Spring 2017
Instructor: C. M. Staniunas

Math 111 Mathematical Models for the Management Sciences
Note: Students who have received credit for Math 112 or higher may not take this course. Students must receive a C or better in Math 111 or INQ 240 to declare a major in Business Administration.

Office: 161 D Trexler Hall

Office hours: MWF 10am-1pm , TTh 11:45am-1pm

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Text: Mathematical Applications for the Management, Life, and Social Sciences , tenth edition, by R. Harshbarger and J. Reynolds .

Calculator Requirement: All students will need a **graphing** calculator for this course, preferably a TI-83 or TI-84
Other electronic devices Turn off the cell phone. Shut the laptop. Put the iPod away.

Tentative	**Test Schedule**
Test 1	Feb. 8
Test 2	Mar. 1
Test 3	Mar. 29
Final Exam	Mon. May 1, 2pm (block 5)
	Tues. May 2, 2pm (block 6)
	Don't leave school before your exam

If illness or family emergency causes you to miss a test, notify me. You'll be expected to take it as soon as possible, preferably within 48 hours Also, please note that arrangements for extended time on testing in a distraction-reduced environment must be made at least one week *before every test*.

Grading Policy:
Homework and quizzes 15%
Tests 20% each
Final exam 25% it IS comprehensive
Your final grade will be computed using the percentages above. Grades will be assigned thus:

A 93-100	B- 80-82	D+ 67-69
A- 90-92	C+ 77-79	D 63-66
B+ 87-89	C 73-76	D- 60-62
B 83-86	C- 70-72	F under 60

Attendance Policy: If you miss four hours of class after the add date, you may be dropped from the course OR have one point deducted from your final grade for each absence after four. If indulgence in alcohol causes you to miss more than one class, the number for AA is 343-6857
You are expected to spend 12 hours per week working for this class (3 hours in class, 9^{+} hours outside of class).

One of your assignments will be to attend one of the MCSP colloquia and complete a reaction form about what you learned. I'll provide a schedule as soon as possible.

Academic Integrity: You are expected to be familiar with the Academic Integrity Code outlined in the booklet Academic Integrity at Roanoke College. In this class, you shall not cheat on tests or quizzes or collaborate on any assignment having the words "work independently" on it.

Course Objective: to provide the background in the quantitative techniques necessary to better understand more advanced courses in Business and Economics.

Learning Outcomes: Upon completing this course, the student will be able to:
Solve linear equations in one or more variables
Solve applied problems using linear equations
Solve systems of linear equations using graphing, substitution, elimination, or matrix methods
Solve quadratic functions and use them in applications
Solve systems of linear inequalities in two variables
Use graphical methods and the simplex method to solve linear programming problems
Find the derivatives of functions
Use derivatives in business applications

Subject Tutoring is an Internationally Certified Tutoring Center through the College Reading and Learning Association (CRLA). Our highly trained staff offers individual tutoring appointments for the following subjects: Business, Economics, Mathematics, Modern Languages, Lab Sciences & Social Sciences. Subject Tutoring is located on the lower level of Fintel Library in room 05 from 4-9 p.m. Sun.-Thurs. Students can logon to make an appointment at www.roanoke.edu/tutoring in 15, 30 or 45 minute intervals. For questions or concerns, please contact Shannon McNeal at 540-375-2247 or mcneal@roanoke.edu.

The Office of Disability Support Services (DSS), is located in the Goode-Pasfield Center for Learning and Teaching in **Fintel Library**. DSS provides reasonable accommodations to students with documented disabilities. To register for Disability Support Services, students must self-identify to the Office of Disability Support Services, complete the registration process, and provide current documentation of a disability along with recommendations from the qualified specialist. Please contact JoAnn Stephens-Forrest, MSW, Coordinator of Disability Support Services, at 540-375-2247 or e-mail her at: stephens@roanoke.edu to schedule an appointment. If you have registered with DSS in the past, and would like to receive academic accommodations for this semester, please contact Ms. Stephens-Forrest at your earliest convenience, to schedule an appointment.

MATH 111 SPRING 2017 TENTATIVE SCHEDULE AND ASSIGNMENTS

1/16	0.2-0.3	Real Numbers; Integral Exponents.
1/18	0.4-0.5	Radicals and Rational Exponents; Operations with Algebraic expressions
1/20	0.6	Factoring
1/23	0.7	Algebraic Fractions
1/25	7.5	Permutations and Combinations.
1/27	1.1-1.2	Linear equations and inequalities in one variable; Functions.
1/30	1.2-1.3	Functions; Linear functions.
2/1	1.5	Solutions of systems of linear equations
2/3	1.5-1.6	Applications of functions in Business and Economics
2/6	**review**	Try the odd-numbered problems on the chapter review and test on pp48-51 and pp118-122
2/8	**Test 1**	After the test, please read section 2.1
2/10	2.1	Quadratic Equations.
2/13	2.2	Quadratic functions: parabolas;
2/15	2.3	Business applications of quadratic functions.
2/17	2.4	Special Functions.
2/20	2.4-3.1	Special functions; Matrices. HWpp162-165/8,34,38,40; p 194/12,16,18,34
2/22	3.2	Multiplication of matrices;
2/24	3.3	Gauss Jordan Elimination
2/27	**review**	Try the odd problems for section 1.6 on pp119-120; do the odd problems for section 2.1-2.4 on pp176-177; do the odd problems for section 3.1 and 3.2
3/1	**Test 2**	
3/3	3.3	Gauss-Jordan elimination
Break		
3/13	4.1	Linear Inequalities.
3/15	4.2	Linear programming; graphical methods.
3/17	4.3	The Simplex Method.
3/20	4.3	The Simplex Method The homework problems will take a lot of time to complete. Begin working on them immediately due Wednesday
3/22	4.3	The Simplex Method. Limits.
3/24	9.1	Limits
3/27	review	Try the odd numbered review problems for sections 3.3 and 3.4 , for sections 4.1-4.4 , and 9.1
3/29	**Test 3**	
3/31	9.2-9.3	Continuity. The Derivative
4/3	9.4	The Derivative; Derivative formulas.
4/5	9.5	The Product rule and the Quotient Rule.
4/7	9.6	The Chain Rule.
4/10		Reviewing the rules of derivatives
4/12	9.7	Using Derivative formulas.
4/14		GOOD FRIDAY NO CLASSES
4/17	9.8-9.9	Higher-order derivatives. Applications.
4/19	10.1	Relative Maxima and minima.
4/21	10.2	Concavity and points of inflection.
4/24	Review	
5/1	**Final**	Block 5 Monday May 1, 2:00-5:00pm **Do NOT schedule your departure before this time. Let your folks know about this NOW. Yes, the exam IS comprehensive.**
5/2	**Final**	Block 6 Tuesday May 2, 2:00-5:00pm **Do NOT schedule your departure before this time. Let your folks know about this NOW. Yes, the exam IS comprehensive.**

Expect to turn in homework every class day (except days on which we have quizzes and weeks in which we have tests). Your homework will be announced at the end of every class and posted on our Inquire page. It will be due the next class period. You ARE allowed to help each other in doing ordinary homework problems from the book. You AREN'T allowed to help each other with any assignment on which I have written "work independently." I will NOT accept homework after the key to that assignment has been posted.