



College Algebra (3 credits) NY 421101
and
College Trigonometry (1 credit) NY 421102

Fall Semester 2007

Professors:

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College algebra is mathematics at the beginning of the college level. A treatment of the number system (real and complex numbers), polynomials, functions and graphs, equations and inequalities, exponents and logarithms.

Main textbook:

Aufman, Barker, Nation, *College Algebra and Trigonometry*, sixth edition, Houghton M. Company, Boston, 2006.

Syllabus:

- Preliminary concepts
 - The real number system
 - Intervals, absolute value, and distance
 - Polynomials
 - Factoring

- Equations and inequalities
 - Linear equations and their applications

- Quadratic equations
 - Other type of equations
 - Inequalities
 - Variations and applications
- Functions and graphs
 - Introduction to functions
 - Linear and quadratic functions
 - Properties of graphs
 - The algebra of functions
- Polynomial and rational functions
 - Polynomial division and synthetic division
 - Polynomial functions; zeros of polynomials
 - The remainder theorem
 - The factor theorem
- Exponential and logarithmic functions
 - Inverse functions
 - Exponential functions and their graphs
 - Logarithmic functions and their graphs
 - Properties of logarithms
 - Exponential equations
 - Logarithmic equations

Teaching methods: 3 hours per week in the form of lectures

Assessment criteria (College Algebra):

Active participation	10%
Homework	20%
Test	2x10%=20%
Midterm exam	20%
Final exam	30%

Exams are closed books. Also, you use your own calculator and nothing else will be allowed. **Mobile phones are strictly not tolerated in the class for any use (including computations).** Active participation is meant as the effort and the interest that a student shows in the class, including homework. After each session students are expected to study all the relevant material, read all the

associated exercises, identify the difficult points and pose their questions in the next session either directly to me or in the class. **Cheating and plagiarism in any form will result immediately in the grade F. Students who are absent more than 20% of the total hours of the semester (i.e. 9 hours) may be required to withdraw from the course.**

College Trigonometry (1 hour per week)

The course is designed primarily for students who plan to study calculus. Topics include trigonometric functions, graphing techniques, right triangle applications, trigonometric identities, inverse functions and oblique triangles.

Students who are absent more than 20% of the total hours of the semester (i.e. 3 hours) may be required to withdraw from the course.

Teaching method: 1 hour per week in the form of lectures

- Angles and arcs
- Trigonometric functions and acute angles
- Trigonometric functions and any angles
- The wrapping function
- Graphs of the fundamental trigonometric functions
- Verification of trigonometric identities
- Sum, difference, and cofunction identities
- Double – and half – angle identities
- Identities involving the sum of trigonometric functions
- Inverse trigonometric functions

Assessment criteria (College Trigonometry):

Active participation	10%
Homework	10%
Test	20%
Midterm exam	20%
Final exam	40%

Grading Scale and Quality Points:

<u>Grade</u>	<u>Percentage</u>	<u>Quality points</u>
A	96-100	4.00
A-	90-95	3.67
B+	87-89	3.33
B	83-86	3.00
B-	80-82	2.67
C+	77-79	2.33
C	73-76	2.00
C-	70-72	1.67
D+	67-69	1.33
D	63-66	1.00
D-	60-62	0.67
F	0-59	0.00

Class Conduct: You are responsible for everything that is announced, presented or discussed in class. The way to avoid any misunderstanding associated with this course is to attend class. You are expected to attend class and I do keep attendance records. Please, be courteous during class; both to me and your colleagues. I find late arrivals distracting, which cause a decline in the quality of my lecture. Importantly, it is also disruptive to your colleagues. Please, refrain from talking during class; it is disruptive to your colleagues and the lecture. I expect the best behavior from all of you. This is what education is all about. Please, consider that **the language of instruction is English, so all our conversation into the class must be in this language.**

If you feel that you have special learning difficulties, please, make an appointment with Ms. Anxhela Gramo. Ms. Anxhela Gramo is trained to help students with learning difficulties. She shall provide this service to our students, just as it is offered in all American universities.