

# **NSC556 Topics in Algebra, Trigonometry & Pre-Calculus Syllabus Fall 2010**

**Times:** Tuesday & Thursday 10:00am - 11:20am

**Classroom:** Sci 216

**Credits:** Variable Credits (depend on the number of topics you choose)

**Instructor:** Yang (Louis) Liu, Ph.D.

**Office:** Sci 205

**Email:** yliu@marlboro.edu

**Phone:** 802-258-9289

**Office Hour:** Friday 2:30pm-3:30pm

**Textbook:** Notes will be available on the class website

## **Introduction:**

This course covers a wide range of math topics prerequisite for further study in mathematics and science and of interest in their own right. The course is divided into over 50 units (listed on the course web page). One credit will be earned for each group of 6 units completed, and students may register for one to four credits. Students select units to improve their weak areas.

There are also tailored streams for students who wish to go on to study calculus or statistics and for those who wish to prepare for the GRE exam. Over this semester and next, 42 units will be offered in the timetabled sessions. Individual tutorial-style arrangements can be made to study the non-timetabled units or to study units earlier than their scheduled session.

## **Prerequisite:**

None

## **Content:**

The following topics can be offered this semester:

1. Arithmetic of fractions
2. Arithmetic of exponents
3. Simplifying expressions
4. Factoring expressions

5. Linear equations
6. Word problems: linear equations
7. Word problems: percentages
8. Geometry: angles and triangles
9. Geometry: areas and volumes
10. Systems of linear equations
11. Linear inequalities
12. Quadratic equations
13. Word problems: counting and probability
14. Statistical concepts
15. Primes and divisibility
16. Polynomial equations I
17. Polynomial fractions
18. Word problems: polynomial equations
19. Division of polynomials
20. Polynomial equations II
21. Trigonometry
22. Applications of trigonometry

**Grading:**

Two tests	40% of final grade;
Graded homework assignments	30% of final grade;
In-class quizzes	20% of final grade;
Class participation and attendance	10% of final grade.

**Attendance Policy:**

Students are expected to attend the selected units unless there is a special reason, for example, medical appointment or family emergency. Also note that class participation and attendance take 10% of your final grade, and in order to earn class participation points, you need to attend class.

**Academic Honesty Policy:**

Students are expected to be aware of the college's policies on academic integrity (see details in College Handbook).

**Office Hours/Help:**

I am available for the help homework or to discuss the class materials via office hours and email. To make an appointment, please check my schedule on my website and email me a time that works for both of our schedules.

You are always welcome to come to my office whenever I am available.

In addition to office hours, there will be math tutoring service available through the semester.

**Academic Accommodation:**

Students in need of academic accommodation should contact Megan Littlehales at the Office of Disability Services and let me know.

**Standard Disclaimer:**

This syllabus provides a general guideline for this course, however, deviation may be necessary.