

M125: Pre - Calculus

Section 9718, 3CR, Fall2007

Instructor: **Iztok Hozo**

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University Police 219-980-6501

CLASS Time and location: **Tue-Thu 1:00-2:15 at HH410**

Office Hours:

TUE	THU	FRI
By Appointment 2:15 – 4:00	By Appointment 2:15 – 4:00	By Appointment

Textbook: Algebra and Trigonometry with Analytic Geometry

Swokowski, Cole (12th edition)

Grading: There will be pop-up quizzes (unannounced), a midterm exam and a final exam. They will count toward the grade as follows:

Quizzes 50%; Midterm 25%; Final 25%

Description:

Homework will be assigned, but not collected. The correct answers to the assigned homework questions can be found at the end of the textbook. Quizzes will consist of 3-12 questions that are very similar to the questions previously assigned as practice – homework. Your personal lowest-score quiz will not be counted. The average of the remaining quizzes will count for 50% of the final course grade, thus it is extremely important to follow and understand the material as it is being taught. You are encouraged to ask questions and participate in class activities as much as possible to make the learning process customized to your taste. It is up to you to make sure that I repeat and explain everything in detail – by asking questions in class. No make-ups!

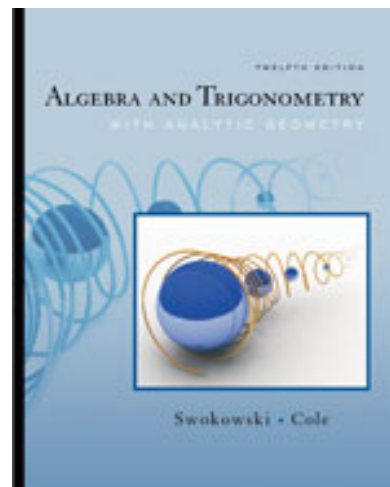
Objectives: This course is designed to prepare students for calculus (M215). Subject matter includes algebraic operations, polynomials, rational functions, exponential and logarithmic functions and their graphs.

Calculator: Any Scientific Calculator or a Graphing calculator (TI-83 preferably, which can be rented at \$15 per semester at IUN Library or Bursar).

Other Class info: In case of absence check <http://www.iun.edu/~mathiho/teaching.shtml> for latest homework, practice tests, test scores, class announcements...

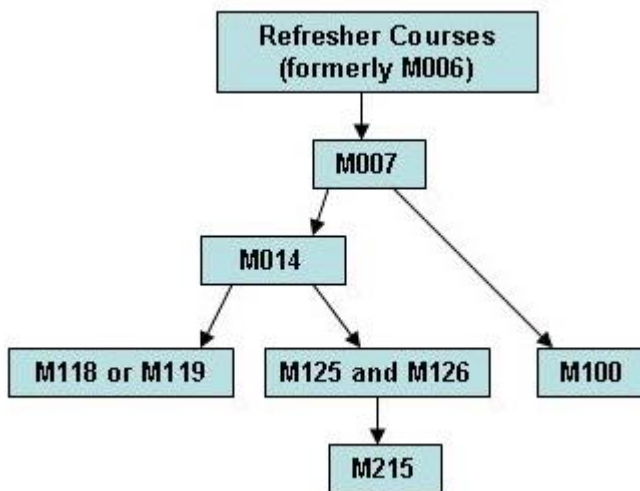
WHAT DO YOU NEED TO DO TO SUCCEED IN A MATH CLASS?

1. **Attend classes:** You are expected to be present for all class meetings. If you are absent from class, it is your responsibility to copy another student's notes and be informed of any announcements made during class.
2. **Keep notes** during class and save graded exams for later review.
3. **Ask questions during class** to make the learning process customized to your class needs. It is up to you to make sure that your instructor explains everything in detail, at a pace that suits the best the entire group.
4. **Review your notes and the textbook examples**, attempting to understand the main points of what was presented in class, before trying to solve the assigned homework problems.
5. **Work all homework problems** the same day they are assigned and check your answers in the back of the book. Homework is an essential activity for you to achieve success in a mathematics class. If you have difficulties solving some of them, consult a classmate, a math lab tutor or visit your professor during office hours. It is extremely important that you clarify all concepts before the next class meeting.
6. **Organize your time** as you should expect to spend at least ten hours per week outside the class working on this material.
7. **Before each exam** you should at a minimum review your class notes, the text material covered, problem solving techniques, the assigned homework exercises and all recent quizzes.
8. **Don't forget** to get a good night's rest before each exam.



9. **When you receive the exam questions**, read quickly through all of the questions, and begin by doing first the problems you feel most confident about. This may settle your nerves! The more challenging questions should be left for later. Try to save a few minutes at the end to proofread your work before handing in the exam.

WHAT CLASS SHOULD YOU TAKE? All incoming students should take the Mathematics Placement Test in HH108. Please call 219-980-6601 to schedule an appointment. The test helps to determine whether a student is ready to take a math refresher course, a developmental course M007 or M014, or some other course offered by the Department of Mathematics and Actuarial Sciences at 100 level or higher. The order in which the courses should be taken is shown in the chart to the right. Students who need to take a math refresher course now have two options: Register for Ivy Tech Community College algebra preparatory class, MAT044 that meets here, on the IU Northwest campus (981-5691) or Register for the Adult Education Mathematics preparatory program (980-6828). More details, as well as information about textbooks, material covered, practice tests and their solutions may be found at department web page <http://www.iun.edu/~math/PREPARE.shtml>.



OFFICE HOURS: When seeking instructor's help during office hours, it would be helpful if you would organize your questions in advance as much as possible, and be prepared to show your own homework attempts.

THE GRADE OF INCOMPLETE: The grade 'I' indicates that the student's work in a course is satisfactory thus far but has not been completed as of the end of the semester. It may be given only when

1. the course work is **substantially completed**
2. the completed portion of a student's work in a course is of **passing quality**
3. there is **documented** proof that it is unjust to hold the student to the original time limit for course completion

It is the responsibility of the student who has incurred a grade of Incomplete to fulfill the requirements of that course within a maximum of one calendar year from the date on which the I grade is recorded. After one calendar year, a grade of Incomplete automatically changes to a grade of F on the student's record.

MATH LAB: IUN provides free math tutoring services on a walk-in basis at Hawthorn Hall 436. All Math Tutors are students majoring in Mathematics, a math-related field or are graduates with a degree in a math related field. In order to accommodate students with varying schedules, we offer evening and Saturday hours. For more information, please call the Math Lab Supervisor at (219) 980-6590 or check the web page <http://www.iun.edu/~math/mlab.shtml>.

ACADEMIC HONESTY: It is the responsibility of the student to know of the prohibited actions such as cheating, fabrication, plagiarism, academic, and personal misconduct, and thus, to avoid them. All students are held to the standards outlined in the code. Please reference the <http://dsa.indiana.edu/Code/> for a complete listing. Any violation may result in serious academic penalty, ranging from receiving a warning, to failing the assignment, to failing the course, to expulsion from the University.

STUDENTS WITH DISABILITIES: If you have a documented disability and need assistance, special arrangements can be made to accommodate most needs. Visit web page <http://www.iun.edu/~supportn/contactus.shtml> for more information.

This is a **tentative** schedule that may vary during the semester. Please attend the classes if you want to know about any changes to this schedule! (I will try to keep updated syllabus on the web: <http://www.iun.edu/~mathiho>)

TENTATIVE SYLLABUS			
Week	Date	Day	Homework Problems (Odd-Numbered Problems)
1	Sep 1	Tuesday	Chapter 1: Review: 1 – 17, 23 – 35, 41 – 45, 61 – 71, 81 – 87
	Sep 3	Thursday	Chapter 1: Discussion exercises: 1 – 7
2	Sep 8	Tuesday	2.1 Equations: 1 – 19, 39 – 49, 53 – 71
	Sep 10	Thursday	2.2 Applied Problems: 1 – 33
3	Sep 15	Tuesday	2.3 Quadratic Equations: 1 – 11, 17 – 27, 37 – 45, 49, 55 – 77
	Sep 17	Thursday	2.4 Complex Numbers: 1 – 13, 23 – 55
4	Sep 22	Tuesday	Review
	Sep 24	Thursday	2.5 Other Types of Equations: 3, 7 – 17, 23 – 31, 41 – 49, 57 – 67
5	Sep 29	Tuesday	2.6 Inequalities: 5, 9, 11, 15 – 29, 37 – 47, 57 – 63, 77 – 83
	Oct 1	Thursday	2.7 More on Inequalities: 1 – 11, 19 – 27, 35 – 47
6	Oct 6	Tuesday	Chapter 2 Review Exercises: 1 – 37, 47, 51, 59 – 79
	Oct 8	Thursday	3.1 Rectangular Coordinate Systems: 3 – 19, 25 – 29
7	Oct 13	Tuesday	3.2 Graphs of Equations: 1 – 25, 37, 43, 47 – 53, 61, 69 – 73
	Oct 15	Thursday	3.3 Lines: 1 – 21, 31 – 35, 43 – 49, 57, 61, 65
8	Oct 20	Tuesday	3.4 Definition of Function: 3, 5 – 15, 19, 27, 33, 39, 47 – 53, 65, 73, 75, 77
	Oct 22	Thursday	3.5 Graphs of Functions: 5 – 11, 15 – 23, 31, 41, 47 – 51, 57 – 67
9	Oct 27	Tuesday	3.6 Quadratic Functions: 11 – 19, 25, 31 – 35, 43 – 51
	Oct 29	Thursday	3.7 Operations on Functions: 1 – 13, 21 – 31, 41 – 45, 51
10	Nov 3	Tuesday	Chapter 3 Review Exercises: 3 – 13, 19 – 25, 35, 43, 51, 53, 61, 67, 75 – 81
	Nov 5	Thursday	MIDTERM
11	Nov 6	Friday	4.1 Polynomial Functions of Degree Greater than 2: 3 – 7, 11, 21 – 27, 35, 41, 45
	Nov 10	Tuesday	4.2 Properties of Division: 3, 7, 11, 19, 25 – 29, 33, 37, 41, 47
	Nov 12	Thursday	4.3 Zeros of Polynomials: 3 – 13, 19 – 29
12	Nov 17	Tuesday	4.4 Complex and Rational Zeros of Polynomials: 3 – 13, 17 – 21, 33, 35, 37
	Nov 19	Thursday	4.5 Rational Functions: 3 – 11, 21 – 31, 37 – 43, 47, 49, 53
13	Nov 24	Tuesday	Automatic 'W' Deadline
	Nov 26	Thursday	4.6 Variation: 1 – 7, 13 – 23, 29
14	Nov 27	Friday	Chapter 4 Review Exercises: 1 – 7, 11, 15 – 21, 27, 33, 37, 43
	Nov 30	Monday	5.1 Inverse Functions: 1 – 9, 17 – 21, 29 – 37, 43, 47
15	Dec 1	Tuesday	5.2 Exponential Functions: 1 – 17, 35, 37, 43 – 51
	Dec 3	Thursday	5.3 The Natural Exponential Function: 1 – 17, 21, 25, 31
16	Dec 8	Tuesday	5.4 Logarithmic Functions: 1 – 5, 11, 13 – 23, 35 – 43, 49, 53, 57, 63, 69
	Dec 10	Thursday	Thanksgiving Recess
17	Dec 15	Tuesday	5.5 Properties of Logarithms: 3, 7, 11 – 21, 27 – 33, 41, 49 – 53, 59
	Dec 17	Thursday	5.6 Exponential and Logarithmic Equations: 1 – 5, 11 – 23, 27, 37, 41 – 47, 57, 59
18	Dec 22	Tuesday	Chapter 5 Review Exercises: 3 – 41, 53 – 69, 75
	Dec 24	Thursday	Review
Finals Week	Dec 29	Tuesday	FINAL EXAM