

POLK STATE COLLEGE

MAT 1033 INTERMEDIATE ALGEBRA

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CREDIT HOURS, PREREQUISITES, AND COURSE DESCRIPTION:

3 hours Lecture, 3 credits

Prerequisite: MAT 0024 or appropriate placement examination score

This course provides the foundation for higher courses in algebra. Topics include polynomials, factoring, rational expressions, linear and quadratic equations, exponents, radicals, graphing, systems of equations and inequalities, and applications.

PSC MISSION AND CORE OBJECTIVES: Polk State College is a quality-driven educational institution, providing access to affordable associate and baccalaureate degrees, career certificates, and workforce development programs, delivered by diverse, qualified faculty and staff who are committed to student learning and achievement through the consistent practice of collaboration and focus on excellence. In line with this purpose, PSC's general education develops competence in the areas of 1) Communication, 2) Critical Thinking, 3) Scientific and Quantitative Reasoning, 4) Information Literacy, 5) Diversity, 6) Culture, 7) Ethics and 8) Social Responsibility. Please see the PSC catalog for complete descriptions of these outcomes. A primary focus of this course is competence related to the area of:

3. Scientific and Quantitative Reasoning

Understand and apply mathematical and scientific principles and methods to solve abstract and real-world problems.

COURSE OBJECTIVES:

1. Simplify or rewrite algebraic expressions with integral or rational exponents. (3)
2. Perform operations on polynomials. (3)
3. Factor polynomials. (3)
4. Solve linear equations. (3)
5. Solve quadratic equations. (3)
6. Solve rational equations. (3)
7. Solve equations involving square roots. (3)
8. Solve linear inequalities. (3)
9. Solve systems of equations in two variables. (3)
10. Apply techniques of solving equations to word problems. (3)
11. Apply techniques of solving equations to literal equations. (3)
12. Perform operations on rational expressions. (3)
13. Perform operations on radical expressions. (3)
14. Perform techniques to find various characteristics of functions (i.e. finding domain, finding range, evaluating function). (3)
15. Perform techniques to find various aspects of linear graphing (i.e. finding slope, writing equation, graphing equation, graphing inequality). (3)
16. Perform operations on complex numbers. (3)

TEXTBOOK AND OTHER REQUIREMENTS: For textbook information, visit the campus bookstore, the bookstore website at www.efollet.com, or see the course syllabus.

COURSE CONTENT:

Chapter 2	Linear Equations, Inequalities, and Applications	2.1 - 2.6
Chapter 3	Graphs, Linear Equations, and Functions	3.1 - 3.5
Chapter 4	Systems of Linear Equations	4.1; 4.3
Chapter 5	Exponents, Polynomials, and Polynomial Functions	5.1; 5.3a; 5.5b

Chapter 6	Factoring	6.1 - 6.5
Chapter 7	Rational Expressions and Functions	7.1 - 7.6
Chapter 8	Roots, Radicals, and Root Functions	8.1 - 8.7
Chapter 9	Quadratic Equations, Inequalities, and Functions	9.1 - 9.2
Additional topics as determined by the instructor.		

METHODS OF INSTRUCTION: These will vary according to specific course objectives, student learning needs, and instructional style.

THE GORDON RULE: The Gordon Rule, State Rule 6A-10.30, requires A.A. program students to complete six semester hours of English and six semester hours of additional courses in which the student must demonstrate college-level writing skills through multiple assignments. Because PSC uses a "Writing Across the Curriculum" approach to meeting the writing requirement, in addition to the required composition courses, any of the required social sciences and humanities courses will fulfill the writing requirement. This is not a Gordon rule writing course, but it may include writing assignments as part of course requirements.

In addition, State Rule 6A-10.30 requires A.A. program students complete six credits of college level mathematics. Taking the appropriate general education mathematics courses satisfies the mathematics portion of the requirement.

A minimum grade of "C" is required in all courses with primary responsibility for fulfilling the communications and mathematics areas of the general education requirements. This includes any course taken to complete the general education mathematics requirement, and the courses taken to complete the communications requirement.

STUDENT HELP: The instructor is available for help during posted hours and by appointment during other non-class hours. Students are encouraged to seek assistance from the instructor. To further the educational process, the Teaching /Learning /Computing /Center (TLCC) provides qualified staff and up-to-date equipment and facilities to promote student academic success by providing tutoring services, computing resources, and other instructional support. TLCC hours of operation and tutor schedules are posted in the TLCCs and available on PSC's website at: www.polk.edu/it/tlcc.

WITHDRAWAL: Students may officially withdraw from course(s) during any given term provided the appropriate policy and procedure is followed. Following the conclusion of the Drop/Add period, the student may officially withdraw without penalty from any credit course provided the appropriate forms are submitted to Student Services no later than the deadline published in the term schedule booklet. (The published deadline reflects the 70% point in the course based upon the course's scheduled duration.) It is the student's responsibility to submit these withdrawal forms. Failure to do so may result in an "F" in the course. By State rule students are not allowed to withdraw from the third course attempt. If students stop attending class after the deadline, or any time during the third attempt, a grade other than a "W" is assigned and posted. Students cannot use course withdrawal to avoid academic dishonesty penalties. Students who have been penalized for academic dishonesty in a course are not eligible to withdraw from the course.

REPEATING A COURSE: Under the Forgiveness Policy, a student is allowed three attempts in any one college credit course: one initial enrollment and two repeats. A course cannot be repeated unless the previously earned grade is a "D", "F", or "W" (see college catalog for details). Students are not allowed to withdraw from their third course attempt. If students stop attending class, a grade other than a "W" is assigned and posted.

ACADEMIC INTEGRITY: Students are responsible for their own work. It is assumed that each student is honest and will abide by that standard. However, in the event there is an indication or suspicion that there has been a case of cheating/plagiarism, the situation will be dealt with in accordance with published College policy. Copies of this policy are available in Student Services offices.

INFORMATION TECHNOLOGY ACCESS/USE POLICY: All individuals who employ information technology resources provided by Polk State College (this includes, but is not limited to telephones, computers, the PSC local area and wide area networks, and the Internet) must use these resources for academic purposes only. Use of these resources is a privilege, not a right. Inappropriate use can result in revocation or suspension of this privilege.

EQUAL OPPORTUNITY FOR STUDENTS WITH DISABILITIES: If you are a student with a disability and will need special accommodations or auxiliary aids under the Americans with Disabilities Act (ADA), please contact the Coordinator of Academic Advising in Student Services on the Lakeland Campus (863) 297-1000 Ext. 6110 or the Winter Haven Campus (863) 297-1000 Ext. 5227.

EVALUATIVE CRITERIA: According to Math Department policies, the grade for the course will be based on grades earned on progress tests, a comprehensive final examination, and additional works a determined by the instructor. The additional work, optional with the instructor, may consist of a combination of homework, quizzes, computer assignments, projects, in-class work, or similar activities. The additional work, when chosen, will be combined into one grade and count as one progress test. Each progress test will count 100 points. The course average at any time prior to the final examination can be determined by finding the average of the progress tests at that time. See the instructor's syllabus for details of the instructor's policy for computation of the progress test average. The final examination will count as 25% of the final course average with the final course average calculated by the formula

$$\frac{3 (\text{progress test average}) + \text{final exam percentage grade}}{4}$$

The course grade will be determined by using the following scale:

A = 90-100% B = 80-89% C = 70-79% D = 60-69% F = 0-59%

CALCULATOR POLICY: A scientific (non-graphing) calculator is allowed in this course for homework. A calculator may or may not be used on tests as directed by the instructor.

ATTENDANCE: Regular attendance is the student's responsibility. If a student has excessive absences (more than 3 hours), he/she may be dropped from the course with a "W" grade before the withdrawal date. After the withdrawal date, a student may receive an "F" grade for the course for excessive absences (more than 3 hours accumulated since the beginning of the term).

WORK MISSED: Make-ups will not be allowed for quizzes or tests. If a quiz is missed, the grade assigned for that quiz will be a zero (0). A grade of zero is also assigned for a missed unit test.