Textbook: *Algebra & Trigonometry, 8th Edition by* Sullivan

Calculator: A graphing calculator is REQUIRED. We recommend the TI-84.
(Note that your instructor will be using a TI-84 or a TI-86.)

Prerequisites: One year geometry, two years algebra, and a qualifying score on the UNL Math Placement Exam dated after October 2007. Students with a previous UNL math course need permission from the Department of Mathematics before registering for this course. **The Department of Mathematics will *automatically* drop any students who do not satisfy this policy** (see Math Placement Policy in the Mathematics section of the Schedule of Classes).

Note: You cannot earn credit for both Math 103 and either Math 101 or Math 102.

Math Placement Exam Dates: A picture ID will be required and calculators are allowed at the exam EXCEPT calculators which have symbolic manipulation functions, such as the TI-89 and TI-92.

August 25th (Monday) – August 29th (Friday) 9:00A.M.-4:00P.M. 127 Burnett Hall

Consider: The Mathematics Resource Center in **13B Avery Hall** offers free tutorial assistance.
Hours are 12:30-8:30P.M. Monday – Thursday, 12:30-2:30P.M. Friday and 1:00-5:00P.M. Sunday

- Goals for Math 103 -

I Students should be proficient in using different representations for functions (symbolic, numeric, graphic, and verbal) and in employing two or more simultaneously to investigate a function's characteristics.

II Students should be proficient in using standard functions (polynomial, exponential, logarithmic, trigonometric, and inverse trigonometric), and understand their periodic and asymptotic behaviors.

III Students should be proficient in investigating graphs of functions and to confirm algebraic and numeric calculations.

IV Students should be able to communicate mathematics. They should be able to carry out the direction "Explain your answer" by using mathematical concepts in complete sentences using correct grammar.

V Students should be able to learn both individually and in small groups.

VI The course should balance the acquirement of skills and the acquirement of understanding.

Date		Content	Sec	Pg	Exercises
8.25	M	Linear Equations	1.1	86	1-3, 7-15 (odd), 19, 25, 31, 37, 43, 49, 55, 61, **89**
8.26	T	Quadratic Functions	1.2	97	1-4, 11, 19, 27, 33, 36, 39, 42, 45, 49, 57, 65, **125**
8.27	W	Radical Equations; Equations Quadratic in Form; Factorable Equations	1.4	118	1-3, 7-11, 20, 32, 35, 42, 45, 62, 72, 81
8.28	R	Solving Inequalities	1.5	124	53-63 (odd), 77-87 (odd), **113**
8.29	F	Equations and Inequalities Involving Absolute Value	1.6	135	9-61 (by four), 68, 70, **94**
9.1	M	**Labor Day---NO CLASS**			
9.2	T	The Distance and Midpoint Formulas	2.1	156	11, 14, 20-28 (even), 29-33 (odd), 37-43 (odd), **54**, **59**
9.3	W	Graphs of Equations	2.2	163	11-16, 29, 36, 60, 64, **88**
9.4	R	Lines	2.3	173	15-30 (odd), 45-57 (odd), 71-78, **118**, **119,121**
9.5	F	Lines	2.3	173	57-70, 103-106

2 September (Tuesday): last day to drop the course and receive a 100% refund.
5 September (Friday): last day to drop a course and receive a 75% refund and the last day to drop a course so it will not appear on your record.
6 September – 14 November: All course withdraws denoted by a 'W' on academic record.
17 October (Friday): last day to change a course registration to or from 'Pass/No Pass'.
14 November (Friday): Last day to withdraw from classes.

Date		Content	Sec	Pg	Exercises
9.8	M	Circles	2.4	189	11-33 (odd)
9.9	T	Systems of Linear Equations	12.1	836	17-35 (odd), **64**
9.10	W	Functions	3.1	208	15-18, 39, 40, 41, 45, 47, 49, **93, 94**
9.11	R	Catch-up/Review			
9.12	**F**	**Exam 1**			
9.15	M	The Graph of a Function	3.2	222	11-22, 24, **34**, **41**
		Properties of Functions	3.3	231	21-27 (odd), 57-61(odd), **63**
9.16	T	Library of Functions; Piecewise-defined Functions	3.4	242	29-37 (odd), **47**
9.17	W	Graphing Techniques: Transformations	3.5	252	7-18, 19-25 (odd), 51, 54, **89**
9.18	R	Quadratic Functions	4.3	293	11-18, 19-52(odd)
		Quadratic Models	4.4	305	3, 5, 8, 9
9.19	F	Polynomial Functions	5.1	324	12, 15, 21, 29, 30, 36, 38, 41, 45-55 (odd), **101**
9.22	M	Rational Functions I	5.2	344	11-21 (odd), 41-49 (odd), **54**
9.23	T	Rational Functions II	5.3	355	7-43 (by four), **55**
9.24	W	Polynomial and Rational Inequalities	5.4	369	3-39 (by four), **51**
9.25	R	The Real Zeros of a Polynomial Function	5.5	375	21, 28, 34, 38, 40, 41, 45, 49, 53, 60, 62, 91, 92, **112**
9.26	F	Composite Functions	6.1	402	11-16, 35, 37, 40, **65**, **66**
9.29	M	Inverse Functions	6.2	409	9-22, 33, 36, 48, 50, 51, 55, **90**, **91**
9.30	T	Exponential Functions	6.3	423	22, 27, 49-56, 57-65 (odd)
10.1	W	Catch up / Review			
10.2	R	Catch up / Review			
10.3	**F**	**Exam 2**			
10.6	**M**	**Group Project Assigned**			
		Logarithmic Functions	6.4	437	9-15 (odd), 17 – 24, 25-48 (0dd), **131**
10.7	T	Properties of Logarithms	6.5	450	7-47 (by four), 56, 58
10.8	W	Logarithmic and Exponential Equations	6.6	459	5-29 (by four)
10.9	R	Compound Interest	6.7	465	3-12, 13- 21 (0dd), **46-49**
10.10	F	Exponential Growth and Decay	6.8	475	**4-24** (by four)
10.13	M	Angles and Their Measure	7.1	504	4-64 (by four), **105**, **111**
10.14	T	Right Triangle Trigonometry	7.2	517	21-53 (odd), **67**
10.15	W	Computing the Values of Trigonometric Functions of Acute Angles	7.3	529	18-28 (even), **54**
10.16	R	Trigonometric Functions of General Angles	7.4	540	21-93 (by four), **117**
10.17	F	Unit Circle Approach	7.5	550	15-59 (by four), 67-72, 84-88
17 October 2008 (Friday): last day to change to or from Pass/No Pass					
10.20	M	**Fall Break---NO CLASS**			
10.21	T	**Fall Break---NO CLASS**			
10.22	W	Catch up / Review			
10.23	R	Catch up / Review			
10.24	F	**Exam 3**			
10.27	M	Graphs of Sine and Cosine Functions	7.6	560	19-28 (even), 43-53 (odd), 73, 75, 77, **96**
10.28	T	Graphs of Other Trigonometric Functions	7.7	574	7-10, 25, 30, 35, **49**
10.29	W	Inverse Trigonometric Functions	8.1	602	13-24, 37-44
			8.2	614	18, 19, 22, 23, 29, 38, 43
10.30	R	Catch up / Review			
10.31	**F**	**Gateway Exam**			

Date		Content	Sec	Pg	Exercises
11.3	M	Trigonometric Identities	8.3	620	9-48 (by three)
11.4	T	Trigonometric Identities	8.3	620	50-85 (by five)
11.5	W	Sum and Difference Formulas	8.4	627	9-19 (odd), 21-24, 56-66 (even)
11.6	R	Double-angle and Half-angle Formulas	8.5	637	9-29 (odd), 48-50 (even)
11.7	F	Product-to-Sum and Sum-to-Product Formulas	8.6	646	19-31 (odd)
11.10	M	Trigonometric Equations I	8.7	649	7-29 (odd)
11.11	T	Trigonometric Equations II	8.8	656	12-45 (by three)
11.12	W	Applications Involving Right Triangles	9.1	670	9-16, 19, **25**, **30**
11.13	R	Catch up/ Review			
11.14	**F**	**Group Project Due**			
		Catch up/ Review			
14 November 2008 (Friday): Last day to withdraw and receive a 'W' on your transcript.					
11.17	M	The Law of Sines	9.2	675	9-23 (odd), 26, 32, 33, 35, 36, **37**, **39**
11.18	T	The Law of Cosines	9.3	686	9-29 (by four), **34**, **37**
11.19	W	The Area of a Triangle	9.4	691	5-12
11.2o	R	Polar Coordinates	10.1	714	39-65 (odd)
11.21	F	Catch up / Review			
11.24	M	Catch up / Review			
11.25	**T**	**Exam 4**			
11.26	**W**	**Thanksgiving Holiday**			
11.27	**R**	**Thanksgiving Holiday**			
11.28	**F**	**Thanksgiving Holiday**			
12.1	M	Polar Equations and Graphs	10.2	722	29-36, 69, 72
12.2	T	The Parabola	11.2	773	11-18, 31-36
12.3	W	The Ellipse	11.3	782	13-16, 33-38
		The Hyperbola	11.4	792	13-16, 41-46
12.4	**R**	**Last Day for Gateway Exam**			
		General Form of a Conic	11.5	804	11-19 (odd)
12.5	F	Polar Equations of Conics	11.6	812	7-11 (odd), 25-30

December 8-12 : Last week of classes. Content to be decided by the instructor.

Final Examination: Monday, December 15, 2008
6:00-8:00 P.M. -- T.B.A.
(ROOM TO BE ANNOUNCED)

Note: You are expected to arrange your personal and work schedule to allow you to take the final exam at the scheduled time. Students with conflicting exam schedules may be allowed to take an alternate final, which is always given **after** the regularly scheduled final. No student will be allowed to take the final exam early. Your instructor cannot reschedule a final exam for you.

You must see Lori in Avery Hall 203 for further details *with a good reason.*

The Department of Mathematics does not tolerate discrimination or harassment on the basis of race, gender, religion, or sexual orientation. If you believe you have been subject to such discrimination or harassment, in this or any math course, please contact the department. If, for this or any other reason, you believe your grade was assigned incorrectly or capriciously, appeals may be made to (in order): the instructor, the department chair, the departmental grading appeals committee, the college grading appeals committee, and the university grading appeals committee.