BERGEN COMMUNITY COLLEGE DIVISION OF MATHEMATICS, SCIENCE AND TECHNOLOGY
DEPARTMENT OF MATHEMATICS
COURSE SYLLABUS

MAT-157 INTERMEDIATE ALGEBRA Part I

COURSE DESCRIPTION: This course is the study of the real number system, linear and absolute value equations in one variable, fractional expressions and equations, linear equations in two variables, functions, and relations.

CREDITS/HOURS: 4 credits 4 hours

PREREQUISITE: MAT-011 or MAT-012 with a grade of C or better or equivalent by testing.

GENERAL EDUCATION COURSE: NO

STUDENT LEARNING OUTCOMES: **Upon successful completion of this course, the student will be able to:**

1. Solve equations in one variable, including linear and absolute value.
2. Identify the differences between functions and relations.
3. Evaluate functions and perform operations with functions.
4. Factor algebraic expressions.
5. Simplify arithmetic and algebraic expressions and equations.
6. Solve inequalities in one variable including linear and absolute value.

ASSESSMENT MEASURES: Each of the above listed student learning outcomes will be assessed by:
1. Written assignments and/or quizzes.
2. Written examinations
3. Other, as announced by the instructor

COURSE GRADE: Students should refer to the instructor's grading policy which will be distributed during the first meeting of the class.

NOTE: **A <u>COMPREHENSIVE</u> <u>DEPARTMENTAL</u> FINAL EXAMINATION WILL COUNT AS 25% OF THE COURSE GRADE.**

TEXTBOOK: <u>Intermediate Algebra</u>, Messersmith, Vega-Rhodes, Feldman, 2nd Edition, McGraw Hill Publisher, Custom Edition for Bergen Community College

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COURSE CONTENT:

TOPIC	SECTIONS (including the "Putting It All Together" sections)
Introduction to the Real number system	1.1, 1.2,1.3, 1.4
Absolute-Value Equations and Inequalities	2.1, 2.3 (part 4 only), 3.1, 3.2, 3.3
Linear Equations in Two Variables and Functions	4.1, 4.2, 4.3, 4.5
Systems of Equations	5.1, 5.2, 12.5
Polynomials and Polynomial Functions	56.1, 6.2 (section 1 only) 5.3, 6.4,6.5, 7.1, 7.4 7.5 (Pythagorean Theorem Only)

ELECTRONIC DEVICES POLICY: **The Department of Mathematics prohibits the use of cellphones, laptops, headphones, and other such devices in mathematics classes unless otherwise specified in the grading policy provided by the instructor at the beginning of the semester.**

FACULTY ABSENCE CLASS CANCELLATIONS may be found at www.bergen.edu/classcancellations

PROCEDURE: If a cancelled class is not listed, it should be reported to the Mathematics Department Office or the Adjunct Office (C-107).

WEBSITE: Go to www.bergen.edu/academics/academic-divisions-departments/mathematics for more information regarding the Mathematics Department.

STUDENT SUPPORT SERVICES:	Learning Assistance Center	Room: L-125	879-7489
	Math and Science Walk-In	Room: L-131	879-7489
	Office of Specialized Services	Room: L-115	612-5269

Statement on Accommodations for Disabilities

The Office of Specialized Services (Pitkin Education Center: L-115, 201-612-5269, http://www.bergen.edu/oss) promotes an inclusive environment for students with disabilities through the provision of accommodations and auxiliary support services. Students interested in learning more about the services provided through this office are strongly encouraged to contact OSS before the semester begins or during the first week or class to request accommodations. Faculty and staff are available to meet with students via phone, in-person, and WebEx (online meeting app). You can also connect by phone: 201-612-5269 and email: ossinfo@bergen.edu. For more information regarding the above, see the section entitled: Office of Specialized Services or Services for Students with Disabilities in the current Bergen Community catalog.

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BCC Attendance Policy:

All students are expected to attend punctually every scheduled meeting of each course in which they are registered. Attendance and lateness policies and sanctions are to be determined by the instructor for each section of each course. These will be established in writing on the individual course outline. Attendance will be kept by the instructor for administrative and counseling purposes.

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SAMPLE COURSE CALENDAR
Intermediate Algebra-McGraw Hill

Week 1	Chapter 1 1.1 Sets of Numbers 1.2 Operations of Real numbers	Chapter 1 1.3 Exponents, Roots and Order of operation 1.4 Algebraic Expressions
Week 2	Chapter 2 2.1 Linear equations in one Variable 2.3 Solving Formulas	Chapter 3 3.1 Linear Inequalities in one variable 3.2 Compound Inequalities in one variable
Week 3	Chapter 3 3.3 Absolute value equations and inequalities	Chapter 4 4.1 Introduction to equations in Two Variables 4.2 Slope of a line and slope-intercept form
Week 4	Chapter 4 4.3 Writing the equation of a line.	Chapter 4 4.5 Introduction to Functions.
Week 5	Review Chapters 1, 2, 3 and 4	Tests 1
Week 6	Chapter 5 Section 5.1 Solving systems of linear equations in two variables	Chapter 5 Section 5.1 Solving systems of linear equations in two variables
Week 7	Chapter 5 Section 5.2 Solving systems of linear equations in three variables	Review Chapter 5
Week 8	Test 2	Chapter 6 Section 6.1 Rules of Exponents. Section 6.3 Addition and Subtraction of Polynomial Functions.
Week 9	Chapter 6 Section 6.2 (Section 1) Rules of Exponents	Chapter 6 Section 6.4 Multiplication of Polynomials and Polynomial Functions..
Week 10	Chapter 6 Section 6.4 Multiplication of Polynomials and Polynomial Functions.	Chapter 6 Section 6.5 Division of Polynomials and Polynomial Functions
Week 11	Chapter 7 Section 7.1 The Greatest Common Factor and Factoring by grouping	Chapter 7 Section 7.2 Factoring Trinomials
Week 12	Chapter 7 Section 7.2 Factoring Trinomials	Chapter 7 Section 7.3 Special Factoring Techniques
Week 13	Chapter 7 Section 7.4 Solving quadratic equations by Factoring Section 7.5 Pythagorean Theorem Only	Chapter 7 Section 7.4 Solving quadratic equations by Factoring Section 7.5 Pythagorean Theorem Only
Week 14	Review	Test #3
Week 15	Review	Final Exam

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