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

Term: **2013 Spring**
Course: **MATH-1400-ES31 (Applied Calculus)**
Class Time: **MWF 9:30–10:50**
Class Room: **ESQ 111**

Instructor: **Toby Bartels, PhD**
E-mail: **TBartels@Southeast.edu**
Voice mail: **402-323-3452**
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-1400/2013s/.**

I.   CATALOG DESCRIPTION
  Course Number: MATH-1400
  Course Name: Applied Calculus
  Prerequisite: "C" or higher in MATH-1150 or appropriate score on the math placement test.
  Catalog Description: Fundamentals of differential and integral calculus with emphasis on applications
                          from business, economics and the life sciences. Not open to pre-engineering or
                          pre-architectural majors.
  Credit Hours: 4.5
  Class Hours: 40.25
  Lab Hours: 0
  Total Contact Hours: 40.25

II.   GENERAL EDUCATION LEARNING OUTCOMES
  A.   Communicate Effectively: The ability to confidently communicate in writing, speaking, reading
         and listening – logically and coherently for a specific purpose and audience, while using and
         acknowledging sources effectively. *(GELO 1)*
  B.   Thinking Critically: The ability to examine data, ideas, issues and arguments; understand and
         evaluate assumptions and evidence; and reach logically valid conclusions. *(GELO 2)*
  C.   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)*
  D.   Information Literacy: The ability to identify the need for information; identify and assess
         sources; and interpret, synthesize, organize and use information within legal and ethical
         guidelines. *(GELO 5)*
  E.   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)

III. **COURSE CONTENT**
Fundamentals of differential and integral calculus with emphasis on applications from business, economics and the life sciences.
Covered topics include limits, continuity, product and quotient rules, chain rule, marginal analysis, first and second derivative tests, graphing rational functions, locating extrema, optimization problems, continuous compound interest, elasticity of demand, exponential functions and their derivatives, logarithmic functions and their derivatives, implicit differentiation, related rates problems, indefinite integrals, integration by substitution, definite integrals, area between curves and integration by parts.

IV. **INSTRUCTIONAL MATERIALS**
    A.   Required Text: Barnett, *Calculus for Business, Economics, Life Sciences*, 12th Edition, Pearson, ISBN 321709012.
    B.   Other Resources: A graphing calculator and/or MyMathLab access codes may be useful.

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

VI. **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		

<p style="text-align: center;">**SYLLABUS STATEMENTS**</p>

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.