Angelina College
Division of Science and Mathematics
MATH 0314 – Intermediate Algebra
Instructional Syllabus T/R – Fall 2018

I. BASIC COURSE INFORMATION:

A. Intermediate Algebra – MATH 0314 –A study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations. This course may not be used for degree credit and is not intended for transfer to a senior college. This course is specifically designed to support the student in Math 1314. **Note: If a student earns an overall passing grade in MATH 0314 they are considered TSI complete in Mathematics.**

B. The intended audience is any student needing to strengthen their mathematics background in order to succeed in their college level mathematics courses.

C. Instructor: Rich Geist
Office Location: S225
Office Hours: as posted on office door
Phone: 936-633-3261
E-mail Address: rgeist@angelina.edu

II. INTENDED STUDENT OUTCOMES:

A. Core Objectives Required for this Course

1. Critical Thinking: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information

2. Communication: to include effective development, interpretation and expression of ideas through written, oral and visual communication

3. Empirical and Quantitative Skills: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

B. Course Learning Outcomes for all Sections

1. Define, represent, and perform operations on real and complex numbers.
2. Recognize, understand, and analyze features of a function.
3. Recognize and use algebraic (field) properties, concepts, procedures (including factoring), and algorithms to combine, transform, and evaluate absolute value, polynomial, radical, and rational expressions.
4. Identify and solve absolute value, polynomial, radical, and rational equations.
5. Identify and solve absolute value and linear inequalities.
6. Model, interpret, and justify mathematical ideas and concepts using multiple representations.
7. Connect and use multiple strands of mathematics in situations and problems, as well as in the study of other disciplines.

III. ASSESSMENT MEASURES

A. Assessments for the Core Objectives

1. **Critical thinking:** Students will demonstrate the application of critical thinking skills by utilizing reading, creative and appropriate problem solving techniques, and appropriate mathematical tools to solve problems. Students will demonstrate these skills in written homework problems which will be assessed using a rubric.
2. **Communication:** Students will communicate mathematical information using complete and correct notation and written and visual communication skills as demonstrated in

written homework assignments. A rubric will be used to assess written, oral, and visual communication skills.

3. **Empirical and Quantitative Skills:** Students will use empirical and quantitative skills to solve mathematical problems/equations in written and computer-based homework assignments. These will be assessed using a rubric.

B. Assessments for Course Learning Outcomes

The course learning outcomes will be assessed using a variety of direct measures, including math problems completed in class or as homework, performance on embedded exam questions, and written analyses of homework problems.

IV. INSTRUCTIONAL PROCEDURES:

The course is taught using a combination of lectures, discussions, practice exercises, and assesments. The amount of time spent using any one technique will vary from class to class and from lesson to lesson as determined to be most appropriate by the instructor. This class is designed to closely follow and support the 1314 curriculum.

V. COURSE REQUIREMENTS AND POLICIES

A. Access to the Hawkes Learning System for MATH 0314/MATH 1314 is required, and is available in the Angelina College Bookstore or may be purchased with a major credit card on the Hawkes website. Students taking MATH 0314 will ONLY need to purchase the Hawkes access code for College Algebra Plus Integrated Review (not the Hawkes MATH 1314 College access code). The access code for College Algebra Plus Integrated Review also provides the student access to MATH 1314 College Algebra.

B. Course Policies – This course conforms to the policies of Angelina College 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, under the "Student Services" tab. A Student Success 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 Student Success and Inclusion in the Student Center (Room 200) or email access@angelina.edu. To report any complaints related to accommodations, you should contact Annie Allen, Director of Student Success & Inclusion, in Room 200 of the Student Center. You may also contact Ms. Allen by calling (936) 633-4509 or by emailing aallen@anglina.edu. To report discrimination of any type, contact Steve Hudman, Dean of Student Affairs, at (936) 633-5292 or shudman@angelina.edu.

1. **Attendance –** Attendance is required as per Angelina College Policy and will be recorded every day. Any student with three (3) consecutive absences of four (4) cumulative absences may be dropped from the class. Not submitting assignments is considered non-participation which also subjects you to being dropped from the course. Records will be turned in to the academic dean 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**. This is official Angelina College Policy.

2. If a student is dropped from MATH 0314, then they will also be dropped from MATH 1314.

3. **Additional Policies Established by the Instructor**

Class participation, questions, and discussion are encouraged, appreciated, and expected. **Students must have their instructor's written permission to use any type of recording device.**

MAKE-UP EXAMS
No make-up exams will be offered. The grade on the final exam can replace the lowest exam grade.

STUDENT CONDUCT
A positive environment for learning will be maintained by students being courteous to each other and to the instructor. Eating, drinking, sleeping, and distracting conversations during lecture will not be allowed. Repeated tardiness will result in warning; if continued this will result in further action depending on upon seriousness of problem. Regular attendance is also expected as per college policy. Punctuality is considerate and expected behavior.

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 OR OTHER ELECTRONIC DEVICES
Pagers, cellular phones, earphones, and similar electronic devices should be silent or off and out of sight during the entire class period. Failure to follow this rule **may result in the student being asked to leave the classroom.**

No electronic devices, other than approved calculators, may be used during any quiz or test. These prohibited electronic devices may include, but not be limited to: cell phones or smart phones, smart watches or other electronic visual aids, audio players, recorders, tablets, notebooks, Google glass, or any other similar devices, any digital device that can be used to record, transmit, receive, or play back audio, photographic, text, or video content.

Failure to follow this rule may result in the student receiving a grade of zero on the quiz or test. If the student receives a test score of zero due to failure to follow this rule, the zero test score cannot be replaced by the final exam.

Technical issues (those not due to Hawkes) do not excuse late homework. The instructor will not extend due dates that are not met due to a student's technical issues.

Any student not enrolled in Hawkes by September 6, 2018 will be dropped from the class.

Visitors are not allowed in classrooms as stated in the College's policy.

VI. COURSE OUTLINE:

See attached COURSE SCHEDULE for 0314. This schedule dictates the topic and timing for the question analysis papers. The classwork topics for review are included in this schedule.

VII. EVALUATION AND GRADING:

1. Your grade will be assessed by:
    a. Four major exams and a final exam (60% of final grade).
    (final exam can replace lowest exam score)
    b. Classwork from the Hawkes Learning System (20% of final grade).
    c. Question analysis papers (1-3 items per assignment) (10% of final grade)
    (number of questions required to be determined by instructor)
    Question analysis items are to come from the homework completed on Hawkes Learning Systems, which **is required**. Student questions will be assessed using a rubric. Assignments which require question analysis are shown on the last page of this syllabus.
    d. Notebook. Students are required to keep a written record of all Math 0314 and Math 1314 assignments/work available each day for use. (10% of final grade)

Student notebook will contain five sections:

d1) MATH 0314 notes
d2) MATH 1314 notes
d3) MATH 0314 homework
d4) MATH 1314 homework
d5) questions derived from MATH 1314 homework

Failure to turn in Question analysis papers (3 or more) or possess written records of assignments (notebook) indicates a lack of participation and may result in an instructor drop.

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.

Date	**Sections**	**Description**
01/15	1.5	Factoring
01/17	1.3, 1.4	Properties of Exponents Properties of Radicals
01/22	1.6, 2.1	Complex Number System 1.6 imaginary unit I and its properties/add, subtract, multiply complex expressions/simplify complex quotients using conjugate/principal square roots Linear Equations in One Variable including Absolute Value 2.1 solving linear equations/solving absolute value equations/extraneous solutions/solving for a variable
01/24	2.2, 2.3	Linear Inequalities in One Variable 2.2 solving linear inequalities/solving compound linear inequalities/solving absolute value inequalities Quadratic Equations in One Variable 2.3 factor/Zero product property/quadratic formula/completing the square/ square root property
01/29	2.3, 2.6	Quadratic Equations in One Variable 2.3 factor/Zero product property/quadratic formula/completing the square/ square root property Radical Equations 2.6 define radical equations/solve radical equations/domain
01/31	2.4	Higher Degree Polynomial Equations 2.4 substitution/factoring/
02/05	2.5	Rational Expressions and Equations 2.5 simplify/combine real or complex expressions/solve/
02/07		Review / Test 1
02/12		Discuss Test 1 and Review for Exam 1 in MATH 1314
02/14	3.1, 3.2, 3.3, 3.4	Cartesian Coordinate System, Linear Equations in Two Variables, Forms of Linear Equations, Parallel and Perpendicular Lines
02/19	4.1	4.1 relation vs. function/function notation/domain and range/
02/21	4.2, 4.3	Linear and Quadratic Functions, Other Common Functions 4.2 plotting points of linear and quadratic functions(table)/domain and range/ vertex/vertex form/find minimum-maximum values/ 4.3 absolute value, polynomial (focus on quadratic and cubic)), radical
02/26	4.4, 4.5	Transformations of Functions Combining Functions
02/28	4.6	Inverses of Functions
03/05		Review / Test 2

03/07		Discusss Test 2 and Review for Exam 2 in MATH 1314
03/19	5.1, 5.2	Introduction to Polynomial Equations and Graphs Synthetic Division
03/21	5.3, 5.4	Locating Real Zeros of Polynomials, The Fundamental Theorem of Algebra
03/26	6.1	Rational Functions
03/28		Review / Test 3
04/02		discuss Test 3 / Review for Exam 3 in MATH 1314
04/04	7.1, 7.2	Exponential Functions and Their Graphs Applications of Exponential Functions
04/09	7.3	Logarithmic Functions and Their Graphs
04/11	7.4	Properties and Applications of Logarithms
04/16	7.5	Exponential and Logarithmic Equations
04/18		Review / Test 4
04/23	8.2	Discuss Test 4 Solving Systems With Matrices
04/25	**Final**	**Comprehensive Final Examination**
04/30	Review	Discuss Final Exam MATH 1314 Final Examination preparation
05/02	**Finals Week**	**Final Notebook Check** **Class Survey**

NOTE: The above schedule reflects the schedule for the MATH 1314 content. The content taught in the MATH 0314 class may include, but not be limited to, the content that is meant to support MATH 1314.

Student Question Analysis Papers
(based on MATH College Algebra Assignments)

MATH 1314 assignment	Lesson	Due Date
chapter 1.5	Polynomials and Factoring	1-25-2019
chapter 2.3	Quadratic Equations in one Variable	2-8-2019
chapter 2.5	Rational Expressions and Equations	2-15-2019
chapter 3.3	Forms of Linear Equations	3-1-2019
chapter 4.1	Relations and Functions	3-1-2019
chapter 4.4	Transformations of Functions	3-8-2019
chapter 5.2	Polynomial Division and the Division Algorithm	3-29-2019
chapter 5.3	Locating Real Zeroes of Polynomials	4-5-2019
chapter 6.1	Rational Functions and Rational Inequalities	4-5-2019
chapter 7.1	Exponential Functions and Their Graphs	4-19-2019
chapter 7.4	Properties and Applications of Logarithms	4-26-2019
chapter 7.5	Exponential and Logarithmic Equations	4-26-2019