

Course Syllabus

Summer 2015	Differential Calculus	May 27, 2015
Math 2413.0U1	MW 10:00am - 12:15 pm	JSOM 1 1.206

Instructor Information

Instructor: Dr. Derege H. Mussa

Office: FO 2.104

Phone: 972-883-6562

E-mail: dxm146130@utdallas.edu

Office hours: 12:30 - 1:30 MW or by appointment

If a personal situation arises that you feel I need to be aware of, send that information via EMAIL.

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

Prerequisite: A SAT II Mathematics Level IC Test Score of at least 600, or two years of high school algebra, one year of high school geometry, trigonometry, or precalculus or MATH 2312 with a grade of at least C-.

Co-requisites: Enrollment in one of the following problem sections is mandatory.

50221	2413.3U1	T	10:00am -12:15 pm	JSOM 2.112
50222	2413.3U2	T	10:00am -12:15 pm	SLC 2.203

During problem section, the TA shall:

- review class material and relevant material from prerequisite courses
- return and discuss quizzes and exams
- work problems, or have students work problems
- entertain questions
- **administer quizzes**

Course Description

Maths 2413- Differential calculus (4 semester hours) Course covers topics in differential calculus of functions of one variable; topics include limits, continuity, derivative, chain rule, implicit differentiation, mean value theorem, maxima and minima, curve sketching, derivatives of inverse trigonometric functions, antiderivative, substitution method, and applications. Three lecture hours and two discussion hours (MATH 2013) a week. Credit given for only one of MATH 1325, MATH 2413 or MATH 2417.

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.
 - Given a limit statement of indeterminate form, the student will be able to apply appropriate algebraic or calculus based techniques to compute the limit.
 - Given a function, the student will be able to compute a first or second order derivative and, if instructed, evaluate the derivative at a point in its domain.

- (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.
 - Students will provide numerical results in a prescribed manner, as a percent, an interval, or with specified accuracy.

Required Textbooks and Materials

Text: *Calculus, Early Transcendental* 7th Edition, Stewart

Digital: *Web assigns Access*

Options:

1. ENHANCED WEBASSIGN (Access Code Only) ISBN: [9780538738071](#)
Contains a digital copy of the text
2. CALCULUS EARLY TRANSCENDENTALS, 7E LOOSE-LEAF with Web assign access and E-book ISBN: [9781285111605](#)
3. CALCULUS EARLY TRANSCENDENTALS, 7E Hard bound with Web assign access and E-book ISBN: [9780495962243](#)

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.

Additional Resources

Elearning: <https://elearning.utdallas.edu/> requires your NETID and password to logon. Once logged in, select this course. If successful, you will see a link to the syllabus and a blue backpack which contains additional course material. You can view your grades, use the email tool, or the discussion tool to communicate with your classmates. You will receive a notice via elearning (either an announcement, or an email) if there is additional information, exam date/location change, or an urgent message, class canceled, etc. If a personal situation arises that you feel I need to be aware of, send that information to: dxm146130@utdallas.edu. I prefer you do not send email to me via elearning.

The UTD Math Lab is located in the Success Center in Room MC 3.606 (phone: 972-883-6707)
summer 2015 hours of operation: Check the Math Lab website

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

Fri, Jun 05	Last day to drop without W
Sat, Jul 04	Holiday- No Class
Mon, Jul 13	Last day students may withdraw from a class with WL

Schedule (subject to change)

Week	Mon		Wed		
1	5/25	Holiday - UTD Closed	5/27	Introduction, Syllabus Sections: 1.1, 1.2, 1.3, 1.5	
2	6/1 GHW1 DHW1	Sections: 1.6, 2.1	6/3	Sections: 2.2, 2.3	Qz 1
3	6/8 GHW2 DHW2	Sections: 2.4, 2.5, 2.6	6/10	Sections: 2.6, 2.7, 2.8	Qz 2
4	6/15 GHW3 DHW3	Sections: 3.1, 3.2, 3.3	6/17	Sections: 3.4, 3.5, 3.6	Qz 3
5	6/22 GHW4 DHW4	Sections: 3.5, 3.6	6/24	Exam 1 Sections: 3.7	
6	6/29 GHW5 DHW5	Sections: 3.7, 3.9, 3.10	7/1	Section : 3.10, 4.1	Qz 4
7	7/6 GHW6 DHW6	Sections: 4.1, 4.2,	7/8	Sections: 4.2, 4.3	Qz 5
8	7/13 GHW7 DHW7	Sections: 4.4, 4.5	7/15	Sections: 4.5, 4.7	Qz 6
9	7/20 GHW8 DHW8	Sections: 4.9, 5.1	7/22	Exam 2 Sections: 5.2, 5.3	
10	7/27 GHW9 DHW9	Sections: 5.4, 5.5	7/29	Sections: 5.5, 6.1	Qz 7
11	8/3 GHW10 DHW10	Sections: 6.2, 6.3	8/5	Sections 6.5 Last Lecture	Qz 8
				Final Exam: Sat 8/7 8:00-10:45 am Room TBA	

Assignments (subject to change)

7th ed	Stewart, Early Transcendental Aug 12, 2011
Sec 1.1	11,17,27-50,51,53,54,57,61,69,73
Sec 1.2	1-4,11,13,
Sec 1.3	9,11,13,17,19,21,23,31,33,35,36,37,39,40,41,43,45,47,49,51a,b
Sec 1.5	1-4,8,7,9,11,13,23,25
Sec 1.6	3,5,7,9,13,15,21,23,25,35,36,37,38,39,41,61,62,63,64,35,67,69
Review	True-False quiz all
Sec 2.1	1a,3a,b,5,7a,i,iv,9a
Sec 2.2	1,3,5,7,9,11,12,15,17,19,21,29,31,33,35,38a,41a,44a,b
Sec 2.3	1,3,5,7,9,10,11,12,13,15,17,21,23,25,26,27,29,41,43,48,49,50a,55,56
Sec 2.4	1,3,5,9,13,15,17,21,23,24,25,29,30 (ep/6) ,31,33
Sec 2.5	3,5,7,11,12,13,14,15,16,17,19,23,25,29,31,35,36,37,39,41,43,45,46,47,51,53,65,67
Sec 2.6	3,5,7,9,11,15,19,21,23,25,28,29,31,33,34,35,49,53,55,57,62b,67,69
Sec 2.7	1,3,5,7,11,13,15,17,23,25(a),27,29,31,35,37,42,43,49,51
Sec 2.8	1b,d,e,3,5,7,9,11,21,23,27,29,37,39,40,43,51,53,59
Sec 3.1	1-35 odd, 45,46,49,51,53,55,59,61,63,66,67,71,75,
Sec 3.2	1-35 odd,41,43,47,53,57
Sec 3.3	1-51 odd
Sec 3.4	1-49 odd,55,57,59,61,65,75,81,83,93,95,97
Sec 3.5	1-21 odd, 25,27,29,33,45-59all,63,73,75
Sec 3.6	1-33 odd,39-53odd
Sec 3.7	1,3,5,9,13,16,19,23,25,30(a),34,35,37
Sec 3.9	1,3,5,11,13,15,23,31,33,34,39,41,45
Sec 3.10	1,3,5,7,8,10,11,13,15,17,19,21,22,23,25,31,33,37,39,40,42
Sec 4.1	1,3,5,7,9,15,19,22,23,24,25,27,29,31,33,35,39,41,43,44,47-61odd,73,74,78
Sec 4.2	1,2,4,5,7,11,13,14,15,19,23,25,33,35,
Sec 4.3	1,3,5,7,9,11,13,14,15,17,19,21,25,27,29,33,39,41,43,45,47,49,61,67,75
Sec 4.4	1-63 every other odd, 71,72,77,81,82,87
Sec 4.5	3,5,7,9,11,17,19,23,27,31,35,41,45,49,55,61,63,67
Sec 4.7	1,3,9,11,13,19,25,29,33,43,51,53,62,67,71
Sec 4.9	1-47 odd,53,59,61,63,65,,66,69
Sec 5.1	1,3,13,15,19 (use n subintervals),24,27a
Sec 5.2	1,3,7,21,25,33a,b,35, 37,39,41,43,45,49,50,57,59,61
Sec 5.3	2,3,5,7,11,13,15,19,20,21, 23,25,26,27,28,29,31,32,33,35,37,38,40,45,47,57,65a,b,72,75
Sec 5.4	1,2,3,5,6,7,9,11,14,15,16,17,18,21,23,27,29,31,33,35,37,41,42,43,50,51,53,59
Sec 5.5	1-35&39-47 odds,53,57,59,61,63,65,67,69,71,73,83,85,86
Sec 6.1	1,3,5,9,11,15,17,19,20,21,22,25,27,31,45,55
Sec 6.2	1,3,4,5,6,11,13,17,23,25,33,43,47,53,65
Sec 6.3	3,5,9,11,13,17,21,25,29,37,41
Sec 6.4	
Sec 6.5	1,3,5,7,9,11,15,17,23

Grade Policy

The course grade is determined from the following:

- 10 Digital Homework sets
- 10 Graded Homework sets
- 8 Quizzes
- 2 major exams
- Comprehensive Final Exam

Weights:	10% Digital Homework Sets
	10% Written Homework Sets
	15% Quizzes
	35% Major exams
	30% Final Exam

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		

- Digital Homework: There will be 10 assignments. The DHW percent will be based on 9 scores. The lowest scores from will be dropped (DHW 10 will not be dropped.) The assignments will be generated using WebAssign. Each assignment will be posted no later than Tuesday afternoon and you will have until 11:59 pm of the following Sunday to complete the assignment. See schedule for due dates, these are indicated by DHW#. WebAssign contains an equation editor, which allows you to present your solutions in a mathematically correct form--beware parentheses. Once you submit a solution, it is graded immediately - - for some problems you will have multiple attempts at the solution, for others only one attempt. Assignment grades will be posted in elearning--there will be NO late digital homework.

To gain access to Web Assign

1. Log into elearning, MATH 2413.0U1 - Differential Calculus - Su15
 2. Select "Access Web Assign"
 3. On the next page, you will have 3 options.
 - a) "Purchase access online" if you do not already have an access code and you want to buy access to the e book and homework problems without printed text
 - b) "Enter an access code" if you have already purchased an access code
 - c) "Continue my trial period" if you want to start using the system before purchasing. The deadline is given in red.
- Graded Homework: There will be 10 homework sets to be handed in for grading. The best 8 of the 10 scores will be scaled to 100%. The homework sets will be made available via elearning, by Tuesday. See schedule for due dates, these are indicated by GHW#. VERY IMPORTANT: GHW is to be printed out, worked, STAPLED and submitted, no exceptions. FIRST and LAST NAME (printed and complete), PROBLEM SESSION NUMBER, and your TA'S Name clearly written. Your work is to be complete, written with proper mathematical notation, and logical flow. Clarity is valued at 25% of the possible points--be neat! Graded homework is to be submitted within the first 5 minutes of lecture on the due date, every Monday. Late homework will not be accepted, no exceptions. Homework will be returned during problem section. If the return window is missed, it is the students' responsibility to make arrangements to pick up the document. GHW that has not been picked up by the date of the exam which covers that material will be destroyed the day of the final exam.
 - Each quiz will be administered in the problem session during the weeks identified in the schedule. They will be returned to you at the next meeting of your problem session. The best 6 of the 8 scores will be scaled to 100%.
 - Major exams constitute 35% of your course grade and are weighted as follows. The lowest exam score is valued at 15%, the greater at 20%. Each major exam will occur at the time and date specified on the schedule.

The location will be announced in class and posted on elearning. Graded exams will be returned during problem session.

- The final exam is not optional, is comprehensive, and constitutes 30% of your course grade. Final exams are not returned to the student but are held for review for one year.

Course & Instructor Policies

Attendance: Daily attendance will be taken.

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, 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 side conversations with your classmates.

There will be **no extra credit**

Exam/Quiz policies

- (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, regardless of inspiration, will receive little or no credit.
- (e) Graded quizzes and major exams will be returned to you as soon as possible.
- (f) Any document not picked up by the end of finals week will be destroyed.

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.

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.

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.
