College Algebra Math 1314.004, N01
Department of Mathematics and Statistics
Fall 2018

A. COURSE INFORMATION
   Course number/section: 1314.004, N01
   Class meeting time: MWF: 9:00-9:50
   Class location: IH 268
   Course Website: bb9.tamucc.edu

B. INSTRUCTOR INFORMATION
   Instructor: Archana Krishnagiri
   Office location: CI 351
   Office hours: MW 12-12:50, TTR: 9:30-10:45
   Telephone: 361-825-2430
   e-mail: archana.krishnagiri@tamucc.edu
   Appointments: By-mail

C. COURSE DESCRIPTION
   Catalog Course Description
   The course continues the development of algebra from MATH 0399, Intermediate Algebra. A review of properties of numbers and linear equations and inequalities is included. Topics include quadratic equations, inequalities, graphs, logarithms and exponential functions, polynomial equations, system of equations, and matrices.

D. PREREQUISITES AND COREQUISITES
   Intermediate Algebra (Math 0399) or placement into College Algebra.

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES
   The textbook for the class is College Algebra by Lial, Hornsby, and Schneider (12th edition) Plus the MyLabsplus student access code. In addition, you will need a TI-83 calculator. You can get the access code for Mylabsplus either in university book store or online. Link for online homework is www.tamucc.mylabsplus.com.

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT
   Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well
they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

Student Learning Outcomes

1. Polynomials. Chapter R.3
2. Factoring. Chapter R.4
3. Rational expressions. Chapter R.5
4. Rational exponents. Chapter R.6
5. Radical expressions. Chapter R.7
6. Linear Equations. Chapter 1.1
7. Solve quadratic equation in one variable. Chapter 1.4
8. Solve problems involving quadratic modeling. Chapter 1.5
9. Solve equations with rational expressions. Chapter 1.6
10. Solve equations with radical expressions. Chapter 1.6
11. Solve polynomial inequalities. Chapter 1.7
12. Solve rational inequalities. Chapter 1.7
13. Solve equations with absolute value expressions. Chapter 1.8
14. Solve absolute value inequalities. Chapter 1.8
15. Solve applied problems using distance and midpoint formulas. Chapter 2.1
16. Find radius, center, domain and range of the circle and graph it. Chapter 2.2
17. Decide whether a relation defines a function. Chapter 2.3
18. Find domain and range of the function from the graph. Chapter 2.3
19. Find domain of the function from the equation. Chapter 2.3
20. Determine values for which a function is increasing, decreasing and constant.
   Chapter 2.3
21. Graph linear functions. Chapter 2.4
22. Find slope given a description of the line. Chapter 2.4
23. Given an equation, find slope and sketch the graph. Chapter 2.4
24. Find and interpret rate of change. Chapter 2.4
25. Solve problems using point-slope form and slope-intercept form of an equation.
   Chapter 2.5
26. Graphs of basic functions. Chapter 2.6
27. Graphing techniques including transformations. Chapter 2.7
28. Function operations and composition of functions. Chapter 2.8
29. Graph quadratic functions and solve models about quadratic models. Chapter 3.1
30. Zero Factorization Theorem. Chapter 3.3.
31. General polynomial function graphs and translations. Chapter 3.4
32. Rational function graphs and asymptotes. Chapter 3.5
33. Decide whether a function is one-to-one. Chapter 4.1
34. Determine if functions are inverse of each other. Chapter 4.1
35. Use graph to find inverse function. Chapter 4.1
36. Exponential functions and graphs. Chapter 4.2
37. Logarithmic functions, graphs, and properties. Chapter 4.3
38. Evaluating logarithms and the change-of-base theorem. Chapter 4.4
39. Solve exponential equations. Chapter 4.5
41. Solve logarithmic equations. Chapter 4.5
42. Applications and Models of exponential growth and decay. Chapter 4.6
43. Solve systems of two equations by substitution, elimination, and graphing.
   Chapter 5.1
44. Solve systems of three equations by elimination and then substitution. Chapter 5.1
45. Matrix solution of linear systems using Gauss-Jordan Method. Chapter 5.2

Upon successful completion of this course, students will:

1. Demonstrate and apply knowledge of properties of functions, including domain and range, 
   Operations, compositions, and inverses.
2. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions 
   and solve related equations.
3. Apply graphing techniques.
4. Evaluate all roots of higher degree polynomial and rational functions.
5. Recognize, solve and apply systems of linear equations using matrices

G. INSTRUCTIONAL METHODS AND ACTIVITIES

Students will be shown models of solutions and will work independently and in groups to 
 demonstrate mastery. Students will use the Mylabsplus software independently to remediate 
 weak areas as designated by assessments. Students will show mastery by passing skill tests 
 and/or the final exam with a 70% on better.

H. MAJOR COURSE REQUIREMENTS AND GRADING

Grades will be calculated according to the following percentages.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>3 Exams</td>
<td>45%</td>
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<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Homework</td>
<td>20%</td>
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<tr>
<td>Quizzes</td>
<td>15%</td>
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A = 90% – 100%
B = 80% - 89%
C = 70% - 79%
D = 60% - 69%
F = Below 60%
I. **Tentative COURSE CONTENT/SCHEDULE**

<table>
<thead>
<tr>
<th>Date</th>
<th>Sections</th>
<th>Homework Due dates</th>
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<tbody>
<tr>
<td>August 27</td>
<td>Introcution, 1.1</td>
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<tr>
<td>August 29</td>
<td>1.1, 1.2</td>
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<tr>
<td>September 5</td>
<td>1.2,1.4</td>
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<td>September 7</td>
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<td>September 17</td>
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<td>September 19</td>
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<td>September 21</td>
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<td>Review 3</td>
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<td>November 7</td>
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<td>Exam 4</td>
<td>Review 4</td>
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<td>December 5</td>
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<td>5.1 and 5.2</td>
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<td>December 7</td>
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Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

J. COURSE POLICIES

Attendance/Tardiness
1. I expect each student to attend all classes. Attendance is mandatory by Texas A&M University. Please save absences for emergencies.
2. If you are more than 15 minutes tardy you are considered absent.

Late Work and Make-up Exams
NO MAKEUPS WILL BE GIVEN FOR QUIZZES.
No Make-up for final test
Extra Credit
NONE

Cell Phone Use
Cell phone must be turned off
Laptop Use
laptops, or any form of a new technology device is NOT allowed in the classroom
during lecture and exam.

Missed Exam
No make-ups will be given without written evidence of an official University excused
absence. For an absence to be considered excused, the student must notify his or her instructor
in writing (acknowledged e-mail message is acceptable) prior to the date of absence if such
notification is feasible. In cases where advance notification is not feasible (e.g. accident or
emergency) the student must provide notification by the end of the second working day after the
absence. In the case of illness or injury, students are required to obtain a confirmation note from
a health care professional affirming date and time of a medical office visit regarding the illness
or injury.

K. COLLEGE AND UNIVERSITY POLICIES

* Academic Integrity (University)

University students are expected to conduct themselves in accordance with the highest standards
of academic honesty. Academic misconduct for which a student is subject to penalty includes all
forms of cheating, such as illicit possession of examinations or examination materials,
falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of
another as one’s own work.) In this class, academic misconduct or complicity in an act of
academic misconduct on an assignment or test will result in a failing grade.

* Classroom/Professional Behavior

Texas A&M University-Corpus Christi, as an academic community, requires that each individual
respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the
Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s
ability to conduct the class or (b) the ability of other students to profit from the instructional
program may be considered a breach of the peace and is subject to disciplinary sanction outlined
in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may
be instructed to leave the classroom. This prohibition applies to all instructional forums,
including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

* Statement of Civility

Texas A&M University-Corpus Christi has a diverse student population that represents the
population of the state. Our goal is to provide you with a high quality educational experience that
is free from repression. You are responsible for following the rules of the University, city, state
and federal government. We expect that you will behave in a manner that is dignified, respectful
and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

* Deadline for Dropping a Course with a Grade of W (University)

I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with your academic advisor, the Financial Aid Office, and me, before you decide to drop this course. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.

* Grade Appeals (College of Science and Engineering)

As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

* Disability Services

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.
http://disabilityservices.tamucc.edu/

* Statement of Academic Continuity

In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

L. OTHER INFORMATION

* Academic Advising

The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

GENERAL DISCLAIMER

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.