

Course Syllabus

Fall 2009

Calculus II

10439 Math 2419.001 MWF 12:30 -1:20pm GR 3.420

Instructor Contact Information

Instructor: Dr. Ray Allum
Office: ECSN 3.924
Phone: 972-883-6342
E-mail: fallum@utdallas.edu
Mail: Mail Station EC35
Office hours: T 1.00-2.00 PM

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Prerequisites: A score of at least 4 on the Advanced Placement Calculus BC exam or MATH 2417.

Co-requisites: You must be enrolled in one of the following problem sections.

10404	2019.301	T	11:30am -1:20pm	ECSS 2.312
10406	2019.303	R	2:30-4:20 pm	GR 3.302
10408	2019.305	F	2:30-4:20 pm	CBW 1.105

During these sessions, the TA will review class material, review relevant material from prerequisite courses, discuss the quizzes and exams, work problems, or have students work problems. **You will also take the quizzes at this time.** Please feel free to ask the TA questions during these sessions.

Course Description

Continuation of MATH 2417. Improper integrals, sequences, infinite series, power series, parametric equations and polar coordinates, vectors, vector valued functions, functions of several variables, partial derivatives and applications, multiple integration.

Student Learning Objectives/Outcomes

- (1) Students will be able to formulate real world problems into mathematical statements.
 - Given a narrative description of a problem that lends itself to mathematical analysis, the student will clearly define any variable quantities introduced and provide an appropriate equation, function, or formula relating those variables.
 - (2) Students will be able to develop solutions to mathematical problems at the level appropriate to each course.
 - Students will perform specified vector operations and distinguish the result as a scalar or vector quantity.
 - Given a multivariable function, students will compute a partial derivative of specified order and, if instructed, evaluate the partial derivative at a point in its domain.
 - Students will determine the convergence or divergence of an improper integral or an infinite series.
 - (3) Students will be able to describe or demonstrate mathematical solutions either numerically or graphically.
 - Students shall provide a qualitative, planar sketch which clearly indicates prescribed attributes.
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Required Textbooks and Materials

Text: *Calculus*, 9th Edition, Larson, Hostetler, and Edwards

Solutions manual: The Student Solutions Manual is recommended and available in the bookstore.

Suggested Course Materials

Online resources: Additional lecture notes are available on my home page
www.utdallas.edu/~fallum/

Calculators: A scientific calculator is recommended. Graphing calculators, programmable calculators, or calculators with non-numeric displays, or with symbolic differentiation/integration capability are NOT ALLOWED on quizzes or exams.

Additional Resources:

The UTD Math Lab is located in Conference Center in Room CN 1.126 (phone: 972-883-6707)
 The hours are 10am until 8pm, Monday through Thursday; Friday and Saturday 10am until 2pm.
 The Math Lab provides free walk-in tutoring for students.

SWE-Society of Women Engineers, <http://swe.utdallas.edu/>

NSBE-National Society of Black Engineers, <http://www.utdallas.edu/orgs/nsbe/nsbehome.htm>

Success Center

Academic Calendar

Wk	Mon		Wed		Fri		
1					8/21	Introduction, Syllabus, Sec 11.1	
2	8/24	Sec: 11.1, 11.2	8/26	Sec: 11.3	8/29	Sec: 11.4	Qz 1
3	8/31	11.5	9/02	Sec: 11.5	8/04	Sec: 10.2	Qz 2
4	9/07	Labor Day	9/9	Sec: 10.2/10.3	9/11	Sec: 10.3/10.4	Qz 3
5	9/14	Sec: 10.5	9/16	Sec: 12.1	9/18	EXAM 1 CN 1.112	
6	9/21	Sec: 12.2	9/23	Sec 12.3	9/25	Sec 12.4	Qz 4
7	9/28	Sec: 12.5	9/30	Sec: 13.1, 13.2	10/02	Sec: 13.2, 13.3	Qz 5
8	10/05	Sec: 13.3, 13.4	10/07	Sec: 13.5	10/9	Sec: 13.6	Qz 6
9	10/12	Sec: 13.7	10/14	Sec: 13.8	10/16	Sec: 13.10	Qz 7
10	10/19	Sec: 14.1	10/21	Exam 2 CN 1.112	10/23	Sec: 14.2	
11	10/26	Sec: 14.3	10/28	Sec: 14.5	10/30	Sec: 8.8,	Qz 8
12	11/02	Sec: 9.1,	11/04	Sec: 9.2	11/06	Sec: 9.3	Qz 9
13	11/9	Sec: 9.4,	11/11	Sec: 9.5	11/13	Sec: 9.6	Qz 10
14	11/16	Sec: 9.7	11/18	Sec: 9.8	11/20	Exam 3 CN 1.112	
15	11/23	Sec: 9.9	11/25	Sec: 9.10	11/27	Thanksgiving Holiday	
16	11/30	Sec: 9.10	12/02	Sec 14.6	12/04	Sec 14.7	
17	12/07	Last day of class	12/10		12/11	Final Exam 7.00-9.45 PM	

8/21 - 9/04	Students may withdraw from a class without record.
9/09 - 9/16	Students may withdraw from a class with signatures and receive a W.
9/17 - 10/22	Students may withdraw from a class with signatures of instructor <u>and</u> advisor receiving a WP(if passing) or WF(if failing).

10/23 - EOT | Students may withdraw from a class for non-academic reasons only.

Assignments :Homework: will be assigned but not graded. However, it is essential that you work all problems thoroughly in order to succeed in this class.

9th ed	July 31, 2009
Sec 8.8	1-13odd,19-53 odd,75,77.
Sec 10.2	1a,b,d,3-35odd,39,41,43,45,51,53,75
Sec 10.3	1-17 odd,19c,21c,29-55 odd
Sec 10.4	1,3,5,11,13,15,23-45 odd,63,69,71-91 odd ,95
Sec 10.5	1-33odd,39-49odd,55,57,59
Sec 11.1	1-55odd,5,37,39,41, 63,65,67,81,83,91,93
Sec 11.2	1-11,odd25-31odd, 35-87odd,91,93,95
Sec 11.3	1-37odd,43,45,47,49,73,75
Sec 11.4	1-19odd,31,33,35,41,43,45,47
Sec 11.5	3-33odd,35-57odd,61-69odd,83,85,91-107odd
Sec 12.1	1-19odd,,27-37odd,69,71,73,75
Sec 12.2	1,5,9-29odd,33-45odd,49-71odd
Sec 12.3	1-27odd
Sec 12.4	1-15odd,21-29odd,35-59odd,73,75,77
Sec 12.5	1,3,9,11,13,21-43odd
Sec 13.1	3-25odd,29,49,51,53,69,71,73
Sec 13.2	5-31odd,43,45,73,75,77
Sec 13.3	5-53odd,59-87odd,93-107odd,117,123,125
Sec 13.4	1-15odd,31,33,37,39
Sec 13.5	1,3,5a,7a,9a,13,15,17,19a,21a,23-41odd,53,55,61
Sec 13.6	1-39 odd,43,45,51-57odd,65,66
Sec 13.7	1-39odd,47-55odd
Sec 13.8	1,3,5,7,9,11,13,21,23,25,27,31,33,45,47
Sec 13.10	1-17odd,35
Sec 14.1	1-37odd,41,45-63odd,67,69,71
Sec 14.2	7,9,11,13,15,17,19,21,23,25,27,53,55
Sec 14.3	1-29 odd,31,43,45,47,49,51,53
Sec 14.5	1-3,5,7,15
Sec 14.6	1,3,5,7
Sec 9.1	1-19odd, 25-41odd, 45-83odd
Sec 9.2	1-29odd,37-75odd,76,79,81,83,85,87,95a,b,123,125
Sec 9.3	1-23odd,27,41odd,87-97odd
Sec 9.4	3,5,7,9,15-35odd,55,59
Sec 9.5	1,3,5,11-29odd,37,39,41a,43a,45a,47-67odd,87-95odd
Sec 9.6	1,3,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,51-67odd ,101,103
Sec 9.7	13,15,17,19,21,23,25,27,29,41,43,68
Sec 9.8	1-47 odd
Sec 9.9	1-25odd,35,37,39,41,45,47
Sec 9.10	1,3,5,7,9,17-35odd,39,41,45,63,67

8th ed	July 31, 2006
Sec 8.8	1,3,5,7,9,15-47odd,71,73,83.
Sec 10.2	1a,b,d,3-35odd,39,41,43,45,51,53,69
Sec 10.3	1-55odd
Sec 10.4	1,3,5,11,13,15,23,25,27,29,31,33,35,37,39,41,59, 65,67,73,75,77,79,81,83,85,87,89,91
Sec 10.5	1-25odd,37,39,45,47
Sec 11.1	1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41, 43,45,47,49,51,53,55,57, 63,65,67,83,93
Sec 11.2	1-31odd 35-87odd,91,93,95,97,99
Sec 11.3	1-37odd,43,45,47,49,73,79,81
Sec 11.4	1-19odd,31,33,35,37,41,43,45,47
Sec 11.5	1-29odd,33-51odd,55,57,59,61,75,81-99odd
Sec 12.1	1,3,5,7,9,11,13,15,23,25,27,29,33,69,71,73,75,77,79
Sec 12.2	1,5,9-23odd,27-41odd,49-67odd
Sec 12.3	1,3,5,9,11,13,15,19,21,25,29
Sec 12.4	1-29odd,35-55odd,65,67,69
Sec 12.5	1,3,5,9,11,13,21-39odd
Sec 13.1	1-27odd,31,33,35,37,49,51,53,55,78,83
Sec 13.2	5-21odd,25,27,29,31,33,41-53odd,69,61
Sec 13.3	1-39odd,45,47,51-67odd,73-85odd,99
Sec 13.4	1,3,5,7,9,11,13,15,31,33,37
Sec 13.5	1,3,5a,7a,9a,11,13,15,17,19a,21a,23-41odd,51,53,57,59
Sec 13.6	1-37 odd,41,43,45,49,55,57,59,61
Sec 13.7	1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,49,51
Sec 13.8	1,3,5,7,9,11,13,21,23,25,31,33,53,55
Sec 13.10	1-25odd,31,33
Sec 14.1	1-33odd,37-63odd
Sec 14.2	1,3,7,9,11,13,15,17,19,21,23,25,27,29,33,35,49,51,53,55
Sec 14.3	1-23 odd, 29, 31,37,39,41
Sec 14.5	1-17odd,21,31,33(See page 547 for # 5 integration)
Sec 14.6	1,3,5,7
Sec 9.1	1-19odd, 25-41odd, 47-93odd
Sec 9.2	1-27odd,35-47odd,51-71odd,79,81,83,85,89a,b,117,119
Sec 9.3	1-35odd,79,81,83,85,87,89
Sec 9.4	3,5,7,9,15,17,19,21,23,25,27,29,33,35,41-61odd,79-87odd
Sec 9.5	1,3,5,11-29odd,33,35,37a,39a,41a,43-61odd,79-87odd
Sec 9.6	1,3,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,51-67odd
Sec 9.7	13,15,17,19,21,23,25,27,29,41,43,68
Sec 9.8	1-47 odd
Sec 9.9	1-25odd,35,37,39,41,45,47
Sec 9.10	1,3,5,7,9,15-31odd,53,55,57,77,79,81

Grading Policy

Grade: The course grade is determined from the following:

Three Major Exams: 100 pts each,
18 September, 2009, 12.30 CN1.112
21 October, 2009, 12.30 CN1.112
20 November, 2009; 12.30 CN1.112

10 Quizzes: 25 pts each, one per week during non-exam weeks
Comprehensive Final Exam: 200 pts,

FRIDAY DECEMBER 11, 2009 7pm-9:45pm ; GR3.420

Each quiz will be administered during the problem section and will be returned to you at the next meeting of your problem section. Please note times and locations of mid-term and final exams. You will be notified in class of any change of venue prior to the date of the exam. Your graded exams will be made available to you during the next problem section.

Grade calculation: The course grade is a percentage of 500 possible points. The final exam contributes 200 points, or, 40% of the grade. The remaining 300 points are derived from the three major exams and the quiz total. Your quiz total is the best 8 quiz scores, (the lowest 2 quiz scores are dropped). The best 3 scores from the quiz total (scaled to a percent) and 3 major exams comprise the remaining 60% of the course grade.

Example: Ex1=89, Ex2=75, Ex3=82, (QzTot)/2=94, Final=168. Ex2 score is dropped.
Course percent = $(168+89+82+94)/5=86.6$, B+

Example: Ex1=75, Ex2=85, Ex3=68, (QzTot)/2=38, Final=168. QzTot score is dropped.
Course percent = $(168+85+68+75)/5=79.2$, letter grade C+

Grade Scale	[96.6,100]...A+	[93.3,96.6)....A	[90,93.3)....A-
	[86.6,90)....B+	[83.3,86.6)....B	[80,83.3)....B-
	[76.6,80)....C+	[73.3,76.6)....C	[70,73.3)....C-
	[66.6,70)....D+	[63.3,66.6)....D	[60,63.3)....D-
	[0,60)....F		

Course & Instructor Policies

Citizenship: Any action that disturbs your classmates or interrupts the lecture is unacceptable. Examples of such actions are:

- Entering the classroom late - be as punctual as possible.
- Leaving the classroom before break or before the end of lecture.

(c) Cell phones, ringers, buzzers, beepers, alarms, raspberries, blackberries - turn them off! unless you are a member of an emergency response team.

Student participation in class is desired, however, please raise your hand to speak and avoid having side conversations with your classmates.

There will be **no** extra credit

Make-up exams/quizzes:

(a) There will be no make-up quizzes.

(b) There will be no make-up exams unless the circumstances are extraordinary.

(c) Exams and quizzes are closed book, without notes, and without graphing calculators.

(d) SHOW ALL WORK on quizzes and exams. Unsupported answers are considered miracles and, while inspirational, will receive little or no credit. Graded quizzes and major exams will be returned to you as soon as possible. Any document not picked up by the end of finals week will be destroyed.

(e) Final exams are not returned to the student but are held for review for one year.

Intercollegiate Competitions

Students involved in a UTD sanctioned competitive activity must supply the instructor with a letter certifying his/her eligibility to participate in such a competition. Said letter may be obtained from the Intercollegiate Compliance Officer. It is the students' responsibility to discern scheduling conflicts and to inform the instructor well in advance of a class, quiz, or exam that will be missed due to a competition. The instructor will make reasonable accommodation to resolve the conflict.

Technical Support

If you experience any problems with your UTD account you may send an email to: assist@utdallas.edu or call the UTD Computer Helpdesk at 972-883-2911.

Field Trip Policies

Off-campus Instruction and Course Activities

Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at the website address http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school dean. Below is a description of any travel and/or risk-related activity associated with this course.

Student Conduct & Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD printed publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Series 50000, Board of Regents, The University of Texas System*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391) and online at <http://www.utdallas.edu/judicialaffairs/UTDJudicialAffairs-HOPV.html>

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic Dishonesty, any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Copyright Notice

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials, including music and software. Copying, displaying, reproducing, or distributing copyrighted works may infringe the copyright owner's rights and such infringement is subject to appropriate disciplinary action as well as criminal penalties provided by federal law. Usage of such material is only appropriate when that usage constitutes "fair use" under the Copyright Act. As a UT Dallas student, you are required to follow the institution's copyright policy (Policy Memorandum 84-I.3-46). For more information about the fair use exemption, see <http://www.utsystem.edu/ogc/intellectualproperty/copypol2.htm>

Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grade Policy

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**.

Disability Services

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:
The University of Texas at Dallas, SU 22
PO Box 830688
Richardson, Texas 75083-0688
(972) 883-2098 (voice or TTY)
disabilityservice@utdallas.edu

If you anticipate issues related to the format or requirements of this course, please meet with the Coordinator of Disability Services. The Coordinator is available to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with Disability Services to notify them of your eligibility for reasonable accommodations. Disability Services can then plan how best to coordinate your accommodations.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

These descriptions and timelines are subject to change at the discretion of the Professor.