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.

Course Pre-requisites: This is an entry-level course and is open to any student meeting TSI standards of college readiness (student must have appropriate assessment test score or have successfully completed DMAT 0310)

Course Materials/Supplies Needed
MYMATHLAB IS REQUIRED BUT HARD COPY OF THE BOOK IS OPTIONAL
COLLEGE ALGEBRA, by Sullivan, 10th edition (ISBN# 9780321979490)
(OPTIONAL) SOLUTION MANUAL (ISBN# 9780321979582)
TI – 83 OR TI-83 PLUS CALCULATOR or any other graphing utility REQUIRED

Core Statement:
MATH 1314 is a Tier 1 course in the Quantitative Reasoning learning category. “Knowledge and skills that are important to your success in other college courses will be introduced and reinforced in Tier 1. The Quantitative Reasoning category promotes the application of mathematics to increase your ability to solve “real-world” problem. When you are quantitatively literate, you can use logic and critical thinking in new ways.” - Catalog of the Colleges of DCCCD
Core Objectives:
MATH 1314 develops the following Core Objectives:
Critical Thinking – to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
Communication – to include effective development, interpretation and expression of ideas through written and visual communication.
Empirical and Quantitative Skills – to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Core Objective Development Statement:
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 equations.

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.

Course Outline:
Chapter 1     Equations and Inequalities
Chapter 2     Graphs
Chapter 3     Functions and Their Graphs
Chapter 4     Linear and Quadratic Functions
Chapter 5     Polynomial and Rational Functions
Chapter 6     Exponential and Logarithmic Functions
Chapter 8     Systems of Equations and Inequalities
Chapter 9     Sequences, Induction, the Binomial Theorem
Note: The instructor may omit certain topics in these chapters.

Evaluation Procedures:
Three Tests                  45%
Class Participation/Quizzes 20% (for online classes 20% quizzes, no class participation is required)
Homework                    20%
Final                        15%
100%

Instructor Attendance Policy: (May not apply to online classes)
Students are expected to attend all classes. Students have the responsibility to attend class and to consult with the instructor when an absence occurs. If for some reason you must leave class early, you should inform the instructor prior to the start of class of your reason for leaving early.
Students must begin attendance in all classes of enrollment. No exceptions. Financial Aid will not be granted to students who have been certified as not attending, by the certification date. For this lecture course, your physical participation in class, on or before the certification date will allow you to receive credit for FA purposes. For certification dates, check with the division or FAO for further information. Students, who are not certified as beginning class, are responsible for any payments due as a result of non-certification, to include the dropping of courses.

**Grading Scale:**

- 90 – 100 A
- 80 – 89 B
- 70 – 79 C
- 50 – 69 D
- 0 – 49 F

**Late Work Policy:**
Late work will not be accepted.

**Makeup Exam Policy:** No makeup test or quiz will be given. However, under extenuating circumstances, with proper documentation (Note from hospital, doctor, etc.) a maximum of one makeup test or quiz may be arranged.

**Certification Procedures: (For Online Courses)**

I need to certify your class before the certification day. You need to show attendance by signing up to MyMathLab/MyLab&Mastering when the class starts. If you are in my online or hybrid class, MyMathLab/MyLab&Mastering is the basis for your attendance. (For Lecture classes, you need to sign the attendance sheet when we meet in class).

Please go to www.dcccd.edu, click on the link eCampus, sign up if you are new to eCampus then log in, click on courses, then to this course. On your left click on “what you need to do first” to get the course ID for MyMathLab, and get started. If for some reasons, you have not been able to buy MyMathLab and have not sign in yet, please let me know what your plans are so that I can certify you as attended.

**Last day to withdraw is to be announced later. Please contact student services or academic calendar for updates.**

**Academic Dishonesty:**
Students that caught plagiarizing an assignment will be subject to an “F” in the course and possible expulsion from the college.

*Academic honesty is expected, and integrity is valued in the Dallas County Community Colleges. Scholastic dishonesty is a violation of the Code of Student Conduct. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion. As a college student, you are considered a responsible adult. Your enrollment indicates acceptance of the DCCCD Code of Student Conduct published in the DCCCD Catalog. More information is available at https://www1.dcccd.edu/catalog/ss/code.cfm.*
Institution Policies: Please visit http://www.mountainviewcollege.edu/Academics/Documents/Institutional%20Policies.pdf for a complete list of institutional policies (Stop Before You Drop; Withdrawal Policy; Repeating a Course; Financial Aid; Academic Dishonesty; Americans with Disabilities Act Statement; Religious Holidays; and Campus Emergency Operation Plan and Contingency Plan).

Course Calendar

Course calendar is posted on MyMathLab.