MT100: Calculus I  
Credits: 3  Summer, 2013

Instructor:  John J. Aversa 
email:  aversa@bc.edu 
Office:  McGuinn 100 
Office Hours:  Monday and Wednesday immediately following class 
Telephone:  617-552-3900 
Schedule (class times and day(s)):  Monday - Thursday 8:30 to 11:30 AM 
Room:  TBA 

Boston College Mission Statement 
Strengthened by more than a century and a half of dedication to academic excellence, Boston College commits itself to the highest standards of teaching and research in undergraduate, graduate and professional programs and to the pursuit of a just society through its own accomplishments, the work of its faculty and staff, and the achievements of its graduates. It seeks both to advance its place among the nation's finest universities and to bring to the company of its distinguished peers and to contemporary society the richness of the Catholic intellectual ideal of a mutually illuminating relationship between religious faith and free intellectual inquiry. 

Boston College draws inspiration for its academic societal mission from its distinctive religious tradition. As a Catholic and Jesuit university, it is rooted in a world view that encounters God in all creation and through all human activity, especially in the search for truth in every discipline, in the desire to learn, and in the call to live justly together. In this spirit, the University regards the contribution of different religious traditions and value systems as essential to the fullness of its intellectual life and to the continuous development of its distinctive intellectual heritage.

Course Description
This is an introductory Calculus course intended primarily for majors in life sciences and management students. The emphasis is on problem solving using algebraic, numeric, and graphical techniques. Topics covered include a brief review of the major classes of functions (polynomial, exponential, logarithmic, and trigonometric); the derivative and its interpretations; methods of calculation of the derivative; and applications of the derivative.

Course Objectives
In successfully completing this course, students will:

1. Develop an understanding and appreciation for the important relationship between algebraic and graphical representations of functions and their key components such as domain and range, intercepts, asymptotes, symmetry, and maxima and minima.
2. Be able to approximate limits graphically and numerically as well as evaluate limits analytically.
3. Understand the conditions for the continuity of a function and determine in which intervals a function is continuous.
4. Develop an understanding of the derivative as a rate of change and understand how to use it to solve a variety of real-world problems.
5. Determine the derivative of a function using differentiation rules for algebraic, trigonometric and transcendental functions.
6. Utilize tools and techniques such as the product rule, quotient rule, chain rule, and implicit differentiation to determine derivatives of functions.
7. Be able to utilize proper notation and terminology to communicate mathematics and be able to correctly articulate the solutions to problems.
Grading
Grades will be based on attendance/participation, two midterm exams and a final exam according to the following percentages:

- Attendance/Class Participation: 5%
- Midterm Exams: 60%
- Final Exam: 35%

Makeup exams will only be given for very serious reasons and arrangements for a makeup must be completed prior to the next class session. Failure to do so will result in a zero for the exam.

WCAS Grading System
The undergraduate grading system consists of twelve categories: A (4.00), A- (3.67), excellent; B+ (3.33), B (3.00), B- (2.67), good; C+ (2.33), C (2.00), C- (1.67), satisfactory; D+ (1.33), D (1.00), D- (.67), passing but unsatisfactory; F (.00), failure; I (.00), incomplete; F (.00), course dropped without notifying office; W (.00), official withdrawal from course. The graduate grading system is A (4.00), A- (3.67), Excellent; B+ (3.33), B (3.00), good; B- (2.67) and C (2.00), passing but not for degree credit; F (.00), failure.

Grade Reports. All students are required to log into the web through Agora to access their semester grades. Students must utilize their BC username and password to log on. If your username or password is not known, the Student Learning and Support Center in the O’Neill Library Computer Center will issue a new one. The SLSC requires a valid picture ID (a BC ID, driver’s license or passport) to obtain your password.

Required Text(s)/Readings
by Jon Rogawski
W.H. Freeman and Company, New York

Recommended
While not required, it is recommended that each student purchase either a TI 83± or TI 84± graphing calculator for use of graphing techniques and other mathematical topics covered in the course.

Students may also wish to acquire the student solutions manual for the text as a supplement to in class homework problem review.
Important Policies
http://www.bc.edu/content/bc/schools/advstudies/guide/academicinteg.html

Scholarship and Academic Integrity
It is expected that students will produce original work and cite references appropriately. Failure to reference properly is plagiarism. Scholastic dishonesty includes, but is not necessarily limited to, plagiarism, fabrication, facilitating academic dishonesty, cheating on examinations or assignments, and submitting the same paper or substantially similar papers to meet the requirements of more than one course without seeking permission of all instructors concerned. Scholastic misconduct may also involve, but is not necessarily limited to, acts that violate the rights of other students, such as depriving another student of course materials or interfering with another student’s work.

Disability Statement
Classroom accommodations will be provided for qualified students with documented disabilities. Students are invited to contact the Connors Family Learning Center office about accommodations for this course. Telephone appointments are available to students as needed. Appointments can be made by calling, 617-552-8903. You may also make an appointment in person. For further information, you can locate the disability resources on the web at http://www.bc.edu/content/bc/libraries/help/tutoring/specialservices.html.

Attendance
Class attendance is an important component of learning. Students are expected to attend all classes and to arrive by the beginning of and remain for the entire class period. When an occasion occurs that prevents a student from attending class, it is the student’s obligation to inform the instructor of the conflict before the class meets. The student is still expected to meet all assignment deadlines. If a student knows that he or she will be absent on a particular day, the student is responsible for seeing the instructor beforehand to obtain the assignments for that day. If a student misses a class, he or she is responsible for making up the work by obtaining a classmate's notes and handouts and turning in any assignments due. Furthermore, many instructors give points for participation in class. If you miss class, you cannot make up participation points associated with that class. Types of absences that are not typically excused include weddings, showers, vacations, birthday parties, graduations, etc. Additional assignments, penalties and correctives are at the discretion of the instructor. If circumstances necessitate excessive absence from class, the student should consider withdrawing from the class. In all cases, students are expected to accept the decision of the instructor regarding attendance policies specific to the class.

There may be circumstances that necessitate a departure from this policy. Feel free to contact the WCAS at 617-552-3900 for consultation.

Deadlines
Assignments are due at the beginning of the class period on the specified dates and while not collected and graded, students are expected to complete them all and be able to provide solutions in class.
Cell Phone Use
Please turn off and put away cell phones prior to the start of class. Any student who uses a cell phone during class will be asked to leave and points will be deducted from his or her class participation grade.

Course Assignments (readings, exercises and/or experiences)
Because of the accelerated pace of this course, it is expected that 3-4 hours per day of your study time outside of class will be spent on out of class assignments and exercises. These assignments will be posted on the course site in Blackboard. Please note that some days will require more time and some days less time but the average is approximately 3-4 hours per day over the semester.

The following is a preliminary course schedule and is subject to change. The Blackboard site will reflect the current schedule, along with daily assignments. Also, students are expected to read the sections being covered PRIOR to the class in which they will be taught.

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