Instructor Information
Name: Russell Simmons
DCCCD Email: RSimmons@dcccd.edu
Office Phone: (214)860-8717
Office Location: W241
Office Hours: 12:30-2:00, MW
9:30-10:30, TR
Division Office and Phone: W120, 214-860-8760

Course Information
Course Title: College Algebra
Course Number: MATH 1314
Section Number: 61880
Semester/Year: Fall 2019
Credit Hours: 3
Class Meeting Time/Location: INET
Certification Date: Monday, October 28, 2019
Last Day to Withdraw: Wednesday, November 27, 2019

Course Prerequisites
College level ready in Mathematics algebra-based level.

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.)

Coordinating Board Academic Approval Number 2701015419
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
Text: College Algebra (w/Glued-In MyMathLab Access Card)
   Edition: 5th
   ISBN: 9780321981769
   Author Beecher
   Publisher: Pearson
   Copyright Year: 2016
Calculator: TI-83 or TI-84
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.

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Percentage of Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tests (4)</td>
<td>60%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>15%</td>
</tr>
<tr>
<td>MyMathLab Homework Assignments</td>
<td>20%</td>
</tr>
<tr>
<td>MyMathLab Practice Tests</td>
<td>5%</td>
</tr>
</tbody>
</table>

Final Grade

<table>
<thead>
<tr>
<th>Percentages</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100%</td>
<td>A</td>
</tr>
<tr>
<td>80-89%</td>
<td>B</td>
</tr>
<tr>
<td>70-79%</td>
<td>C</td>
</tr>
<tr>
<td>60-69%</td>
<td>D</td>
</tr>
<tr>
<td>0-59%</td>
<td>F</td>
</tr>
</tbody>
</table>

Description of Graded Work
Tests: Four tests and a comprehensive final examination will be given. Tests 1, 2, 3, and 4 will count as 15% of the performance grade. The Final Exam will count as 15% of the performance grade. The exams will posted and completed online at https://www.pearsonmylabandmastering.com/northamerica/mymathlab/. Each exam will cover the chapters assigned for the unit and will consist of a combination of multiple-choice and short-answer questions.

Online Homework/Practice Tests: Homework and Practice Tests will be submitted online at https://www.pearsonmylabandmastering.com/northamerica/mymathlab/.

Attendance
Students are expected to login and utilize the course materials and activities in MyMathLab on a regular basis. As a minimum expectation, you should login to the course at least 5 times per week. To be successful students should spend a MINIMUM of 12-15 hours working on course materials each week.

Late Work Policy
This is not a self-paced course. You MUST keep up with the work in the class. All assignments must be completed and submitted on time. Late work is not accepted.

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.

Mountain View Institutional Policies
<table>
<thead>
<tr>
<th>DAY</th>
<th>TOPIC(S) COVERED</th>
<th>Deadlines. All deadlines are at 11:59PM on date stated.</th>
</tr>
</thead>
</table>
| Week 1 | October 22-October 27 | 1.1: Introduction to Graphing  
1.3: Linear Functions, Slope and Applications  
1.4: Equations of Lines and Modeling  
1.5: Linear Equations, Functions, Zeros, and Applications  
1.6: Solving Linear Inequalities  
| **Homework:** Sunday, October 27: Ch. 1 (section 1,3,4,5, and 6) and Orientation quiz (for certification purposes) |
| Week 2 | October 28-November 3 | 1.2: Functions and Graphs  
2.1: Increasing, Decreasing, and Piecewise Functions  
2.2: The Algebra of Functions  
2.3: The Composition of Functions  
2.4: Symmetry  
2.5: Transformations  
| **Homework:** Sunday, November 3: Ch. 1 (section 2), Ch. 2 (Sections 1,2,3,4, and 5) |
| Week 3 | November 4-November 10 | 3.1: The Complex Numbers  
3.2: Quadratic Functions, Zeros, and Models.  
3.3: Analyzing Graphs of Quadratic Functions  
3.4: Solving Rational Equations and Radical Equations  
| **Quiz 1:** Ch. 1 and Ch. 2 Tuesday, November 5, 2019  
**Test 1:** Ch. 1 and Ch. 2 May be taken either Monday, November 4 OR Tuesday, November 5  
| **Homework:** Sunday, November 10: Ch. 3 (Sections 1,2,3,4) |
| Week 4 | November 11-November 17 | 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 Functions  
4.5: Rational Functions  
4.6: Polynomial and Rational Inequalities  
| **Homework:** Sunday, November 17: Ch. 4 (Sections 1,2,3,4,5,6) |
| Week 5 | November 18-November 24 | 5.1: Inverse Functions  
5.2: Exponential Functions and Graphs  
5.3: Logarithmic Functions and Graphs  
5.4: Properties of Logarithmic Functions  
5.5: Solving Exponential Equations and Logarithmic Equations  
5.6: Applications and Models  
| **Quiz 2:** Ch. 3 and Ch. 4 Tuesday, November 19  
**Test 2:** Ch. 3 and Ch. 4 May be taken either Monday, November 18 or Tuesday, November 19  
| **Homework:** Sunday, November 24: Ch. 5 (Sections 1,2,3,4,5,6) |
| Week 6 | November 25-December 1 | 6.1: Systems of Equations in Two Variables  
6.2: System of Equations in Two Variables  
| **Quiz 3:** Ch. 5 Tuesday, November 26  
**Test 3:** Ch. 5 May be taken either Monday, November 25 or Tuesday, November 26 |
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Content</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3</td>
<td>Matrices and Systems of Equations</td>
<td>Sunday, December 1, Ch. 6 (sections 1,2,3,4), Ch. 8 (Sections 1,2,3,7)</td>
</tr>
<tr>
<td>6.4</td>
<td>Matrix Operations</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>Sequences and Series</td>
<td></td>
</tr>
<tr>
<td>8.2</td>
<td>Arithmetic Sequences and Series</td>
<td></td>
</tr>
<tr>
<td>8.3</td>
<td>Geometric Sequences and Series</td>
<td></td>
</tr>
<tr>
<td>8.7</td>
<td>The Binomial Theorem</td>
<td></td>
</tr>
</tbody>
</table>

**Week 7**

December 2 -

December 8

**Quiz 4:**

Tuesday, December 3: Ch. 6 (sections 1,2,3,4), Ch. 8 (sections 1,2,3,7)

**Test 4:**

May be taken Monday, December 3 or Tuesday, December 4. Ch. 6 (sections 1,2,3,4), Ch. 8 (sections 1,2,3,7)

**Final Exam Week**

December 9 -

December 12

**Quiz 5:**

Tuesday, December 10

**Final Exam:**

Tuesday, December 10 OR Wednesday, December 11