

# Course Syllabus

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**Applied Calculus II**

**Spring 2007**

12419    Math 1326.001    TR    11:30 -12:45pm    JO 3.516

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## **Instructor Information**

Instructor: Dr. Bentley Garrett  
Office: ECSN 2.510  
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E-mail: [btg032000@utdallas.edu](mailto:btg032000@utdallas.edu) or via WebCT (see section below)\*  
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Office hours: T 1:00-3:00 PM, R 5:30-6:30 PM

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

Pre-requisite: A score of at least 4 on the Advanced Placement Calculus AB exam, a score of at least 3 on the Advanced Placement Calculus BC exam, or MATH 1325.

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## **Course Description**

Applications of differential equations, functions of several variables, multiple integrals, infinite series. Cannot be used to satisfy degree requirements for B.S. majors in Schools of Engineering and Computer Science or Natural Sciences and Mathematics.

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## **Student Learning Objectives/Outcomes**

- (1) Students will be able to formulate real world problems into mathematical statements.
  - Embedded questions to assess student's ability to interpret a narrative description of a situation, to set up variables and relationships ready for the determination of areas of certain geometric figures.
  - Embedded questions to assess student's ability to interpret a narrative description of a situation, to set up variables and relationships in preparation for the determination of financial analysis related to continuous money flows.
- (2) Students will be able to develop solutions to mathematical problems at the level appropriate to each course.
  - Embedded questions to assess student's ability to apply the principles and techniques of integral calculus to solve problems which have already been set up in terms of variables and relationships.
  - Embedded questions to assess student's ability to apply the principles and techniques of calculus to solve optimization problems where more than one variable is subject to choice, and which have already been set up in terms of variables and relationships.

(3) Students will be able to describe or demonstrate mathematical solutions either numerically or graphically.

- Embedded questions to assess student's ability to apply the principles and techniques of differential and integral calculus to create graphical display of given relationship between variable quantities.
- Embedded questions to assess student's ability to apply the principles and techniques of differential and integral calculus to determine and tabulate numerical values of certain quantities, given values of other quantities and relationships between them.

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### **Required Textbooks and Materials**

Text: *Calculus with Applications*, 8<sup>th</sup> edition, Lial, Greenwell, Ritchey

### **Suggested Course Materials**

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

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

\*Online resources: WebCT: <http://webct.utdallas.edu> You must enter your NETID username and password to logon to WebCT. Here, you will find the syllabus, problem sets, handouts, etc., as well as a record of your grades. Any messages/e-mails concerning the class will also appear on WebCT. **This is also where you should contact me; just click the Mail link/icon, click Compose Message, click Browse, and select the top name (which is mine.)**

### **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.

## Academic Calendar (subject to change)

Week	Tuesday		Thursday	
1	1/9	Diagnostic Test, Syllabus, Sec 7.1	1/11	Sec: 7.1/7.2
2	1/16	Sec: 7.3, Qz1	1/18	Sec: 7.4
3	1/23	Sec: 7.5, Qz2	1/25	Sec: 7.5/8.1
4	1/30	Sec: 8.2, Qz3	2/1	Sec 8.2/8.3
5	2/6	Sec 8.3	2/8	Exam 1
6	2/13	Sec: 8.4, Qz4	2/15	Sec: 9.1
7	2/20	Sec: 9.2, Qz5	2/22	Sec: 9.3
8	2/27	Sec: 9.4, Qz6	2/29	Sec: 9.5
	3/6	<b>SPRING</b>	3/8	<b>BREAK</b>
9	3/13	Sec: 9.6	3/15	Exam 2
10	3/20	Sec: 10.1, Qz7	3/22	Sec: 10.2
11	3/27	Sec: 10.2/10.4, Qz8	3/29	Sec: 10.4
12	4/3	Sec: 12.1, Qz9	4/5	Sec: 12.1/12.2
13	4/10	Sec: 12.2	4/12	Exam 3
14	4/17	Sec: 12.4, Qz10	4/19	Review
15	4/24	Final Exam 11:00am-1:45pm		

- 1/8 - 1/24 Students may withdraw from a class without record.  
 1/25 - 2/4 Students may withdraw from a class with signatures and receive a W.  
 2/5 - 3/21 Students may withdraw from a class with signatures of instructor and advisor receiving a WP(if passing) or WF(if failing).  
 3/22 - EOT Students may withdraw from a class for non-academic reasons only.

## Assignments

### Chapter 7

Section 7.1: 1-41 odd, 47, 57, 59, 67  
Section 7.2: 3, 7, 11, 13, 17, 19, 27, 35, 41, 43  
Section 7.3: 3, 5, 7, 15, 17  
Section 7.4: 1, 3, 11, 19, 23, 27, 41, 55, 59  
Section 7.5: 11-21 odd, 27, 29, 31

### Chapter 8

Section 8.1: 1-35 odd  
Section 8.2: 1-17 odd, 22, 27, 30, 31, 32  
Section 8.3: 1, 5, 7, 11, 13  
Section 8.4: 1-25 odd, 41, 44

### Chapter 9

Section 9.1: 1-15 odd, 21-26  
Section 9.2: 3-35 odd, 41, 43  
Section 9.3: 1-17 odd, 21-26, 31, 33  
Section 9.4: 1-13 odd, 19, 21, 27  
Section 9.5: 1-15 odd, 27  
Section 9.6: 13-29 odd, 41-59 odd, 63, 67, 69

### Chapter 10

Section 10.1: 1, 5, 9, 13, 17, 23, 27, 35, 50  
Section 10.2: 1-19 odd, 31  
Section 10.4: 5, 6, 16-22

### Chapter 12

Section 12.1: 1-29 odd; 33, 37  
Section 12.2: 1-27 odd; 35, 47, 51  
Section 12.4: 1-19 odd; 23, 29

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## Grading Policy

Grade: The course grade is determined from the following:

Three Major Exams:	100 pts each, see schedule for dates
10 Quizzes:	25 pts each, one per week during non-exam weeks
Comprehensive Final Exam:	200 pts

**Tues Apr 24, 11am-1:45pm**

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) plus the attendance quiz (cannot be

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 =  $(168+89+82+94)/5=86.6$ , letter grade B<sup>+</sup>

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<sup>+</sup>

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		

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## Course & Instructor Policies

**Attendance: It is essential that you attend every lecture to succeed in this class.**

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

- (a) Entering the classroom late - be as punctual as possible.
- (b) 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.

**An apology is expected from anyone creating such a disturbance.**

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.

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General University policies on Academic Integrity, Incomplete Grades, and other important topics, form part of this Syllabus, and are to be found in the version of the Syllabus posted on the Web.