Math 100C
Fall/2011
Senior Lecturer: Mrs. Susan Riner

Fractal Art

Thoughts on mathematics…….

Perhaps the greatest paradox of all is that there are paradoxes in mathematics.
Kasner, E. and Newman, J.

From *Alice's Adventures in Wonderland* by Lewis Carroll: The Mock Turtle went on. 'We had the best of educations ... Reeling and Writhing, of course, to begin with, and then the different branches of Arithmetic: Ambition, Distraction, Uglification, and Derision.'

It is the merest truism, evident at once to unsophisticated observation, that mathematics is a human invention. Bridgman, P. W.

The mathematical sciences particularly exhibit order, symmetry, and limitation; and these are the greatest forms of the beautiful. Aristotle

From *The Times* [London] article titled *Pupils sum up math teachers as fat nerds* by Simon de Bruxelles: MATHEMATICIANS are fat, scruffy and have no friends -- in any language. Youngsters from seven countries, asked to come up with a portrait of the typical mathematician, showed a badly dressed, middle-aged nerd with no social life….. Most children drew white men with glasses, often with a beard, bald head or weird hair, and shirt pockets filled with pens, who were working at a blackboard or computer.

And my personal favorite:
Life is good for only two things, discovering mathematics and teaching mathematics.
Siméon Poisson

Math 100C
Syllabus
Fall, 2011

Senior Lecturer: Mrs. Susan Riner
Office: 120B Pierce hall
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Text: Algebra and Trigonometry by Keedy/Bittinger, 6th edition

Purpose: This course is designed to review algebra, trigonometry, exponential and logarithmic functions in order to prepare students for Math 110A. Math 100C will provide each student with an opportunity to increase his or her proficiency in and understanding of the basic concepts of Algebra, graphing, solving equations and systems of equations, and basic trigonometry.

Goals and Objectives: Students should - without the aid of a calculator – demonstrate the following: proficiency in algebraic and trigonometric calculations, graphing lines, parabolas, absolute values, hyperbolas, circles, sine and cosine curves, logarithmic and exponential functions; retention of algebraic and trigonometric formulas; understanding of basic concepts, rules, and theorems in algebra and trigonometry.

Attendance: Students are expected to be on time and attend all classes and are responsible for all material covered in class as well as any changes made in the attached schedule regarding topics, homework, quizzes, and test dates. Attendance and consistent preparation for class will determine the success or failure the student realizes in this course. Missing classes, tests, assignments, etc. due to observance of religious holidays should be worked out in advance with the professor.

Homework: Homework problems will not be collected but are assigned to benefit you. You will need to study 2-3 hours outside of class for every hour spent in class.

Tutoring: Student tutors are scheduled for a limited amount of time per week in the afternoon and evening in the Mathematics Center in Pierce Hall. You may want to consult tutors if you are having trouble with homework problems. Tutoring schedules are posted on the Oxford web page, on Blackboard, in the classrooms, and in the Mathematics Center.

Labs: There will be four Math 100C labs. During these labs, students will work in groups on problems related to the material currently being covered in class. Students may use textbooks, calculators, and class notes. Each group will turn in one lab and receive one grade. Attendance is mandatory. Since lab assignments are to be done as a group rather than individually, **there is no provision for making up a missed lab.**
Honor Code: **The Honor Code of Oxford College applies to all work submitted for credit. You will pledge with your signature that the work you submit for credit is yours and yours alone.**

Assessment Procedures: Tests will be given on Tuesdays during the lab period. Quizzes will be given during class time. Labs not used for tests will be used for graded group assignments. Each test should be passed with 70 points or more with provisions made for one re-test per section. 70 will be the highest grade given on a re-test. If any student needs special accommodations, the appropriate paperwork should be turned in to the professor and arrangements made prior to the first graded assignment. There is no provision for making up tests. **If a student has a note from a doctor or a documented family emergency**, that student may take the re-test. The lowest quiz grades will be dropped. Therefore, **there is no provision for making up a quiz**.

A STUDENT MUST MAKE 70% OR ABOVE ON THE FINAL EXAM IN ORDER TO PASS MATH 100C.

Points will be distributed as follows:

4 Tests	100 points each	400 points
4 Labs	25 points each	100 points
Quizzes	100 points total	100 points
Final Exam	200 points total	200 points
Total		800 points

Grades will be assigned as follows:

A (90 - 100): 720-800 points
B (80 - 89): 640-719 points
C (74 - 79): 592-639 points
D (70 - 73): 560-591 points
F: Below 560 points

Math 100 - Topics

Wed., Aug. 24	1.2 - Exponential Notation
Fri., Aug. 26	1.3, 1.4 - Algebraic Operations
Mon., Aug. 29	1.5 - Factoring
Wed., Aug. 31	1.6 - Rational Expressions
Fri., Sept. 2	1.6 - Rational Expressions (cont.)
Mon., Sept. 5	Labor Day Holiday
Wed., Sept. 7	1.7 - Radical Expressions
Fri., Sept. 9	1.8 - Rational Exponents
Mon., Sept. 12	2.1 - Solving equations
Tues., Sept. 13	**Lab I**
Wed., Sept. 14	2.2 - Rational Equations
Fri., Sept. 16	2.5 - Quadratic Equations
Mon. Sept. 19	Review
Tues., Sept. 20	**Test 1**

Wed., Sept. 21	2.6 – Area, Volume, Motion Problems
Fri., Sept. 23	2.6 – Area, Volume, Motion Problems
Mon., Sept. 26	2.7, 4.2, 4.3 - Radical Equations, Absolute Value
Wed., Sept. 28	2.8 – Equations Reducible to Quadratic
Fri., Sept. 30	3.1 – Graphs, half parabolas, semicircles
Mon. Oct. 3	Graphing Piecewise-defined functions
Tues., Oct. 4	**Lab II**
Wed., Oct. 5	3.2 – Distance Formula, Circles
Fri., Oct. 7	3.3 - Functions
MT, Oct 10, 11	Midsemester Break
Wed., Oct. 12	3.4, 3.5 – Lines, Greatest Integer Function
Fri. Oct. 14	3.7 – Combinations of Functions
Mon. Oct. 17	Review
Tues., Oct. 18	**Test II**

Wed., Oct. 19	3.8 - Transformations
Fri., Oct. 21	4.1 - Quadratic Functions
Mon., Oct. 24	5.2 – Exponential Functions
Wed., Oct. 26	5.3 – Logarithmic Functions
Fri., Oct. 28	5.4 – Properties of Logarithmic Functions
Mon., Oct. 31	5.7 – Solving Equations/Natural Logs
Tues., Nov. 1	**Lab III**
Wed., Nov. 2	5.7 – Solving Equations/Natural Logs
Fri., Nov. 4	6.1, 6.2 - Unit Circle, Sine and Cosine
Mon., Nov. 7	Review
Tues., Nov. 8	**Test III**

Wed., Nov. 9	6.3 - Trigonometric Functions
Fri., Nov. 11	6.4, 6.5 - Angles and Rotations, Triangle Trigonometry
Mon., Nov. 14	6.7 – Trigonometric Graphs
Wed., Nov. 16	7.5 – Trigonometric identities
Fri., Nov. 18	7.6 – Inverses of Trigonometric Functions
Mon., Nov. 21	7.8 – Trigonometric Equations
***Tues., Nov.22**	**Lab IV (Day before Thanksgiving Break)**
W-F, Nov. 23-25	Thanksgiving Break
Mon., Nov. 28	Review
Tues., Nov. 29	**Test IV**
Wed., Nov. 30	9.1 – Systems of Equations
Fri., Dec., 2	10.4 – Systems of Second and Third Degree Equations
Mon., Dec. 5	Exam Review