Description: Intermediate Algebra covers rational expressions and equations, radicals, quadratic equations, complex numbers, functions and relations, and exponential and logarithmic functions.

Pre-requisites: MATH 082 or a satisfactory score on the math placement test and RDNG 051.

I. Basic Course Information
   A. Instructor’s Name: Bob Brown
   B. Office Number: Dundalk MASH 211-C
      Email: USE BLACKBOARD MAIL
      Email (only if Blackboard is down): RBrown2@ccbcmd.edu
      Phone: (443) 840-3744
   C. Instructor's Office Hours: MWF 11:45 a.m. – 12:15 p.m.; TR 1:30 – 2:00 p.m.
   D. Mathematics Department Phone Number (Dundalk): (443) 840-3292
   E. Class Meets: MWF 12:20 – 1:15 p.m. in CRBL 201
   F. Statement of Student Out of Class Work Expectations: This is a three-credit/billable hour course offered over 14 weeks. You are expected to complete at least six hours of work per week outside of class including reading, course preparation, homework, studying, etc.
   G. Required Materials: Introductory and Intermediate Algebra For College Students, 4th Edition, by Robert Blitzer; Pearson Addison Publishers. (Please note that the book, if purchased from a CCBC bookstore, is bundled with MyMathLab, which is required.)

II. Course Goals Overall
   A. Course objectives as listed on the official Common Course Outline
      Upon completion of this course students will be able to:
      1. simplify and perform algebraic operations on quadratic expressions, including factoring;
      2. simplify and perform algebraic operations on rational expressions;
      3. simplify and perform algebraic operations on radical expressions and variable expressions with rational exponents;
      4. identify and perform operations on complex numbers;
      5. recognize and evaluate exponential and logarithmic expressions;
      6. solve quadratic equations and applications;
      7. solve rational equations, including proportion and variation applications;
      8. solve radical equations;
      9. identify functions and use function notation;
      10. perform algebraic operations on functions;
      11. graph and recognize the graphs of quadratic, exponential, and logarithmic functions; and
      12. determine the domain and range of functions.
   
   B. Major Topics as Listed on the Official Common Course Outline
      I. Relations and Functions
         a. Identify a relation and specify its domain and range
         b. Identify a function and specify its domain and range
         c. Recognize and use function notation
d. Perform algebraic operations on functions

II. Polynomial Expressions and Equations
   a. Identify monomial and binomial greatest common factors
   b. Factor polynomial expressions using various methods
   c. Solve polynomial equations

III. Rational Expressions and Equations
   a. Simplify rational expressions and identify where these expressions are undefined
   b. Perform algebraic operations on rational expressions
   c. Solve rational equations and proportions using various methods
   d. Solve applications using variation

IV. Radical Expressions and Equations
   a. Simplify and evaluate roots and other radical expressions
   b. Recognize and simplify expressions with rational exponents
   c. Utilize algebraic properties to perform algebraic operations on radical expressions
   d. Rationalize a monomial denominator
   e. Identify and perform algebraic operations on complex numbers
   f. Solve radical equations

V. Quadratic Expressions, Equations, and Functions
   a. Factor and simplify quadratic expressions
   b. Solve quadratic equations using various methods
   c. Recognize the graph of quadratic functions and identify domain and range
   d. Graph quadratic functions using axis of symmetry, vertex, and intercepts
   e. Solve applications involving quadratic functions

VI. Exponential and Logarithmic Expressions, Equations, and Functions
   a. Explore relationship between exponential and logarithmic expressions
   b. Simplify and evaluate exponential and logarithmic expressions
   c. Recognize and graph exponential and logarithmic functions
   d. Identify domain and range of exponential and logarithmic functions
   e. Use exponential properties to solve basic exponential and logarithmic equations
   f. Solve applications involving exponential and logarithmic equations

C. Rationale
   The applications of intermediate algebra impact every area of human endeavor. It is an indispensable prerequisite for advancement in or to careers in natural sciences, social sciences and various technical professions. This course is designed to give the basic algebraic knowledge necessary for college level math courses and for the math content so prevalent in other credit courses.

III. Evaluation (see my faculty website for a tentative schedule of exams)
A. Exam 1, Topics 1 – 4; 100 points
   Exam 2, Topics 5 – 8; 100 points
   Exam 3, Topics 9 – 14; 175 points
   Exam 4, Topics 15 – 17; 150 points
   Exam 5, Topic 18; 75 points
MyMathLab Homework; 100 points (MML course ID: brown44308)
Final Exam, Topics 1 – 18; 300 points (Friday, December 18, 12:00 – 2:00 p.m.)
TOTAL 1000 points
B. Instructor’s grading policy
   i. A: 900 – 1000 points
   ii. B: 800 – 899 points
   iii. C: 700 – 799 points
   iv. F: 0 – 699 points

The Final Exam Review can be accessed at http://www.ccbcmd.edu/Programs-and-Courses/Schools-and-Academic-Departments/School-of-Mathematics-and-Science/Mathematics/Course-Review.aspx

C. Math Department Attendance Policy:
   i. You are expected to attend ALL scheduled classes.
   ii. Attendance is critical to student success in college.
   iii. Satisfactory attendance is defined to be at most six hours of unexcused absences.
   iv. Documentation of the reason for your absence(s) may be required.
   v. The instructor may count each unexcused tardy arrival as an absence and each unexcused early departure as an absence.

D. Math Department Audit Policy: Students may change from credit to audit only during the published 50% refund period, as indicated in the CCBC academic calendar. Students who audit are required to attend class, participate in course activities, and complete assignments (except for tests and the final exam) in accordance with instructor guidelines and due dates. For students who do not meet these requirements, the instructor may change their grade from AU to W.

E. Instructor’s Missed Exam Policy: If you know beforehand that you have to be away during scheduled exam (a.k.a. test) days, inform me of this well in advance. On the other hand, if you are truly sick or if another urgency arises, call me or e-mail me as soon as you are able.

There is a 25-point deduction for each calendar day after the last originally scheduled exam date that a student takes a make-up exam (if one is offered at all) for an unexcused absence from the original exam, up to the maximum number of possible points for the missed exam. It is not guaranteed that a student with an unexcused absence from an exam might be given a make-up exam; if not, he/she will earn a score of 0 for the missed exam.

Note that missing a scheduled make-up date will be treated in the same manner as a missed original exam, except that an unexcused missed make-up date cannot be made up—no exceptions.

I reserve the right to allow or disallow a make-up exam, and in case of alleged sickness or other urgency, CCBC policy permits instructors to ask for documentation (from an employer, physician, or other source), including a phone number for verification.

Invalid reasons for missing an exam (or other course work) include, but are not limited to, personal vacations during the semester and the extending of in-semester holiday dates or periods.

Finally, if a student misses an exam, it is the student who must initiate a request (whether the absence is excused or unexcused) for a make-up exam and offer documentation, if any. It is not the instructor’s responsibility to initiate the offer a make-up exam, if one is to be offered at all. It
is the student’s responsibility to know the most updated version of the semester calendar for the course.

F. The instructor reserves the right to alter this policy (and any portion of this syllabus) at his discretion. Posting it on his faculty website and/or in Blackboard serves as public notification for the changes.

III. Course Procedures
A. College-Wide Syllabus Policies: “For college wide syllabus policies such as the Code of Conduct related to Academic Integrity and Classroom Behavior or the Audit/Withdrawal policy, please go to the Syllabus Tab on the MyCCBC page.”
B. Contact Information for Course-Related Concerns: Students should first attempt to take concerns to the faculty member. If students are unable to resolve course-related concerns with the faculty member, they should contact the Mathematics Department Coordinator at the Dundalk campus, Bob Brown, at (443) 840-3744 or rbrown2@ccbcmd.edu.
C. Academic Calendar and Final Exam Schedule:
http://www.ccbcmd.edu/Resources-for-Students/Registering-for-Classes/Academic-Calendar.aspx
Department Statement: The following is a list of sections and problems that will be covered in this course and can be assessed on the departmental final exam.

Instructor Statement: The problems listed below are required, just as the MyMathLab problems are required. However, the problems below will not be collected or graded—but you can ask about them in class. Exams (regular and final) may draw from the problems below, the MML problems, and the handout-lecture notes.

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