Instructor Information
Name: Jen Laughlin
DCCCD Email: jelaughlin@dcccd.edu
Office Phone: 972-860-4750 (E-mail is more efficient)
Office Location: K-142
Office Hours: To Be Announced
Division Office and Phone: Science, Mathematics, and Engineering.
Room K224. 972-860-4750

Course Information
Course Title: College Algebra
Course Number: MATH 1314
Section Number: 20401
Semester/Year: Spring 2020
Credit Hours: 3
Class Meeting Time/Location: Online
Certification Date: February 3, 2020
Last Day to Withdraw: April 16, 2020

Course Prerequisites
Prerequisite Required: College level ready in Mathematics algebra-based level.

Course Description
Course Description: This course is an 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. 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.)
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 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.

Texas Core Objectives

The College defines essential knowledge and skills that students need to develop during their college experience. These general education competencies parallel the Texas Core Objectives for Student Learning. In this course, the activities you engage in will give you the opportunity to practice two or more of the following core competencies:

1. **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. **Communication Skills** - 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
4. **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal
5. **Personal Responsibility** - to include the ability to connect choices, actions, and consequences to ethical decision-making
6. **Social Responsibility** - to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities

Required Course Materials


ISBN: 9780321970008

This course will run using interactive software called MyMathLab. MyMathLab is an online, textbook-based software where you will complete assignments. Students must
have access to a computer with Internet to complete the required work for this course. Standard plug-ins are needed to access this tool.

To enroll into your MyMathLab course you will need a course ID which will be given to you by your instructor. You can request temporary access but will only have access from the first day of the semester through day 14. After this point, you must enter a valid MyMathLab student access code. If the access code is not entered by that day, access to all online assignments will be suspended. Students should have permanent access to MyMathLab by the end of the first test.

If you purchase your MyMathLab code online you MAY have the option of purchasing a 10 or an 18 week subscription. You MUST purchase the 18 week subscription so that you will have access to your assignments for the entire 16 week semester.

Note: A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

**Graded Work**
The tables below provide a summary of the graded work in this course and an explanation of how your final course grade will be calculated.

**Summary of Graded Work**

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>MyMathLab Homework</td>
<td>39 assignments worth 100 points each</td>
<td>10%</td>
</tr>
<tr>
<td>MyMathLab Quizzes</td>
<td>9 quizzes worth 100 points each</td>
<td>10%</td>
</tr>
<tr>
<td>Tests</td>
<td>5 tests worth 100 points each</td>
<td>60%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>1 final worth 100 points</td>
<td>20%</td>
</tr>
</tbody>
</table>

**TOTAL: 100%**

Extra Credit: You will have the opportunity to replace the scored earned on a test grade (Not Test 4) with the score earned on the final exam if you have no more than 3 absences AND you have an average score of at least 80% on all homework assignments.

**Final Grade**
Points | Percentages | Letter Grade
--- | --- | ---
90-100 | 90-100% | A
80-89 | 80-89% | B
70-79 | 70-79% | C
60-69 | 60-69% | D
0-59 | 0-59% | F

**Description of Graded Work**

**Homework:** Each section covered will have a homework assignment on MyMathLab for the student to complete outside of class. Each problem will allow 3 attempts, then the student will be able to use the “Similar Question” feature to get a new problem to attempt. The student will have the ability to get a perfect 100 on every homework assignment with the “Similar Question” feature. Homework will count for 10% of your course average.

**Quizzes:** The unit quizzes on MyMathLab must be completed within a 60-minute time-limit. You will be allowed two attempts at the quiz and your highest score will be counted towards your final course grade. Quizzes will count for 10% of your course average.

**Tests:** You will have 5 tests each worth 100 points. Each test will be over a chapter or two in the course. Tests will be proctored via webcam in Respondus lockdown and Monitoring or in Proctored Testing Center. Each test will count for 12% of your course average.

**Final Exam:** The final exam is a Comprehensive 25 question multiple choice test. The final will be proctored via webcam in Respondus lockdown and Monitoring or in Proctored Testing Center. The final exam will count for 20% of the course average.

**Late Work Policy**

Deadlines are an important part of life as well as this course. We need to learn how to manage our time wisely to be efficient in this class and in your life! You should work ahead so that you are not relying on the deadline to finish your work.
Institutional Policies

Institutional Policies relating to this course can be accessed using the link below. These policies include information about tutoring, Disabilities Services, class drop and repeat options, Title IX, and more.

Brookhaven Institutional Policies

Course Schedule

<table>
<thead>
<tr>
<th>Day</th>
<th>Topic</th>
<th>Readings &amp; Assignments</th>
<th>Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar 24-29</td>
<td>Introduction to College Algebra 1.1 – Introduction to Graphing</td>
<td>Orientation Review of Basic Algebra Sections 1.1, 1.2, 1.3, 1.4, &amp; 1.5 Unit 1 – Quiz 1</td>
<td>MyMathLab assignments due Sunday</td>
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<tr>
<td></td>
<td>Introduction to Calculator 2.1 – Functions and Graphs</td>
<td>(Chapter 1)</td>
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<td></td>
<td>1.3 – Linear Functions and Graphs</td>
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<td></td>
<td>1.4 – Equations of lines and modeling</td>
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<tr>
<td></td>
<td>1.5 – Linear Equations, Functions, Zeros, Application</td>
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<tr>
<td>Mar 30 –</td>
<td>2.1 – Increasing, Decreasing, and Piecewise Functions; Applications</td>
<td>Sections 2.1, 2.2, 2.3, 2.4, 2.5 Unit 1 – Quiz 2 (Chapter 2)</td>
<td>MyMathLab Assignments due Sunday</td>
</tr>
<tr>
<td>Apr 5</td>
<td>2.2 – The algebra of Functions</td>
<td>Test 1 due by Monday April 5th</td>
<td>Test 1 due by Monday April 6th</td>
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<td></td>
<td>2.3 – The composition of Functions</td>
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<td></td>
<td>2.4 – Symmetry</td>
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<td></td>
<td>2.5 – Transformations Review/Test 1</td>
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<tr>
<td>Apr 6 –  12</td>
<td>JIT – Classification of Numbers (p 595, 596)</td>
<td>Classification of Numbers Sections 3.1, 3.2, 3.3, 3.4 Unit 2 – Quizzes 3 and 4</td>
<td>MyMathLab Assignments due Sunday</td>
</tr>
<tr>
<td></td>
<td>3.1 – Complex Numbers</td>
<td>Test 2 due by Monday Apr 13th</td>
<td>Test 2 due by Monday April 13th</td>
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<tr>
<td></td>
<td>3.2 – Quadratic Equations, Functions, Zeros, and Models</td>
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<td></td>
<td>3.3 – Analyzing Graphs of Quadratic Functions</td>
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</tr>
<tr>
<td>Day</td>
<td>Topic</td>
<td>Readings &amp; Assignments</td>
<td>Due Dates</td>
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</tbody>
</table>
| Apr 13 - 19 | 3.4 – Solving Rational Equations and Radical Equations  
4.1 – Polynomial Functions and Models  
4.2 – Graphing Polynomial Functions  
4.3 – Polynomial Division; The Remainder Theorem and the Factor Theorem  
4.4 – Theorems about Zeros of Polynomial Function  
4.5 – Rational Functions  
Review/Test 2 | Sections 4.1, 4.2, 4.3, 4.4  
Unit 3 – Quizzes 5 and 6  
**Test 3 is due by Monday April 20th** | MyMathLab Assignments due Sunday  
**Test 3 is due by Monday April 20th** |
| Apr 20 - 26 | 5.1 – Inverse Functions  
5.2 – Exponential Functions and Graphs  
5.3 – Logarithmic Functions and Graphs  
5.4 – Properties of Logarithmic Functions | Sections 5.1, 5.2, 5.3, 5.4  
Unit 4 – Quiz 7 | MyMathLab Assignments due Sunday |
| Apr 27 – May 3 | 5.5 – Solving Exponential and Logarithmic Equations  
5.6 – Applications and Models; Growth and Decay; Compound Interest  
Review/Test 4 | Sections 5.5, 5.6  
Unit 4 – Quiz 8  
**Test 4 is due by Monday May 4th** | MyMathLab Assignments due Sunday  
**Test 4 is due by Monday May 4th** |
| May 4-10 | 6.1 – Systems of Equations in Two Variables  
6.2 – Systems of Equations in Three Variables  
6.3 – Matrices and Systems of Equations | Sections 6.1, 6.2, 6.3  
Unit 5 – Quiz 9  
**Test 5 is due by Monday May 11** | MyMathLab Assignments due Sunday  
**Test 5 is due by Monday May 11** |
<table>
<thead>
<tr>
<th>Day</th>
<th>Topic</th>
<th>Readings &amp; Assignments</th>
<th>Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 11-13</td>
<td>Review for Final Exam</td>
<td>Final Exam is due by Wednesday May 13</td>
<td>Final Exam is due by Wednesday May 13</td>
</tr>
</tbody>
</table>

10/21/19 Version