MATH1190.001: BUSINESS CALCULUS
Syllabus for Spring 2011 (Jan.18-May.13)

INSTRUCTOR: Koshal Dahal	**OFFICE: GAB 441 (with Window-Nepal)** **Personal Site: www.math.unt.edu/~koshal**
OFFICE HOURS:- M/W/F: 10:00-10:45am Fri: 4pm-5:45pm & by appointment.	**CLASS MEETS:** M/W/F, 9am-9:50am, @ GAB 206
EMAIL: koshaldahal@my.unt.edu For emergencies, not in lieu of attendance. Allow two (2) business days for reply. Include course name, number and section and your full name in the subject header. Email without this information may not get opened.	**MATH LAB: GAB 440 (Opposite to Window-Nepal)** Web site: www.math.unt.edu/mathlab Go to Website for hours of operation**.**

FINAL EXAM DATE AND TIME: Wednesday May 11, 8am-10am

COURSE DESCRIPTION: 3 hours. Differential and integral calculus with emphasis on applications to business. Prerequisite(s): two years of high school algebra and consent of department; or MATH 1100 with a grade of C or better. Satisfies the Mathematics requirement of the University Core Curriculum.

TEXTBOOK: Calculus and Its Applications, 9th Bittinger and Ellenbogen.

ONLINE TUTORING:
www.unt.edu/lc, and select the online tutoring button located in the left column of the page. The link will direct you to www.smarthinking.com.

GRAPHING CALCULATOR:
TI 83, TI 83 Plus, TI 84, TI 84 Plus or equivalent. TI 89's, TI 92'2 or any other utility with alphanumeric capabilities ARE NOT permitted. **A calculator may NOT be shared during an exam.**

ATTENDANCE POLICY:
Class attendance is mandatory. Students are responsible for all information given in class, regardless of his/her attendance. Starting Monday, Feb. 28, students may be administratively dropped from the course for nonattendance with a grade of "WF". The last day a student may be dropped for nonattendance is Friday, April 22. The **Four (4)** or more absences constitute nonattendance.

ACADEMIC DISHONESTY:
Refer to the following university site for the official policy with regards to academic dishonesty. The web site is: http://vpaa.unt.edu/academic-integrity.htm.

EVALUATION:-	
Average of 3 in-class exams	60%
Homework	20%
Final Exam	20%

GRADE ASSIGNMENT:
A: [90%, ∞); B: [80%, 90%); C: [70%, 80%);
D: [60%, 70%); F: [0%, 60%). **Note: 59% is an F.**

Your grade is determined solely by your performance on the evaluation criteria and the grade assignments listed above. Please "**Expect NO extra credit"**.

FINAL GRADE:
Students may access their course grades online at: my.unt.edu. Your final course grade is determined by the criteria explicitly stated on this syllabus.

DISABILITY ACCOMMODATIONS:
It is the responsibility of students with certified disabilities to provide the instructor with appropriate documentation from the Dean of Students Office.

NOTES:-

1) This syllabus is subject to change as the instructor deems necessary. Any/all changes will be announced during regular class time. It is the responsibility of the student to attend each scheduled class to be informed of these changes.
2) You are responsible for meeting all university deadlines, such as: registration, fee payment, drop deadlines, etc. Refer to the University Catalog for policies and dates: http://essc.unt.edu/registrar/schedule/spring/calendar.html

Summary of Key Dates for Spring 2011:

January 18, Tuesday
Classes begin.

January 19, Wednesday
Last day to register for Spring2011

January 31, Monday
Last day to drop a course and receive some refund; Drops after this date require instructor's written
consent.

February 25, Friday
Last day to drop a course or withdraw from the university with a grade of "W" for courses that a student is not passing; after this date a grade of "WF" may be recorded.

February 28, Monday
Beginning this date instructors may drop students with a grade of "WF" for non-attendance.

March 9, Wednesday
Mid semester

March 14 – March 18
Spring Vacation

March 29, Tuesday
Last day to drop course with consent of instructor

April 11, Monday
Beginning this date a student may request a grade of "I", incomplete, a non-punitive grade given only if a student (1) is passing; (2) has justifiable reason why the work cannot be completed on schedule; and (3) arranges with instructor to complete the work within the following academic semester.

April 22, Friday
Last day for an instructor to drop a student with a grade of "WF" for non-attendance

May 2 – May 6
Pre-finals week

May 6, Friday
No Classes

May 7, Saturday – May 13, Friday
Final examinations week: term ends.

Academic Dishonesty:

Cheating on final exams, on in-class tests are a serious breach of academic standards and will be punished severely and generally result in a student failing the course. All work done on in-class exams and quizzes must represent only the student's own work, unless otherwise stated in the directions. See http://vpaa.unt.edu/academic-integrity.htm for details on academic integrity at UNT.

Attendance:

Class attendance is mandatory. Missing any portion of class may be counted as an absence. **My email may NOT be used in lieu of attendance**. Students are responsible for all information given in class, regardless of his/her attendance. This includes knowing exam dates and homework assignments. If you miss a class, it is your responsibility to learn of all the important stuff you missed. Exchange contact information with several members of your class; so that you will have multiple sources contact in case of a personal emergency.

Classroom Etiquette:

Appropriate behavior is expected of all students taking this course. **Arrive to class promptly and do not leave until the scheduled ending time of the class**. If you must arrive late or leave early, please do so as discreetly as possible and take a seat near the door. **Turn off** all non-medical electronic devices such as pagers, cell phones, laptops, etc. Take off the headphones. Do not read newspaper or work on unrelated assignments during class. I prefer that you not eat during class.

Course Objectives:

Upon successful completion of this course, the student will be able to apply arithmetic, algebraic and higher-order thinking skills as they apply to solving business and economics applications problems that involve calculus: differentiation and integration.
Specifically, the student will

- Be able to apply appropriate differentiation techniques to obtain derivatives of various functions, including logarithmic and exponential functions
- Be able to solve application problems involving implicit differentiation and related rates
- Be able to solve optimization problems with emphasis on real-world business applications
- Be able to obtain integrals of various functions, including use of integration by substitution and by parts.
- Be able to solve real-world economics and business applications problems using integration techniques

Drop Policy:

If the student is unable to complete this course, it is his/her responsibility to formally withdraw from the course. The student may do so through the Registrar's Office after obtaining the necessary signatures. Consents for withdrawal and all necessary signatures may be obtained in the Math Department Office, GAB 435. **The last day to drop a class with an automatic "W" is** Friday, Feb 25. **The last day to drop a class with the consent of instructor with "W" or "WF" is** Tuesday, March 29. "WF" is averaged into your GPA as an "F." If the student does not properly withdraw from the course but stops attending, s/he will receive a performance grade, usually an **F**.

Exams:

Three in-class exams are planned for this semester. Count your points on exams to be sure the totals are correct. Keep a record of all your scores. If you think that your work has been graded incorrectly, ask for

a re-grade immediately after receiving the exam back. Your entire exam will then be re-graded, and you may lose points or gain points on any problem, including but not limited to the problem you ask about. Each exam is evaluated at 20% of the course grade.

Content and dates are tentatively scheduled as follows:

EXAM 1: Chapter R, 1.1 – 1.4 – (Week of Monday Feb. 14)
EXAM 2: Chap: 1.5 – 1.8, Chapter 2 as presented in class, 3.1, 3.2 – (Week of Monday March 21)
EXAM 3: Chap: 3.4 – 3.6, and Chapter 4 – (Week of Monday April 18)

The final exam will include this material as well as sections 5.1 and 5.2.

Exam Etiquette:

- Place all papers, textbook, notes, etc. in a backpack or a book bag and close it securely.
- Turn off all electronic devices (unless medically necessary), this includes cell phones, pagers, etc.
- Handling of ANY such electronic devices during an exam will be construed as cheating (receiving unauthorized aid) and may result in a zero for that exam.
- Do not wear HATS or CAPS during exams.
- Do not share any materials during an exam. This includes, but is not limited to pencils, erasers, calculators, etc.
- Only approved calculators during an exam. You may have both a scientific and a graphing calculator. It is your responsibility to know how to work the calculator(s) you bring to a test.
- Have only the exam, pencil, eraser and calculator out during an exam. Plenty of work–space is provided on the actual exam. You will not be permitted to have any scratch paper during an exam.

Final Exam: Wednesday May 11, 8am-10am

Your final exam will be administered in our regular classroom. It is scheduled on Wednesday May 11, 8am-10am. See http://essc.unt.edu/registrar/schedule/fall/final.html for UNT Spring 2011 final exams schedule. **The final exam is comprehensive and is 20% of the course grade.**

Grade Assignment:

The student course grade is assigned according to the evaluation criteria and grading assignment stated on this syllabus. The grade is completely objective and is determined solely by student performance on each of the evaluation criteria (in-class exam grades, on-line homework and quizzes, and the final exam). Do not expect extra credit work or bonus grade assignments.

Homework:

Homework is usually assigned ONLINE (math.unt.edu/~koshal/teachingportfolio.html) for every class period. Unless otherwise stated, all homework assignments are due at the beginning of the next class period. NO LATE HOMEWORK will be accepted for any reason whatsoever. A grade of zero will be assigned to any homework assignment not turned in at the time class begins. **NO EXCEPTIONS.** If you know that you will not be in class in time to turn in an assignment, you may turn it in EARLY to me personally. Homework dropped off at my office, slid under my office door, handed to someone in my office or into the Math Department office is NOT considered turned in. Math dept staffs are explicitly instructed to NOT accept homework on my behalf. Electronically submitted homework (fax or email) will not be accepted, regardless of reason. You or someone in lieu of you must attend class promptly and submit the assignment(s) in order to have the assignments accepted.

Incomplete, the Grade of "I":

Beginning Monday, April 11, a student that qualifies may request a grade of "I", incomplete. An "I" is a non-punitive grade given only if ALL three of the following criteria are satisfied. They are:

1) The student is passing the course;
2) The student has a justifiable (and verifiable) reason why the work cannot be completed as scheduled; and
3) The student arranges with the instructor to complete the work within one academic year.

Make-up Exam Policy:

NO MAKE-UP EXAMS WILL BE GIVEN. An exam may be taken **prior** to the scheduled date. I request a week's notice for this accommodation via email. In the event of a schedule conflict with a university function, dental/physician's appointment, wedding, formal, or whatever, the **student must take the test early**. If a student does not take a scheduled exam, a **zero** will be recorded for that exam and a notice may be sent through the registrar's office.

There are three in-class exams. If your final exam score is higher than one of your in-class exam scores, then that in-class exam grade will be replaced with final exam grade. If you miss an in-class exam, a zero will be recorded for that exam grade and your final exam score will replace that one zero. If you receive a zero for cheating on an exam, the final exam score will NOT replace that zero. The final exam score can count as 20% of the course grade. Again, **NO MAKE-UP EXAMS WILL BE GIVEN FOR ANY REASON EVER**.

Progress Reports:

Students needing progress reports completed/signed for athletics, scholarships and/or any other organization must attend office hours to get them completed.

Recommended Keys to Success/Expectations:

Students who are successful in math spend a great deal of time and honest effort outside of class along with punctual attendance. Students who are successful come to each class on time and stay the entire class. You are responsible for everything that happens in class. You should come to each lecture and come prepared. Students who are successful spend an hour (or two) after each lecture with a classmate reviewing the lesson and working on homework problems. They meet with a study group several times per week, attend SI sessions and use the Math Lab. Successful students work on the assignments consistently every day, instead of waiting until the last minute. They read their textbooks regularly and make learning notes. Math is not a spectator sport. You will not learn mathematics from watching the instructor or friends display ideas and solve problems. You must try the problems, finish problems, ask questions, correct your mistakes, put concepts in your own words, and practice, practice, practice!! An increase in effort usually results in increases in success.

Statement regarding use of email and attendance:

- Email may not be used in lieu of attendance. It is primarily for emergencies. YOU MUST ATTEND class to obtain course-related information.
- YOU are responsible for attending the required class meetings as stated in the course schedule guide.

Student Behavior:

Student behavior that interferes with an instructor's ability to conduct a class or other students'

opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. **Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Center for Student Rights and Responsibilities to consider whether the student's conduct violated the Code of Student Conduc**t. The university's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at www.unt.edu/csrr

Student Evaluation of Teaching Effectiveness:

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. Please be advised that the spring administration of the SETE will remain open through the week of finals at www.my.unt.edu

REMARK:

TO BE SUCCESSFUL IN A MATHEMATICS CLASS:

1. **Before each class meeting, read the section in the book that will be covered that day. (Consult the Daily Schedule to know what section that will be.)**
2. **Attend every class. Be on time and prepared to concentrate on the lesson.**
3. **Take good, organized notes in class and keep them in a notebook. Write down all examples and key comments made by the instructor.**
4. **Study both your notes and text on a regular basis. Rework class examples. Read your text slowly, using pencil and paper to work out examples.**
5. **Work all of the homework assignment before the next class. Read the directions carefully. Note the different types of problems. Be sure you understand the necessary facts (intuitions) and related procedures needed to work each type of problem.**
6. **Study in advance for tests. Include these activities: review notes and text; practice working problems; and reflect on similarities, differences, and possible variations of problems.**
7. **Get a good night's sleep before a test. Make sure you have sharpened pencils, eraser, and charged batteries in your calculator at test time.**
8. **While taking a test: jot down formulas; read directions carefully; work easy problems first; show your work in an organized, neat form; use all of the allowed time.**

MATHEMATICS IS NOT A SPECTATOR SPORT -- YOU MUST PRACTICE TO LEARN!!!

Tentative Schedule for Math 1190:001–MWF Spring11

Below is a TENTATIVE schedule of instruction for the semester. Homework assignments are typically due at the beginning of class period following its lecture. The dates and contents are subject to change and you are responsible for all changes announced during class. As class time permits, we will work ahead. You are responsible for all information given in class regardless of your attendance. **Note: The Exam date may change as the instructor deems necessary.**

	Monday	Wednesday	Friday
Wk 1	No Class	Introduction (R.1): Graphs and Equations	(R.2): Functions and Models
Wk 2	(R.3): Finding Domain and Range	(R.4): Slope and Linear Functions	(R.5): Nonlinear Functions and Models
Wk 3	1.1: Limits: A Numerical and Graphical Approach	1.2: Algebraic Limits and Continuity	1.3: Average Rates of Change
Wk 4	1.4: Differentiation Using Limits of Difference Quotients	1.5: Differentiation Techniques: The Power and Sum-Difference Rules	Content Overview, special applications
Wk 5	**EXAM 1:** **(R1-R5 & §1.1-1.4)**	1.6: Differentiation Techniques: The Product and Quotient Rules	1.7: The Chain Rule
Wk 6	1.8: Higher Order Derivatives	2.1: Using First Derivatives to Find Maximum and Minimum Values and Sketch Graphs	2.2: Using Derivatives to Find Absolute Maximum and Minimum Values
Wk 7	2.4: Using Derivatives to Find Absolute Maximum and Minimum Values	2.5: Maximum-Minimum Problems: Business and Economic Applications	(2.6): Marginal and Differentials
Wk 8	2.7: Implicit Differentiation and Related Rates	3.1: Exponential Functions	3.2: Logarithmic Functions
Wk 9	**WINTER BREAK**	**WINTER BREAK**	**WINTER BREAK**
Wk 10	Content Overview, special applications	**EXAM 2:** **(§1.5-1.8, Chap.2 & §3.1-3.2)**	3.3: Applications: Uninhibited and Limited Growth Models
Wk 11	(3.4): Applications: Decay	3.5: The Derivatives of a^x and $\log_a x$	3.6: An Economics Applications: Elasticity of Demand
Wk 12	4.1: The Area under a Graph	4.2: Area, Anti-derivatives and Integrals	4.3: Area and Definite Integrals
Wk 13	4.4: Properties of Definite Integrals	4.5: Integration Techniques: Substitution	4.6: Integration Techniques: Integration by Parts
Wk 14	Content Overview, special applications	**EXAM 3:** (§3.4-3.6 & Chap.4)	5.1: An Economics Application: Consumer surplus and Producer Surplus
Wk 15	5.2: Applications of the Models $\int_0^T P_0 e^{kt} dt$ and $\int_0^{-T} P_0 e^{kt} dt$	Problem Sessions, Content Overview	**Review**
Wk 16	**Review**	**Reading Day, No Classes**	**Semester Ends**
Wk 17	**Final**	**Final**	**Final**

Have a good Semester!!!