

University of North Texas at Dallas

Spring 2012

SYLLABUS

Math 1710 Calculus I

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| Department of Mathematics & Information Sciences | | Division of Liberal Arts and Sciences | |
| Instructor Name: | Vinod Arya | | |
| Office Location: | FH-226 | | |
| Office Phone: | 972-338-1375 | | |
| Email Address: | Vinod.arya2@unt.edu | | |
| Office Hours: | T 12:00 pm – 2:00 pm; Wed 10:00 am – 2:00 pm, Th 1:30 pm – 2:30 pm | | |
| Available upon Appointment: | On request. | | |
| Classroom Location: | 2-242. | | |
| Class Meeting Days & Times: | TTh 10:00 am – 11:20 am & Th 11:30 am – 12:50 pm | | |
| Course Catalog Description: | Limits and continuity, derivatives and integrals; differentiation and integration of polynomial, rational, trigonometric, and algebraic functions; applications, including slope, velocity, extrema, area, volume and work; other selected topics. | | |
| Prerequisites: | Math 1650 (Pre-calculus); both Math 1600 (Trigonometry) and Math 1610 (Functions); or the consent of the instructor. | | |
| Co-requisites: | | | |
| Required Text: | University Calculus Early Transcendentals. Hass, Weir and Thomas, 2 nd Edition, Addison Wesley and MyMathLab (Required). (MyMathLab Code: arya45911) | | |
| Recommended Text and References: | Calculus: Early Transcendentals, 7 th Edition, by J. Stewart, Thomson | | |
| Access to Learning Resources: | UNT Dallas Library: phone: (972) 780-3625; web: http://www.unt.edu/unt-dallas/library.htm UNT Dallas Bookstore: phone: (972) 780-3652; e-mail: 1012mgr@fhcg.follett.com | | |
| Course Goals or Overview: | The goal of this course is to prepare and train students so that they are able to | | |
| 1 | Solve calculus problems. | | |
| 2 | Demonstrate knowledge of problem-formulation, problem-solving and modeling techniques central to applications of mathematics. | | |
| 3 | Manipulate and analyze numerical and graphical data to draw reasonable inferences and conclusions. | | |
| Learning Objectives/Outcomes: | At the end of this course, the student will | | |
| 1 | Understand the concepts of limits, derivatives and integrals of single variable functions. | | |
| 2 | Be able to calculate limits, derivatives and integrals of elementary single variable functions. | | |
| 3 | Be able to interpret and express the concepts of limits, derivatives and integrals in geometrical viewpoint. | | |
| 4 | Be able to utilize the concepts of calculus to problems of other disciplines. | | |

Course Outline

This schedule is subject to change by the instructor. Any changes to this schedule will be communicated by the class website.

| Week | Topics |
|---------|--|
| Week 1 | Review of Functions 1.1 – 1.3 |
| Week 2 | Review of Functions 1.3 – 1.6; Limit of a Function 2.1 – 2.4 |
| Week 3 | Continuity 2.5; Limits Involving Infinity |
| Week 4 | Differentiation 3.1 – 3.3 |
| Week 5 | Differentiation 3.4 – 3.6 |
| Week 6 | Test 1 |
| Week 7 | Differentiation 3.7 – 3.8 |
| Week 8 | Inverse Trigonometric Functions 3.9 |
| Week 9 | Related Rates 3.10 |
| Week 10 | Applications of Derivatives: 4.1-4.3 |
| Week 11 | Applications of Derivatives 4.4-4.5 |
| Week 12 | Test 2 |
| Week 13 | Integration 5.1, 5.2 |
| Week 14 | Integration 5.3, 5.4 |
| Week 15 | Test 3 |
| Week 16 | Integration 5.5, 5.6 |
| Week 17 | <i>Final Exam: Thursday, May 10; 10:00 am 12:00 PM.</i> |

Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Grading Matrix

| Instrument | Value (points or percentages) | Total |
|--|-------------------------------|-------------|
| Three Tests | 15% each | 45% |
| Online Homework/Quiz/Project/ Class Participation | 40% | 40% |
| Final Exam | 15% | 15% |
| Total | | 100% |

Grade Determination:

- A: 90.0% or better
- B: 80.0% - 90.0%.
- C: 70.0% - 80.0%
- D: 60.0% - 70.0%.
- F: 60.0% or less

University Policies and Procedures

Students with Disabilities (ADA Compliance):

The University of North Texas Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA). Students' with documented disabilities are responsible for informing faculty of their needs for reasonable accommodations and providing written authorized documentation. For more information, you may visit

the Office of Disability Accommodation/Student Development Office, Suite 115 or call Laura Smith at 972-780-3632.

Student Evaluation of Teaching Effectiveness Policy:

The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class.

Assignment Policy:

No late homework assignments will be accepted. A missed home-assignment is worth zero. No makeup tests and quizzes will be given, except for documented emergencies.

Exam Policy:

Exams should be taken as scheduled. No makeup examinations will be allowed except for documented emergencies (See Student Handbook).

Academic Integrity:

Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of conduct and Academic Dishonesty policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Conduct at http://www.unt.edu/csrr/student_conduct/index.html for complete provisions of this code.

Bad Weather Policy:

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website www.unt.edu/dallas. Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.

Attendance and Participation Policy:

The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent.

Diversity/Tolerance Policy:

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Center for Student Rights and Responsibilities as the instructor deems appropriate.

Other Policies:

Use of cell Phones in the class is prohibited. No Food and Drink is allowed in the class. An Incomplete Grade "I" will be awarded only in exceptional circumstances and per university rules (see catalog). Students are responsible for meeting all university deadlines (registration, fee payment, prerequisite verification, drop deadlines etc.). See university catalog and/or schedule of classes for policies and dates.