Texas A&M University – Corpus Christi  
Department of Mathematics and Statistics 
MATH 2414.003: Calculus 1  
Spring 2012

I. COURSE INFORMATION

Instructor: Dr. Jeff Lyons  
Office: CI 357  
Office Phone: (361) 825-3265  
Office Hours: TBD  
Email: Jeff.Lyons@tamucc.edu  
Website: math.tamucc.edu/~jlyons 
Time & Location: TR 12:30-1:45 PM in CI 109  
Final Exam: Thursday, May 3 from 11:00-1:30 PM in CI 109

II. COURSE DESCRIPTION

As suggested by the catalog description (below), this 4-credit hour course focuses on techniques and applications of single-variable integral calculus. Emphasis is on developing procedural fluency while constructing conceptual understanding of key principals of integration.

Integration, applications of integration, especially to differential equations, calculus of exponential functions, sequences, series, Taylor polynomials and series. Contains a one-hour laboratory component.

III. COURSE PREREQUISITES

MATH 2413: Calculus 1 (single-variable differential calculus and the fundamental theorem of calculus)

IV. COURSE MATERIALS

Required: Access code for online WebAssign (available in the bookstore or online) and a Texas Instruments TI-84 (or higher version) graphing calculator. To register for WebAssign, go to https://www.webassign.net and click “I Have a Class Key” underneath “LOG IN”. Our course code is TBD. Each student is allowed a free trial before purchasing access, but at some point, you will be required to purchase access. If you used WebAssign for Calculus 1, you should still have access so DO NOT buy an access code until you know for sure you need it.

There will be times when it is necessary for you to bring printed material to class. It is your responsibility to check the online course schedule at math.tamucc.edu/~jlyons often to see if any material is required for the class. Checking the schedule the day before each class for any changes is advised.

Recommended: Physical copy of Calculus: Early Transcendentals by James Stewart 7ed. However, an electronic copy can be purchased online with your WebAssign account.

V. STUDENT LEARNING OUTCOMES

At the end of the course the student should be able to:
1. Evaluate integrals by
   a. the Fundamental Theorem of calculus 
   b. substitution 
   c. integration by parts 
   d. trigonometric substitution
2. Use integrals to determine volumes
   a. by using washers (slicing)
   b. by using cylindrical shells
3. Use integrals to determine surface areas or curve lengths.
4. Determine whether an integral is an improper integral and determine whether an improper integral converges.
5. Determine convergence/divergence of a sequence
6. Determine convergence/divergence of an infinite series
   a. by the integral test
   b. by a comparison test
   c. by the root or ratio test
7. Determine the interval of convergence of a power series.
8. Find the Taylor or MacLaurin series for elementary functions.

VI. INSTRUCTIONAL METHODS AND ACTIVITIES

The course will be a combination of instructional presentation of new material and concepts, whole-class activities and discussion, individual investigations, and lab activities. Students may be required to give individual or group presentations. All students are expected to actively engage in group and whole class activities with respect and perseverance.

VII. EVALUATION AND GRADE ASSIGNMENT

The methods of evaluation and the criteria for grade assignments are:
Homework/Classwork 15%
Quizzes 10%
Labs 20%
Gateway Exam 10%
Exams 25%
Final Exam 20%

Grading Scale – grades will be no stricter than:
A = 90 – 100
B = 80 – 89.99
C = 70 – 70.99
D = 60 – 69.99
F = 59.99 or below

Homework/Classwork: Individual assignments are made online through WebAssign. Students will solve and submit completed homework assignments online through WebAssign. Homework will be assigned at the completion of each section and each homework assignment will have a due date. Homework assignments will have extension feature which will allow you to work for an extra period of time beyond the due date but for a penalty. WebAssign will not allow students to submit homework assignments after the extension date has passed. WebAssign can be temporarily unavailable or behave erratically from time to time – no time extensions will be given for these problems. Therefore, it is in your best interest to finish the assignment well before the due date. Time extensions for homework will not be given for any circumstances, happenings, or individual student situations, period. Here is a PowerPoint link with step by step instructions for enrollment: http://www.webassign.net/user_support/student/FDOC_self_enrollment.ppt. It is also advisable to work extra problems out of the textbook's exercise section for more practice, and it is the discretion of the professor to assign extra homework at any time. This includes any in class activities. Homework/Classwork is worth 15% of the course grade and a few of the lowest grades will be dropped.

Quizzes: Quizzes will be administered online through WebAssign and in class. Online quizzes will open each week and will have a due date several days later. Once you begin an online quiz, you will not be able to stop and return. In addition, there will be group quizzes done in class. These can be found on the schedule below. Quizzes are worth 10% of the course grade, and a few of the lowest quiz grades will be dropped.
Labs: See the Lab Syllabus for additional information on the lab component of the course. Labs are worth 20% of the course grade.

Gateway Exam: A test of the core integration techniques will be given in the lab (see the lab syllabus for details). To earn any credit, you need to completely and correctly solve at least 8 of 10 integrals on the test. No electronic devices or resources are permitted on the gateway test. The best attempt is worth 10% of the course grade.

Exams: There will be two equally weighted individual assessment exams given during the course of the semester. Calculators will be allowed unless otherwise instructed. A tentative schedule of exam dates can be found below. The combined exams will be worth 25% of the course grade.

Final Exam: The final exam will be an individual assessment covering ALL material presented in the course. Graphing calculators are allowed and encouraged for the final exam. The final is worth 20% of the course grade.

Tutoring: Seeking out help when learning math is very important especially when you are struggling with certain topics. TAMUCC offers various free tutoring opportunities to students. If you attend an approved tutoring center for at least one hour, you will receive a tutoring credit. If you earn 5 tutoring credits during the semester, your lowest exam score will be dropped OR replaced by the final exam whichever improves your score the most. In addition, if you earn 10 tutoring credits during the semester, 5 points will be added to your highest exam score. In further addition, if you earn 15 tutoring credits during the semester, 5 points will be added to your final exam score. You may earn at most one tutoring credit per week counted (Monday to Sunday). CASA and ST Engineering are the only approved tutoring centers at this point in time. You must sign in and sign out to receive a tutoring credit. Attendance will be reported by CASA to your professor. If there is a dispute, the professor has final say on whether or not the criteria for a tutoring credit have been met, and the decision is final.

No special options, assignments, or alternative grading schemes will be considered for individual students. All graded materials returned to the student are the sole responsibility of the student and must be resubmitted to the professor to receive consideration in grading disputes. The sharing of calculators and other materials during quizzes and exams is not permitted.

VIII. TENTATIVE COURSE SCHEDULE

A tentative course schedule may be found at www.math.tamucc.edu/~jlyons/s12cal2sec3.

IX. CLASS POLICIES AND EXPECTATIONS

Attendance: Attendance is mandatory. Absences in the class may impact your final grade. Please save absences for emergencies. Any adjustments or corrections to the schedule or other policies will be announced in class, and it is the responsibility of the student to stay informed of such changes. It is wise to develop acquaintances you can depend upon in case of an absence.

Make-ups: Since attendance is expected, there will be no make-up of online homework due to absence – excused or unexcused – no exceptions. There will be no make-ups given for missed quizzes or exams since several quiz grades will be dropped and an exam grade may be replaced or dropped by the student attending tutoring. If the student has a legitimate conflict, for example, an athletic event, it will be possible to schedule to take a quiz/exam in advance of the quiz/exam date. This should be handled as soon as possible to allow the professor adequate time to prepare an alternate quiz/exam. Students absent from the final exam must either qualify for an incomplete [for the course] or receive a grade of zero for the exam; the final exam cannot be rescheduled or made-up.

Email: I will send information, updates, etc. through email to your islander (or campus registered) email account. It is your responsibility to check the account often for important and pertinent information. I will also reply to email as best I can. Remember I have multiple classes (and a life) so a response may be slow at times!
Website: The course website is www.math.tamucc.edu/~jlyons. There will be information about tests and quizzes, documents, etc. posted on the website. You will want to check frequently for updates. Please review the website before contacting me about quizzes, exams, etc.

Late arrivals and early departures not only disturb your professor but your fellow students. Please refrain from moving about and talking during class. If you disrupt the class for any reason, I may require you to leave the classroom.

Students will not be allowed to use cell phones or MP3 devices during class. If a student is caught using either during a quiz or exam, it will be considered as cheating and may warrant an “F” for the assignment.

Read lessons before and after each class. Take detailed notes from the book and class lectures.

Ask questions in class. Feel free to interrupt the lecture or discussion at any time for relevant questions. They are very much encouraged and will benefit everyone in the class. Come into my office during office hours for as much help as you need. You can also schedule a time in advance with me outside office hours for extra help if needed. Please email me with any questions you might have, and I will do my best to respond quickly.

X. DROPPING A CLASS

I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. March 30 is the last day to drop a class with an automatic grade of “W” this term.

XI. ACADEMIC INTEGRITY/PLAGIARISM

University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will rest in an F on the assignment or test.

XII. CLASSROOM/PROFESSIONAL BEHAVIOR

Texas A&M University – Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outline in Article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. The prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

XIII. DISABILITY SERVICES

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Disability Services Office at (361) 825-5816 or go to the office at Driftwood 101.
XIV. GRADE APPEALS PROCESS

As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

XV. SYLLABUS AMENDMENTS

The instructor may amend the syllabus at any time prior to the final exam by announcing the changes in class.