SOUTHEAST COMMUNITY COLLEGE
DIVISION OF ARTS AND SCIENCES
Mathematics
Revision Date: 2013-03-31

Term: **2013 Spring**
Course: **MATH-1150-ES32 (College Algebra)**
Class Time: **MWF 11:00–12:20**
Class Room: **ESQ 111**

Instructor: **Toby Bartels, PhD**
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Text: **402-805-3021 (*not reliable*)**
Office Hour: **MW 13:00–15:30, TT 11:00–13:00**
Office: **ESQ 112**

Course policies are available at **http://TobyBartels.name/MATH-1150/2013s/.**

I.   CATALOG DESCRIPTION

Course Number:	MATH-1150
Course Title	College Algebra
Prerequisite(s):	A grade of "C" or higher in MATH-1100 or appropriate score on math placement test.
Catalog Description:	A study of college algebra with emphasis on functions in preparation for advanced math & science coursework. Topics include solving equations and inequalities, graphing and modeling using polynomial, rational, exponential, and logarithmic functions; systems of equations, and analytic geometry.
Credit Hours:	4.5
Class Hours:	40
Lab Hours:	0
Total Contact Hours:	40

II.   COURSE OBJECTIVES: *Course will:*

A.   Review solving algebraic equations and inequalities.
B.   Investigate functions, function notation, and properties of functions.
C.   Find information about polynomial, rational, and exponential functions, including elementary functions.
D.   Develop techniques for graphing elementary functions, with an emphasis on graphing polynomial, rational, and exponential functions.
E.   Use functions to model and interpret geometric, economic, financial, and biological applications.
F.   Use equations to solve applications.
G.   Graph certain conic sections.

III.   STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

A.   Student Learning Outcomes: *Student will be able to:*
　　1.   Solve equations and inequalities.
　　2.   Identify properties of a function using its equation and/or its graph.
　　3.   Use a variety of techniques to create a graph of a function.

   4. Create and use functions to model applications.
   5. Use problem solving skills to model and solve applications.
   6. Set up and solve systems of linear equations.
   7. Graph points of interest for certain conic sections.
  B. General Education Learning Outcomes
   1. Problem Solving: The ability to define a problem, propose hypotheses and strategies for testing solutions, implement outcomes that address all factors of the problem, evaluate results, and define any need for further work. *(GELO 3)*
   2. Quantitative Reasoning: The ability to reason and solve quantitative problems in a variety of contexts utilizing mathematical manipulations such as words, data sets, graphs, tables, etc. *(GELO 6)*
   3. Thinking Critically: The ability to examine data, ideas, issues and arguments; understand and evaluate assumptions and evidence; and reach logically valid conclusions. *(GELO 2)*

IV. COURSE CONTENT/UNITS OF INSTRUCTION (*course outline may provide more detailed information)*
  A. Review techniques for solving algebraic equations and inequalities.
  B. Review basic geometry concepts (distance, midpoint, area).
  C. Functions and their graphs with applications.
  D. Modeling with linear and quadratic functions.
  E. Analyzing and graphing polynomial and rational functions.
  F. Properties of exponential and logarithmic functions.
  G. Solving exponential and logarithmic equations.
  H. Graphing exponential and logarithmic functions.
  I. Modeling and applications using exponential and logarithmic functions.

V. INSTRUCTIONAL MATERIALS
  A. Required Text: Sullivan, *Algebra & Trigonometry*, 9th Edition, Pearson (Prentice Hall), 2012, ISBN 321760654.
  B. Other Resources: A graphing calculator and/or MyMathLab access codes may be useful.

VI. METHODS OF PRESENTATION/INSTRUCTION
  A. Lecture
  B. Small Group Discussion

VII. METHODS OF EVALUATION
  A. Homework
  B. Comprehensive Final Exam
  C. SCC GRADING SCALE:

A+	95-100	C+	75-79	F	59 or less
A	90-94	C	70-74		
B+	85-89	D+	65-69		
B	80-84	D	60-64		

VIII. SPECIFIC COURSE REQUIREMENTS
  None

<center>**SYLLABUS STATEMENTS**</center>

Statement of Equal Opportunity and Nondiscrimination

It is the policy of Southeast Community College to provide equal opportunity and non-discrimination in admission, attendance and employment matters for all qualified persons, attending or seeking admission to the College, without regard to race, color, ethnicity, religion, sex, age, marital status, national origin, veteran status, sexual orientation, disability, or other factors prohibited by law. Inquiries concerning the application of Southeast Community College's policies on equal opportunity and nondiscrimination should be directed to the Vice President for Access, Equity and Diversity, SCC Area Office, 301 S. 68th St. Place, Lincoln NE 68510-2449; Phone 402-323-3412; Fax 402-323-3420; Internet e-mail jsoto@southeast.edu.

Americans with Disabilities Act – Reasonable Accommodations

If you have a disabling condition that may substantially limit your ability to participate in this class, it is your responsibility to contact the Disability Services provider on campus. For additional information and assistance contact**:**

Lincoln	Room J2	402-437-2620
Milford	Assessment Office	402-761-8202
Beatrice	Jackson Hall – Room J406	402-228-8242

Academic Integrity

Academic Integrity is one of the basic principles of a college community. SCC encourages and expects the highest standards of academic honesty from all students. Please note that cheating, plagiarism, or other forms of academic dishonesty are monitored and subject to disciplinary action.

Electronic Devices

Personal use of any electronic device not authorized by the instructor i**s prohibited**. **Violations may lead to formal disciplinary action.** Instructors, for instructional purposes, may allow in the classroom the **use of cell phones and personal electronic devices.**

Firearms/Weapons Strictly Prohibited

SCC policy prohibits the possession of firearms, weapons, or fireworks on College property or at any College-sponsored event. Effective January 1, 2007, Nebraska State Statute 69-2441 makes it unlawful to carry a concealed handgun into a meeting of the governing body of a political subdivision, collegiate athletic event, school, school grounds, school-owned vehicle, or school-sponsored activity or athletic event. These prohibitions apply to EVERYONE (employees, students, invitees, and visitors) and are enforceable EVERYWHERE (all college property and all college-related events.) Violations of these prohibitions will result in disciplinary and/or law enforcement action.