

Course Syllabus

Fall 2008

Applied Calculus II

Aug. 17, 2008

11213 Math 1326-002 MWF 12:30 p.m. to 1:20 p.m. SOM 2.717

Professor: Dr. John R. Hedstrom

Professor's Contact Information

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Office hours 1:20p.m.– 2:00p.m. WF, and 3:20p.m.– 4:00p.m. WF

Teaching Assistant **Abraham, Waheeda**

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General Course Information

Course Prerequisites Math 1325

Other Restrictions Calculators will not be allowed.

Course Description

Applied Calculus II “Applications of differential equations, functions of several variables, least squares modeling, multiple integrals, infinite series.” The main goal of the course is the presentation of fundamental techniques of calculus along with some applications. The concepts of integration, multivariate calculus (including partial differentiation), specialized differential equations, and geometric series will be developed.

Student Learning Outcomes

Students will be able to formulate real world problems into mathematical statements, develop solutions to mathematical problems at the level appropriate to this course and describe or demonstrate mathematical solutions either numerically or graphically.

Student Learning Objectives

1. Given a narrative description of a situation, students will be able to set up variables and relationships ready for the determination of areas of certain geometric figures, and to set up variables and relationships in preparation for the determination of financial analysis related to continuous money flows.
2. Given a description of problems which have already been set up in terms of variables and relationships, students will be able to apply the principles and techniques of calculus to solve optimization problems where more than one variable is subject to choice.
3. Given a suitable function definition, students will be able to apply techniques of integral calculus to create an appropriate graphical display, and to determine and tabulate numerical values of certain quantities.

Required Textbooks and Materials

Calculus with Applications, Ninth Edition, by Lial, Greenwell and Ritchey

Suggested Course Materials

Solutions Manual

Examinations

Exam I Friday October 3rd

Exam II Friday November 7th

**Final Exam Wednesday December 17th
at 11:00a.m. – 1:45p.m.**

Grading Policy

Each quiz is worth 10 points: They will be given on Fridays, without prior notice. Quizzes are counted and converted to a percentage, giving a possible total of 100 points. Each regular examination is also worth 100 points. The comprehensive final examination is worth 200 points. This score cannot be dropped. These scores are weighted so that the final contributes 40% toward the overall grade. The remaining 60% is made up from the two exams and the quiz average.

Grade: (500 pts. Max.) * 2/10 = (100 total pts. Max) → Grade Scale

Grade Scale:

[90, 93) A-, [93, 97) A, [97, 100] A+,
[80, 83) B-, [83, 87) B, [87, 90) B+,
[70, 73) C-, [73, 77) C, [77, 80) C+,
[55, 60) D-, [60, 65) D, [65, 70) D+,
[0, 55) F

Make-up exams There will be no makeups. Missed quizzes are a zero. **If the first exam is missed, the second hour exam counts twice.** Final exam must be taken.

Class Schedule

Week		Monday		Wednesday		Friday
1					8/22	Sec. 7.1
2	8/25	Sec. 7.2	8/27	Sec. 7.3	8/29	Sec. 7.3
3	9/1	Labor Day	9/3	Sec. 7.4	9/5	Sec. 7.5
4	9/8	Sec. 7.5	9/10	Sec. 8.1	9/12	Sec. 8.1
5	9/15	Sec. 8.2	9/17	Sec. 8.2	9/19	Sec. 8.3
6	9/22	Sec. 8.3	9/24	Sec. 8.4	9/26	Sec. 8.4
7	9/29	Sec. 9.1	10/1	Sec. 9.2	10/3	Exam I
8	10/6	Sec. 9.2	10/8	Sec. 9.3	10/10	Sec. 9.3
9	10/13	Sec. 9.4	10/15	Sec. 9.4	10/17	Sec. 9.5
10	10/20	Sec. 9.5	10/22	Sec. 9.6	10/24	Sec. 9.6
11	10/27	Sec. 9.6	10/29	Sec. 10.1	10/31	Sec. 10.1
12	11/3	Sec. 10.1	11/5	Sec. 10.2	11/7	Exam II
13	11/10	Sec. 10.2	11/12	Sec. 10.4	11/14	Sec. 10.4
14	11/17	Sec. 12.1	11/19	Sec. 12.1	11/21	Sec. 12.2
15	11/24	Sec. 12.2	11/26	Sec. 12.3	11/28	Thanksgiving Holiday
16	12/1	Sec. 12.3	12/3	Sec. 12.4	12/5	Sec. 12.4
17	12/8	Last class Review				

Homework assignments

Chapter.Section	Odd Problems	Even Problems	Applications
7.1	1-39	40, 44	56, 63, 70
7.2	1-31		39, 42
7.3	1,3,7,9,15,17		29
7.4	1-43,53,55,57		55, 70
7.5	1-31		36
8.1	1-21,29,31,33,35		39
8.2	1-17,25,27,31	22,30	37
8.3	1-19		16
8.4	1-25,43,45,47	44	45, 51
9.1	1-15; 21-27		40a, 44a
9.2	1-39; 41,45,47,49		52a, 60a, 66
9.3	1-21	22-26	36, 38
9.4	1-15; 19-27		23
9.5	1-19		18, 30
9.6	1-59; 63-69		67
10.1	1-27; 35,37		35, 37
10.2	1-23		21, 23
10.4	1,3,5	2,4	1, 11
12.1	1-29; 33,37		39, 44
12.2	1-27; 35,47,51		30, 45
12.3	1,5,11,15		39
12.4	1-19; 23,29		22

Additional Resources

The UTD Math Lab is located in McDermott Library in Room 2.412 (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. In addition to the help available during normal operating hours, each registered student is entitled to a free, one-hour, individual tutorial per week. Individual tutorials require an appointment which are arranged via learning center personnel.

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

Academic Calendar

Classes begin Thursday August 21st
Last Day to Add a Course Thursday August 28th
Census Day Monday September 8th

Last day to drop without a “W” Monday September 8th

Labor Day Monday September 1st

Signature Required period begins Tuesday September 9th
WP/WF withdrawal period begins Thursday September 18th
Midterm grades available online Wednesday October 15th
WP/WF withdrawal period ends Thursday October 23rd

Thanksgiving holidays Thursday November 27th
to Friday November 28th

Last day of classes Monday December 8th

Reading Days Tuesday December 9th
to Wednesday December 10th
Final grades available online Thursday December 11th
to Wednesday December 24th

Student Learning Outcomes

Students will be able to formulate real world problems into mathematical statements, develop solutions to mathematical problems at the level appropriate to this course and describe or demonstrate mathematical solutions either numerically or graphically.

Course & Instructor Policies

Extra credit n/a

Late work All students are expected to take the examinations at the announced time.

Homework assignments Problems will be assigned on a daily basis. Answers to most of these problems are given at the back of the textbook. Complete solutions to many of these problems may be found in the Solutions Manual.

Class attendance Classroom attendance and problem session attendance (where applicable) is required.

Classroom citizenship Professional behavior is expected at all times. Classroom discussions are not permitted between students. Cellphones must be turned off at all times. Laptops may only be used for taking notes.

Technical Support

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

Field Trip Policies

O -Campus Instruction and Course Activities

O -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](http://www.utdallas.edu/BusinessAffairs/TravelRiskActivities.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 owners 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 institutions 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 Deans 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 semesters 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 students 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 noti es

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.