Penn State University - University Park

MATH 004, Intermediate Algebra WEB Course

CATALOG DESCRIPTION:

MATH 004 Intermediate Algebra (3 semester hours) Algebraic expressions; linear, absolute value Equations and inequalities; lines; systems of linear equations; integral exponents; polynomials; factoring. This course may not be used to satisfy the basic minimum requirements for graduation in any Baccalaureate degree program.

PREREQUISITE:

Basic arithmetic skills or satisfactory performance on the mathematics proficiency examination, Students who do not meet the prerequisite may have great difficulty in the course

REQUIRED TEXT, EQUIPMENT, SOFTWARE

- An 18 week Access to ALEKS 360 is needed to provide access to the ebook and supplementary materials www.aleks.com . This can be purchased separately or with the book.
- ALEKS Course Code : **MNPMR-LFYMA**
- Intermediate Algebra with P.O.W.E.R Learning 1st edition, Messersmith, Perez, Feldman
    - Ebook with 1 semester ALEKS 360 access (18 weeks) ISBN-10: 0077528530
    - Paperback (ALEKS access not included) ISBN-10: 0073406279
- Adobe Reader [Download from Adobe]
- Flash Player [Download from Adobe]
- Microsoft Office
- iTunes/Quicktime
- CDF Player (from Wolfram) [Download from Wolfram]

FREQUENT QUESTIONS:

What if I have never taken an online course?

This course is taught completely online. You will use Penn State's course management system, ANGEL, to communicate with the professor and your classmates through chat, e-mail, and threaded discussions within ANGEL.

You do not need to come to campus at any time.

However, an online course is not easier than on-campus course. In fact, it takes a lot more self-discipline. You must be willing and able to commit the same amount of time as you would for attending class and studying for a traditional course. You must also be a motivated, organized student who feels confident about reading to learn and who is comfortable working independently.

What are the technological requirements for this course?

To complete this course, you must have the following equipment or capabilities:

1. have access to a computer that meets the **ANGEL technological requirements**.
2. be comfortable with navigating the Internet

MATH 004 LEARNING OBJECTIVES:
Upon successful completion of MATH 004, the student should be able to:

Unit 1

1. Simplify numerical expressions.
2. Perform arithmetic operations with real numbers.
3. Apply properties of real numbers to simplify expressions.
4. Evaluate exponential expressions.
5. Simplify and evaluate algebraic expressions.

Unit 2

6. Solve first-degree equations.
7. Use equations to solve word problems.
8. Solve equations involving fractions or decimals.
9. Solve word problems involving discount and. selling price, simple interest, and mixtures.
10. Solve inequalities, and write solution sets in interval notation.
11. Solve inequalities involving fractions or decimals.
12. Solve compound inequalities.
13. Use inequalities to solve word problems.
14. Solve equations and inequalities that involve absolute value.

Unit 3

15. Determine the slope of a line, and use slope to graph lines.
16. Determine the point-slope equation of a line:
17. Determine the slope-intercept equation of a line.
18. Find equations for parallel or perpendicular lines.
19. Find and graph solutions for linear equations in two variables.
20. Graph linear equations by finding the x and y intercept.
21. Graph lines passing through the origin, vertical lines, and horizontal lines.
22. Use the distance formula.
23. Solve systems of linear equations by graphing and substitution

Unit 4

24. Add, subtract, and multiply polynomials.
25. Divide monomials.
26. Factor out the greatest common factor.
27. Factor by grouping.
28. Factor the difference of two squares and the sum or difference of two cubes.
29. Factor trinomials by trial-and-error and the four-step method.
30. Solve polynomial equations by factoring.

ASSESSMENT and GRADES

Conceptual	Basic Skills	Exams
200 points	350 points	450 points
4 Piazza Participations (25 points each)	4 Scheduled ALEKS Assessments (20 each)	Final Exam Proctored (250 points)
4 Angel Concept Quizzes (25 points each)	4 Unit ALEKS Quizzes (20 each)	Angel Midterm (200 points)
	4 ALEKS Unit Completion (30 each) Midterm and Final ALEKS Units (35 each)	

GRADE	% Score
A, A-	90 -100
B+, B, B-	80 - 89
C+, C	70 - 79
D	60 - 69
F	0 - 59

PROCTORED EXAMINATIONS:

The final examination will be available via ANGEL during the scheduled exam periods. The Final will be a proctored exam.

Arranging a Proctor

You will need to secure a proctor in order to take exams in this course. A proctor will not automatically be assigned to you; rather, you must make the necessary contacts to secure a professional who will serve in this capacity.

1. Contact a person who meets the qualifications and ask him or her to proctor your exam.
2. The Mathematics Department must approve your proctor before any exams can be taken. Please see instructions for securing a suitable proctor. While many proctors will serve on a voluntary basis, you are responsible for paying any expenses incurred in retaining a proctor.
3. You must submit your proctor for approval or schedule your exams at a testing center.
4. If your proctor does not meet the required specifications, you will be notified within 5 to 7 business days.
5. Unless you have received permission to take your exam at an alternative time, your proctor will only allow you to take the exam during dates specified in your course.

DEFERRED GRADES

Students who are unable to complete the course because of illness or emergency may be granted a deferred grade which will allow the student to complete the course within the first six weeks of the following semester. Note that deferred grades are limited to those students who can verify and document a valid reason for not being able to take the final examination.
For more information see DF grade

ACADEMIC INTEGRITY

Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is a basic guiding principle for all academic activity at The Pennsylvania State University, and all members of the University community are expected to act in accordance with this principle. Consistent with this expectation, the University's Code of Conduct states that all students should act with personal integrity, respect other students' dignity, rights and property, and help create and maintain an environment in which all can succeed through the fruits of their efforts.

Academic integrity includes a commitment not to engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of work completed by others.

Academic dishonesty includes, but is no limited to, cheating, plagiarizing, […], facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with academic work of other students. […] A student charged with academic dishonesty will be given oral or written notice of the charge by the instructor. If students believe that they have been falsely accused, they should seek redress through informal discussions with the instructor, the department head, dean or campus executive officer. If the instructor believes that the infraction is sufficiently serious to warrant the referral of the case to Judicial Affairs, or if the instructor will award a final grade of F in the course because of the infraction, the student and instructor will be afforded formal due process procedures.

From Policies and Rules, Student Guide to the University Policy 49-20.

In cases where academic integrity is questioned, requires that the instructor give the student notice of the charge as well as the recommended sanction. Procedures allow the student to accept or contest the charge through discussions with the instructor. Please see the Eberly College of Science Academic Integrity homepage for additional information and procedures.

Additionally, students enrolled at Penn State are expected to act with civility and personal integrity; respect other students' dignity, rights, and property; and help create and maintain an environment in which all can succeed through the fruits of their own efforts. An environment of academic integrity is requisite to respect for self and others, and a civil community.