STEM Division
MATH 1314 Online
FALL 2019, Syllabus
MATH 1314-48400, 3 Credit Hours
College Algebra
Course Dates: 10/22/2019 - 12/12/2019
MEETING DAYS and TIMES:
UMTWRFS(INET)

<table>
<thead>
<tr>
<th>Instructor:</th>
<th>Ahmad Abdallah</th>
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</thead>
<tbody>
<tr>
<td>Phone:</td>
<td>972-391-1085</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:ahmadabdallah@dcccd.edu">ahmadabdallah@dcccd.edu</a></td>
</tr>
<tr>
<td>Office &amp; Office Hours:</td>
<td>C276 / Office hours by appointment ONLY. *Appointments may be granted and require a formal email request at least 72 hours in advance.</td>
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STEM Division: S-Building, Room 210 | 972-860-7297

Course Drop Date: 11/27/2019

Disclaimer: The instructor reserves the right to amend this syllabus as necessary.

Institutional Policies: Eastfield College Institutional Policies
(https://www.eastfieldcollege.edu/au/fastfacts/legal/pages/policies-for-syllabi.aspx)

INSTRUCTOR CONTACT INFORMATION
My preferred method of contact is ahmadabdallah@dcccd.edu. Make sure your emails are appropriately addressed if you expect a response (course and section number in the subject line and your full name as a signature)

Please keep in mind that it is against the law (FERPA) for me to discuss grades with you via phone or email. See me in person if you need to discuss your personal academic progress or grades in this course. **Email is the best way to contact me. Your email will be answered within 24 hours, except on the weekends/holidays. Those emails will be answered Monday in the order they were received.**
Course Description:
This course is an in-depth study and applications of polynomial, rational, radical, exponential, logarithmic, absolute value and piecewise-defined functions, and systems of equations using matrices. Also covered are the graphing calculator, non-linear inequalities, sequences and series, circles, the Binomial Theorem and a review of the classification of the real number system. (3 or 4 LEC) This course is the prerequisite for MATH 1316. This course is cross-listed as Math 1414. The student may register for either Math 1314 or Math 1414, but may receive credit for only one of the two. (3 Lec.)

PREREQUISITE
Two years of high school algebra and an appropriate assessment score or Developmental Mathematics 0310.

Student Learning Outcomes:
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 knowledge of polynomial, rational, radical, exponential, logarithmic, absolute value and piecewise-defined functions.
   - Solve polynomial (including equations reducible to quadratic), rational, radical, exponential (including same base and different bases), logarithmic and absolute value equations related to these functions.
   - Solve polynomial, rational and absolute value inequalities.
3. Use graphing techniques, including, but not limited to, the use of a graphing calculator: increasing/decreasing/constant intervals, symmetry, even/odd functions, transformations (including translations, reflections, stretching and shrinking), completing the square, and finding relative maxima and minima graphically.
   - Recognize and be able to graph the basic equation of a circle.
4. Use the different theorems of polynomials (including the Rational Zeros Theorem) to evaluate all roots of higher degree polynomial and rational functions.
5. Recognize and solve systems of linear equations and their applications using matrices.
6. Demonstrate an understanding of sequences and series, including finding nth term & partial sums for arithmetic and geometric sequences.
7. Use the Binomial Theorem to expand binomials.
8. Recognize the different classifications within the real and complex number systems.

Core Objectives:
MATH 1314 develops the following Core Objectives:

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 and visual communication.
3. **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.
Core Objective Development Statements: MATH 1314 develops **Critical Thinking**, **Communication**, and **Empirical and Quantitative Skills** by requiring students to solve and analyze applications of various functions and systems of equation.

**COURSE INTRODUCTION**
This is an online course, mostly self-paced class. You can always work ahead, however, deadlines will be enforced. Don’t fall behind.

**COURSE MATERIALS**
- My Math Lab Website **MyMathLab Access Code is required for this course.**
- Microsoft Windows 7 and 8 users should use one of the following browsers with MyMathLab courses-- Chrome, Firefox or Internet Explorer 10 and 9. For other system requirements go to [http://www.pearsonmylabandmastering.com/northamerica/system-requirements/](http://www.pearsonmylabandmastering.com/northamerica/system-requirements/)

**MyMathLab Information:**

<table>
<thead>
<tr>
<th>Your Course Name</th>
<th>FA2019-MATH-1314-FELX2</th>
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<tbody>
<tr>
<td>Your Course ID</td>
<td>abdallah18439</td>
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**CALCULATOR**
A graphing calculator is required for this course. You may choose your own graphing calculator model; however, TI 83 or TI 84 version is strongly preferred. Graphing calculators may not be allowed during some examinations.

**GRADING RATIONALE**
A: 90-100%;  B: 80-89%;  C: 70-79%;  D: 60-69%;  F: below 60%

**GRADING POLICY**
Your grade will be determined as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Homework and Quizzes</td>
<td>30%</td>
</tr>
<tr>
<td>Module Tests</td>
<td>25%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
<td>25%</td>
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MASTERY LEARNING
Mastery learning is a major tenant of this course. This means that you will not be able to proceed to the next topic until you have mastered the skills being covered. All homework and quizzes require mastery. For the purpose of this course, mastery is defined as a minimum score of 80%.

POLICY ON MISSED TESTS AND ASSIGNMENTS
All assignments have deadlines. Due dates are a guideline so you will not fall behind and can be viewed in MyMathLab.

INSTRUCTIONAL COMPONENTS FOR THIS COURSE
This course is divided into modules. You need to click on the Module number that you are working on, then click on: “Open this content in a new tap” to access assignments and test for that module
The components of each module are described below

1. Videos (optional) – Video lectures reinforce objectives and may be accessed as necessary
   • Grade omitted from course average

2. Homework – Consists of problems from each section
   • Problem can be repeated until mastered – select “Similar Exercise” after each 3rd incorrect attempt
   • All “Help” buttons available
   • Can still be accessed after due date
   • Late problems penalized 10%
   • Must be in “Homework,” not “Review” mode to save progress
   • Problems saved individually
   • 80% mastery required to proceed to next topic

3. Quiz – Consists of problems that summarize multiple sections
   • Problem can be repeated until mastered – select “Similar Exercise” after each 3rd incorrect attempt
   • “Help” buttons not available
   • Can be accessed after due date
   • Late problems penalized 10%
   • Must be in “Homework,” not “Review” mode to save progress
   • Problems saved individually
   • 80% mastery required to proceed to next topic

4. Test Review (optional) – Helps prepare students for module test
   • Score omitted from student grades
   • Can be accessed after due date

5. Test – Assesses student understanding of module
   • Reviewed by student only immediately after submission
   • Late submission is allowed
   • Late problems penalized 10%
6. Test Remediation (if necessary) – Practice skills not mastered
   - Contains only problems not mastered in module test
   - Each problem not mastered creates 2 similar remediation problems
   - Score omitted from student grades
   - 80% mastery required to access 2nd test attempt

7: 2nd Test Attempt (if necessary) – Retest module concepts
   - Reviewed by student only immediately following submission
   - Lower Score (1st or 2nd attempt) omitted following 2nd attempt

8: Test Remediation II (if necessary) – Practice skills not mastered
   - Homework assignment containing only problems not mastered in 2nd module test attempt
   - Each problem not mastered creates 2 similar remediation problems
   - Score omitted from student grades
   - 80% mastery required to access 3rd test attempt

9: 3rd Test Attempt (if necessary) – Final test attempt permitted
   - Reviewed by student only immediately following submission
   - Lowest test attempt scores are omitted

MIDTERM AND FINAL EXAM (Both are computer based and must be proctored)
After you have mastered the first two modules, you will be prepared to take the midterm exam. The midterm exam will be administered at the testing center at Eastfield by the date indicated on the schedule. If you have not completed any homework, quizzes, or tests from modules 1 or 2 by the date indicated on the schedule, you will be given a grade of zero on those assignments. You can increase your grade on these past due assignments following the late submission guidelines described above. Late midterm exam submissions will be penalized 15%.

After you’ve mastered the remaining course modules, you will be prepared to take your comprehensive final exam. Since the final exam is comprehensive, you may not take the final exam until you’ve completed all module coursework including homework, quizzes, and tests. If you have not completed homework, quizzes, or tests for modules 3 or 4 by final exams week, you will be given a final grade of zero on those past due assignments. Late final exam submissions are not accepted under any circumstance.

If an alternate approved testing center is preferred for the midterm and the final exam, you are responsible to let me know via email and provide me with the testing center name, coordinator and phone number by Friday Nov. 1st. Another option for the midterm and final is to use ProctorU, which is a proctoring service that will allow you to take the midterm and final from home while you are being proctored via a camera on your computer, this service is NOT FREE, if you decide to use this service you need to let me know a week in advance.

Midterm and Final Exam Policies:
   - Bring instructor approved calculator, pencil and eraser
   - Computer based
   - Must be completed independently
   - No remediation option
   - One attempt for each
Drop Date:
Last date to drop with a grade of “W” is **11/27/2019**

ADDITIONAL RESOURCES

**Math tutoring is available in the second floor of the library (L200). Students are encouraged to take advantage of this service for additional help in their course work. Please visit the Math Tutoring Center located in the Learning Commons in L200, check eastfieldcollege.edu/tutoring, or call 972-860-7174 for more information. In addition, TI-84 calculators are available for daily check-out in the library.**

INSTITUTIONAL POLICY AND SERVICES:
Institutional Policies relating to this course can be accessed from the following link: https://www.eastfieldcollege.edu/syllabipolicies

Course Coverage:

<table>
<thead>
<tr>
<th>Sections</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1, 1.5-1.7, 2.1-2.2, 2.5-2.8</td>
<td>Real number system, Equations, Relations and Functions; Circles</td>
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<tr>
<td>3.1-3.6</td>
<td>Polynomial and Rational functions; Theory of Functions</td>
</tr>
<tr>
<td>4.1-4.5</td>
<td>Exponential, Logarithmic and Special functions</td>
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<tr>
<td>6.3-6.5, 8.1-8.3, 8.5</td>
<td>Progressions, The Binomial Theorem, Matrices, Determinants, mathematical reasoning skills, Sequences, Series and Applications</td>
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</tbody>
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SYLLABUS REVISION:
The guideline in this syllabus may be changed, deleted, or amended any time by the instructor. The attached course outline is intended as an aid in helping you know your responsibilities for the semester. It is possible that some changes in the course outline or class policies will be made during the semester. Any changes that are made to the class policies or course outline will be announced via email.