PREREQUISITES: Completion of DMA 010 – DMA 050.

COURSE DESCRIPTION: This course provides a study of problems involving algebraic representations of quadratic, rational, and radical equations. Topics include simplifying polynomial, rational, and radical expressions and solving quadratic, rational, and radical equations. Upon completion, students should be able to find algebraic solutions to contextual problems with quadratic and rational applications.

8 General Education Competencies: Represent real-world applications as quadratic equations, Apply exponent rules, Solve application problems involving polynomial, Apply the principles of factoring when solving problems, Represent and solve contextual application problems involving operations on expressions and/or equations, Explain the reasonableness of solutions found, Solve radical equations, Perform operations with radical expressions

20 Student Learning Outcomes: Demonstrate the use of a problem solving strategy to include multiple representations of the situation, organization of the information, and algebraic representation of quadratic and rational equations, Add and subtract polynomials, Apply exponent rules, Multiply polynomials, Divide a polynomial by a monomial, Factor trinomials using multiple methods, Factor the difference of two squares, Given the graph of a parabola, identify the vertex and x-intercepts, Solve quadratic applications using the zero product property and critique the reasonableness of solutions found, Identify the domain of a rational expression, Multiply and divide rational expressions, Solve basic rational equations, Use rational exponents to rewrite radical expressions, Simplify radical expressions, Add and subtract radical expressions, Divide radical expressions, Solve radical equations with one radical term, Solve quadratic equations and applications using the quadratic formula

REQUIRED SUPPLEMENTS:
- MyLabsPlus online access code
  Go to CFCC.MyLabsPlus.com and sign in using your CFCC username and the password, Welcome1. If you cannot afford the access code presently, you are provided the option to choose temporary access for 14 days.
- Calculator: TI-83 or TI-84 calculator is recommended and will most likely be the required calculator for your future college transfer math course. Calculators may also be purchased with financial aid.

| ONLINE GRADED WORK: We will use MyLabsPlus for online homework, quizzes, and the Final Exam. We will do many examples and practice worksheets in class that will not be graded to prepare you for your online assignments which count toward your grade. Your final exam counts as 80% of your grade. We may have days where we use the lab computers in class, but that is not to be guaranteed. You should plan to complete most of your online assignments outside of class. You are allowed 3 attempts on your online quizzes. If you do not do as well as you’d like on your first attempt, you may feel free to ask me questions about any problems you may have missed before attempting your second attempt. Your online assignments are VERY important. If you DO NOT DO ANY online homework or quizzes, you will need to make a 100% on the final exam to pass the class. If you make a 100 on ALL online homework and quiz assignments you can make as low as a 75% on the final exam and pass the class.|

LATE ASSIGNMENTS: If you work on a homework assignment, you can earn 80% on problems completes after the due date. Quizzes cannot be completed after the due date.
FINAL EXAM: The Final Exam is: Monday, February 27th. The final exam is a proctored, in-class, ONLINE test during our regular class time. If you do not pass the final exam the first time you will be offered a SECOND attempt on Wednesday, March 1st. Come to class on exam day prepared with a pencil and an approved calculator. You will NOT be permitted to share calculators. Cell phones and tablets are not approved calculators. No notes.

ATTENDANCE: Attendance is essential to do well in this course. You may miss 12 hours of class. The student will receive an R in the course and will subsequently fail if they go over 12 hours. Mondays count as 2 hours and Wednesdays count as 3 hours.

CLASSROOM CONDUCT: Disruptive behavior will NOT be tolerated. Arrive to class on time, do not leave early, stay awake in class, turn your cell phone AND laptop off, and do not listen to music. These rules are to help provide a great learning environment for you and your classmates.

HONOR CODE: While working on homework assignments, students can ask for assistance from the instructor, use the textbook, or any other resources available. Upon registering for this course on MyLabsPlus, students are agreeing not to solicit or secure assistance on online quizzes or tests. If there is just cause, your instructor may require some or all of a student’s work to be proctored.

CHEATING: If you are caught cheating, you will be referred to Student Development for disciplinary action. A second offense will result in withdrawal from class and you will receive a grade of “R” for the course. See the CFCC Catalog and Student Handbook for more information.

CFCC LEARNING LAB: FREE extra help is available at the LEARNING LAB. Information about the LEARNING LAB including location, hours of operation and policies can be found at http://cfcc.edu/learninglab/locations-and-hours-2/. The service is free, but you will have to fill out a form the first time you go in. You are encouraged to go to the LEARNING LAB on a regular basis if you are having difficulty with the work.

TOBACCO PRODUCTS ON-CAMPUS: Use of tobacco is prohibited by students, staff, faculty or visitors in all campus buildings, facilities or property owned or leased by Cape Fear Community College and outside areas of the campus except at a specific location(s) on the North Campus as approved by the College President due to unsafe conditions going off-campus. See the CFCC Catalog and Student Handbook for more information.

STUDENT ACCOUNTS: Your myCFCC account is a single username and password for all of your CFCC network accounts: email, WebAdvisor, Blackboard, campus computer access, and more. The email account provided to you (yourusername@mail.cfcc.edu) is used for all official communication with CFCC instructors and staff. Some information will ONLY be sent by email and not by postal mail, so it is very important that you check this account. All emails sent to your instructors should be from your CFCC account. This is encouraged because our spam filter may block messages from outside email accounts. This account may also be used for personal email, but is subject to the CFCC Acceptable Use Policy. Be sure to logout of your account in each service you may have opened (email, Blackboard, etc.) when you leave a shared computer, otherwise it is possible for the next user of the computer to access your information.

RELIGIOUS OBSERVANCE POLICY: Effective Fall 2010, students will be allowed two excused absences each academic year for religious observances required by the faith of the student. See the CFCC Catalog and Student Handbook for more information.

DISABILITY SERVICES: If you are a person with a disability and anticipate needing accommodations of any type in order to access or participate in this class, you must contact the Disability Support Services Office (Union Station, Office U-218, 362-7012 or 362-7158), provide the necessary documentation of the disability and arrange for the appropriate authorized accommodations. All information shared with the Disability Support Services Office is protected as confidential.

NOTE ON FINANCIAL AID: While grades of “W” and “R” do not affect your overall GPA, they do matter to financial aid. Your aid is based on course completion, so a grade of “W” or “R” are the same for financial aid. Please speak to your advisor, a counselor, or the financial aid office before withdrawing from this, or any other course at CFCC.

DISCLAIMER: Information contained in this syllabus was, to the best knowledge of the instructor, considered correct and complete when distributed for use at the beginning of the semester. The instructor reserves the right, acting within the policies and procedures of Cape Fear Community College, to make changes in course content or instructional techniques without notice or obligation.
<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>In Class</th>
<th>ONLINE Assignments Due Sunday Nights, 11:59pm</th>
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</thead>
</table>
| M   | 1/9  | 6.1 Introduction to Polynomials  
6.2 Addition and Subtraction of Polynomials | |
| W   | 1/11 | 6.3 Multiplication and Division of Polynomials  
6.4 Introduction to Factoring | Sunday  
HW 6.1, 6.2, 6.3, 6.4 |
| M   | 1/16 | **NO CLASS- Martin Luther King, Jr. Day** | |
| W   | 1/18 | 6.5 Factoring Trinomials of the Form $x^2 + bx + c$  
6.6 Factoring Trinomials of the Form $ax^2 + bx + c, a \neq 1$ | Sunday  
HW 6.5, 6.6,   
DMA 060 Midway Quiz |
| M   | 1/23 | 6.7 Factoring Trinomial Squares and Differences of Squares  
6.8 Solving Quadratic Equations by Factoring | |
| W   | 1/25 | 7.1 Applications of Rational Equations  
7.2 Graphing Rational Functions | Sunday  
HW 6.7, 6.8, 7.1,   
DMA 060 Review Quiz |
| M   | 1/30 | 7.3 Multiplying and Dividing Rational Expressions | |
| W   | 2/1  | 7.4 Adding and Subtracting Rational Expressions | Sunday  
HW 7.2, 7.3, 7.4,   
DMA 070 Midway Quiz |
| M   | 2/6  | 7.5 Solving Rational Equations | |
| W   | 2/8  | 8.1 Radical Expressions and Functions  
8.2 Rational Numbers as Exponents | Sunday  
HW 7.5, 8.1, 8.2,   
DMA 070 Review Quiz |
| M   | 2/13 | 8.3 Simplifying Radical Expressions  
8.4 Operations with Radicals | |
| W   | 2/15 | 8.5 Solving Radical Equations | Sunday  
8.3, 8.4,   
DMA 080 Midway Quiz |
| M   | 2/20 | 8.6 The Quadratic Formula and Applications | |
| W   | 2/22 | Final Exam Review | Sunday  
8.5, 8.6,   
DMA 080 Review Quiz |
| M   | 2/27 | **ONLINE PROCTORED FINAL EXAM – 1st Attempt in class** | Optional, but highly recommended  
DMA 060, 070, 080 Review quiz |
| W   | 3/1  | FINAL EXAM – 2nd Attempt in class *(if necessary)* | |