkes Learning System and is required.

✓ Hawkes Learning System comes with new books from the Angelina bookstore, and it may also be purchased with a major credit card on the website.

✓ Missing 5 assignments is considered lack of participation and may result in an instructor drop.

Those who drop the course on or before September 9th will not receive a grade for the class. Those dropping between September 9th and November 9th (inclusive) will receive a W in the course. November 9th is the last day for dropping a course.

CLASS CONNECTION

We will use Blackboard Collaborate to connect the Brookeland and Apple Springs classrooms.

MATH 1314 COURSE OUTLINE

Please complete the "Learn" portion of Hawkes Learning System for each assigned section BEFORE arriving to class each day; we will use our class time to view examples and complete practice problems. We need to use one Friday (11/13) lesson as a required class day to make up for holidays that do not match between the school calendars. We will not connect on "Lab" days unless we need to use them to make up or complete a lecture; I will let you know if you must connect on a "Lab" day. **[Apple Springs: Because we will not connect on "Lab" days, please consult your proctor about attendance requirements.]**

Lesson	Date	Sections	Pages	Description
1	8/25	Setup		Syllabus, TI-84s, Set up Hawkes, Blackboard, Connection
2	8/27	1.3 1.4	28 – 44 45 – 60	Properties of Exponents Properties of Radicals
Lab	8/28			Hawkes Assignments; Prepare Test Helper Sheet
3	9/1	1.5	61 – 76	Polynomials and Factoring
4	9/3	1.6 2.1	77 – 85 97 – 111	The Complex Number System Linear Equations in One Variable
Lab	9/4			Hawkes Assignments; Prepare Test Helper Sheet
5	9/8	2.1 2.2	97 – 111 112 – 121	Linear Equations in One Variable Linear Inequalities in One Variable
6	9/10	2.3	122 – 136	Quadratic Equations in One Variable
Lab	9/11			Hawkes Assignments; Prepare Test Helper Sheet
7	9/15	2.4 2.6	137 – 142 158 – 163	Higher Degree Polynomial Equations Radical Equations
8	9/17	2.5	143 – 157	Rational Expressions and Equations
Lab	9/18			Hawkes Assignments; Prepare Test Helper Sheet
9	**9/22**	**Exam #1**		**Exam #1 (Sections 1.3 – 1.6, 2.1 – 2.6)**
10	9/24	3.1 3.2	175 – 188 189 – 196	The Cartesian Coordinate System Linear Equations in Two Variables
Lab	9/25			Hawkes Assignments; Prepare Test Helper Sheet
11	9/29	3.3 3.4	197 – 214 215 – 222	Forms of Linear Equations Parallel and Perpendicular Lines
12	10/1	4.1	255 – 270	Relations and Functions
Lab	10/2			Hawkes Assignments; Prepare Test Helper Sheet
13	10/6	4.2	271 – 286	Linear and Quadratic Functions
14	10/8	4.3a 4.4	287 – 303 304 – 321	Other Common Functions Transformations of Functions

Lab	10/9			Hawkes Assignments; Prepare Test Helper Sheet
15	10/13	4.4 4.5	304 – 321 322 – 335	Transformations of Functions Combining Functions
16	10/15	4.6	336 – 348	Inverses of Functions
Lab	10/16			Hawkes Assignments; Prepare Test Helper Sheet
17	**10/20**	**Exam #2**		**Exam #2 (Sections 3.1 – 3.5, 4.1 – 4.6)**
Lab	10/22		Ward Absent	Hawkes Assignments; Prepare Test Helper Sheet
Lab	10/23		Ward Absent	Hawkes Assignments; Prepare Test Helper Sheet
18	10/27	5.1	363 – 376	Introduction to Polynomial Equations and Graphs
19	10/29	5.2	377 – 389	Synthetic Division
Lab	10/30			Hawkes Assignments; Prepare Test Helper Sheet
20	11/3	5.3	390 – 404	Locating Real Zeros of Polynomials
21	11/5	5.4 6.1	405 – 418 431 – 448	The Fundamental Theorem of Algebra Rational Functions
Lab	11/6			Hawkes Assignments; Prepare Test Helper Sheet
22	11/10	6.1	431 – 448	Rational Functions
23	**11/12**	**Exam #3**		**Exam #3 (Sections 5.1 – 5.4, 6.1)**
24	11/13	7.1 7.2	507 – 516 517 – 532	Exponential Functions and Their Graphs Applications of Exponential Functions
25	11/17	7.3 7.4	533 – 544 545 – 560	Logarithmic Functions and Their Graphs Properties and Applications of Logarithms
26	11/19	7.5	561 – 576	Exponential and Logarithmic Equations
Lab	11/20			Hawkes Assignments; Prepare Test Helper Sheet
27	12/1	8.2	605 – 618	Solving Systems with Matrices
28	**12/3**	**Exam #4**		**Exam #4 (Sections 7.1 – 7.5, 8.2)**
Lab	12/4			Review for Final Exam; Prepare Test Helper Sheet
Lab	12/8			Review for Final Exam; Prepare Test Helper Sheet
29	**12/10**	**Final**		**Comprehensive Final Exam**