### University of North Texas at Dallas
### Fall 2012
### SYLLABUS

#### MATH 1720 D: DIFFERENTIAL CALCULUS 3 Hrs

<table>
<thead>
<tr>
<th>Department of Mathematics and Information Sciences</th>
<th>Division of Liberal Arts and Life Sciences</th>
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</table>

**Instructor Name:** Vinod Arya  
**Office Location:** DAL2-226  
**Office Phone:** 972-338-1375  
**Email Address:** vinod.arya@unt.edu

**Office Hours:** TWR 1 pm – 4 pm  
**Virtual Office Hours:** None

**Classroom Location:** DAL 2-242  
**Class Meeting Days & Times:** TR 11:30 am – 12:50 pm

**Course Catalog Description:** Differentiation and integration of exponential, logarithmic and transcendental functions; integration techniques; indeterminate forms; improper integrals; area and arc length in polar coordinates; infinite series; power series; Taylor’s theorem. Prerequisite(s): MATH 1710. Satisfies the Mathematics requirement of the University Core Curriculum.

**Prerequisites**  
MATH 1710 (Calculus I)  
Satisfies the Mathematics requirement of the University Core Curriculum.

**Co-requisites:** None

**Required Text:**  

**Recommended Text and References:**

**Access to Learning Resources:**  
**UNT Dallas Library:**  
phone: (972) 780-3625;  
web: [http://www.unt.edu/unt-dallas/library.htm](http://www.unt.edu/unt-dallas/library.htm)  
**UNT Dallas Bookstore:**  
phone: (972) 780-3652;  
e-mail: 1012mgr@fheg.follett.com

**Course Goals or Overview:**  
The goal of this course is to prepare students to be able to take other higher level calculus, differential equations and other classes.

**Learning Outcomes:** At the end of this course:

**Course Learning Outcomes:**

1. Students will be able to learn various methods of integrating polynomial, transcendental and other functions.
2. Students will be able to apply these techniques to the real world problems.
3. Students will be able to expand a function in an infinite series or power series.
4. Students will become familiar with Taylor’s theorem and how to use it.

**Program Learning Outcomes**

SLO#1 Students will be able to solve calculus problems.  
SLO #5 Students will be able to manipulate and analyze numerical and graphical data in such a way as to draw reasonable inferences and conclusions.

**Tentative Course Outline**
This schedule is subject to change by the instructor. Any changes to this schedule will be communicated by announcement in class and/or email.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week #1</td>
<td>Syllabus and Review</td>
</tr>
<tr>
<td>Week #2</td>
<td>8.1, 8.2</td>
</tr>
<tr>
<td>Week #3</td>
<td>8.3, 8.4, Quiz I</td>
</tr>
<tr>
<td>Week #4</td>
<td>8.5, 8.7, 9.1,</td>
</tr>
<tr>
<td>Week #5</td>
<td>9.2, 9.3, Review and Exam I</td>
</tr>
<tr>
<td>Week #6</td>
<td>9.4, 9.5,</td>
</tr>
<tr>
<td>Week #8</td>
<td>9.6, Quiz II</td>
</tr>
<tr>
<td>Week #9</td>
<td>9.7, 9.8,</td>
</tr>
<tr>
<td>Week #10</td>
<td>10.1, Review and Exam II</td>
</tr>
<tr>
<td>Week #11</td>
<td>10.2, 10.3</td>
</tr>
<tr>
<td>Week #12</td>
<td>10.4</td>
</tr>
<tr>
<td>Week #13</td>
<td>11.1, 11.2</td>
</tr>
<tr>
<td>Week #14</td>
<td>Review and Exam III</td>
</tr>
<tr>
<td>Week #15</td>
<td>11.3, 11.4</td>
</tr>
<tr>
<td>Week #16</td>
<td>Review and Final Exam</td>
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</tbody>
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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:**

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Value (points or percentages)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework Assignments</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>3 tests</td>
<td>3 at 15% each</td>
<td>45%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Grade Determination:**

- A = 90% or better
- B = 80 – 89 %
- C = 70 – 79 %
- D = 60 – 69 %
- F = less than 60%

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 Academic Integrity 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 Academic Integrity at [http://www.unt.edu/unt-dallas/policies/Chapter%207%20Student%20Affairs,%20Education,%20and%20Funding/7.002%20Code%20of%20Academic_Integrity.pdf](http://www.unt.edu/unt-dallas/policies/Chapter%207%20Student%20Affairs,%20Education,%20and%20Funding/7.002%20Code%20of%20Academic_Integrity.pdf) for complete provisions of this code.

In addition, all academic work submitted for this class, including exams, papers, and written assignments should include the following statement:

*On my honor, I have not given, nor received, nor witnessed any unauthorized assistance that violates the UNTD Academic Integrity Policy.*

**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](http://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.