

## MATH 21 FALL, 2007 (B version)

### COURSE INFORMATION

**OVERVIEW: Calculus I.** This course begins the students' study of Calculus. Topics covered will include: review of the properties of the basic functions, including polynomial, rational, exponential, logarithmic and trigonometric functions; notion of limit and its applications to the study of graphs, continuity of functions and the definition of derivative; derivatives of basic functions; computational methods for identifying derivative functions: product rule, quotient rule, chain rule, implicit differentiation. The course then develops applications of differentiation to curve sketching and analysis, related rates and optimization. The final portion of the course introduces the definition of the definite integral, some methods of computation and the application to area, distance, volume and average value of a function. The relationship between differentiation and integration is examined in the Fundamental Theorem of Calculus.

This course assumes facility with basic algebra and mathematical analysis as tested on the Calculus Readiness Assessment. If you are unsure whether your background is adequate for this course, please make an appointment to discuss this with your instructor immediately.

**TEXT:** Calculus: Early Transcendentals, 6<sup>th</sup> ed. By James Stewart, Chapters 1 through 6,

#### INSTRUCTORS:

Prof. H. Fegan	hdf3	8-4678	XS 209
Prof. M. Muralee	mum2	8-3743	XS-208
Prof. L. Stanley	ljs4	8-3723	XS-335
Prof. S. Szczepanski	ss08	8-3727	XS-340

#### TEACHING ASSISTANTS:

J. Ahmet	jba205	8-4394	XS-311
B. Baker	bab207	8-3757	XS-306
A. Gerek	ayg207	8-4377	XS-308
J. Shiffler	jps207	8-4707	XS-312
M.Skyers	mas207	8-3761	XS-314

**CLASS MEETINGS and ATTENDANCE:** Classes will meet four times each week. Lectures will be given on Monday, Wednesday and Friday. Each section will meet for one recitation each week on Tuesday or Thursday. **Attendance is required. A Section Three Report will be filed with the Dean's office for any student who misses three or more classes.**

**ASSIGNMENTS/EXAMINATIONS:** Grades in this course will be based upon the student's performance on graded assignments/quizzes, written assignments, two one-hour tests (4 o'clock examinations) and a final examination.

For each topic covered, a list of suggested **“PRACTICE PROBLEMS”** from the textbook will be posted on the course webpage, usually about ten to fifteen. These problems will be used directly or as templates for problems on quizzes and examinations. Students should prepare all of these problems.

Each week a **“HOMEWORK QUIZ”** will be given in recitation. Typically these assignments will include 3-5 questions from the previous week’s work. The problems will be drawn from the list of PRACTICE PROBLEMS. The quizzes will be generated by an online system that will randomly select problems from the list of practice problems and will generate variants of the PRACTICE PROBLEM listed in the textbook. Students will receive ONE point for each correct answer submitted. **NO PARTIAL CREDIT will be awarded on these weekly quizzes.**

**NO MAKE-UP QUIZZES will be permitted under any circumstances.**

**Homework grade** will be determined by totaling the number of quiz points earned and then multiplying by THREE. There will be a minimum of 35 quiz questions; 25 quiz points will indicate a “perfect” quiz grade of 75 in the COURSE TOTAL ; quiz points earned in excess of 25 will be added to the students course total (no multiplication by three). OCCASSIONALLY, LECTURERS may give an unannounced quiz in lecture. Points earned on these quizzes will be added to the “quiz excess” total.

In addition students will be required to submit SEVEN written assignments during the semester. **“WRITTEN ASSIGNMENTS”** will be posted on the webpage; these will be collected in lecture on the date specified on the assignment. Typically these will consist of one or two problems. Students will be required to submit solutions to these problems that are carefully prepared and well written. Student work will be evaluated on the basis of presentation, clarity as well as correctness. A specific rubric for the evaluation of WRITTEN ASSIGNMENTS will be posted on the webpage.

Work will be collected at the beginning of lecture. **All work must be submitted on time; no exceptions.** A student will receive a grade of “0” for each missed or late assignment. The student’s **Written Assignments grade** will be determined after dropping the two lowest Written Assignment scores.

Students may use calculators while working on practice problems and to check computations but are reminded that **calculators are not permitted during examinations.** Use of the computer algebra system, **MAPLE**, will be introduced; some assignments will require its use.

The two **“EXAMINATIONS”** are scheduled as follows:

**Tuesday, September 25**

## Thursday, November 8

The material to be included and the location will be posted on the courses webpage approximately one week prior to the examination. Student work will be evaluated for its presentation, clarity and correctness.

Make-up examinations will only be given to those students with legitimate and verifiable reasons for missing the regularly scheduled examination. It is the student's responsibility to notify the instructor in a timely fashion, preferably before the scheduled examination.

The final examination will be comprehensive. Students should be prepared to answer questions on all topics covered in this course. **Students should not make travel plans until after the final examination schedule has been announced by the Registrar.** Make-up examinations to accommodate travel plans will not be permitted.

**GRADING POLICY:** Student work will be weighted as follows:

<b>HOMEWORK QUIZ:</b>	<b>maximum of 75 POINTS</b>
<b>WRITTEN ASSIGNMENTS:</b>	<b>maximum of 75 POINTS</b>
<b>Midterm EXAMS:</b>	<b>maximum of 100 POINTS (each)</b>
<b>FINAL EXAM.:</b>	<b>maximum of 200 POINTS</b>
<b>QUIZ excess:</b>	<b>(estimated range: 10-25 POINTS)</b>
<b>TOTAL:</b>	<b>maximum of 550 POINTS</b>

The following policy will be used:

A student with an average of at least 90% (495 points) will receive a grade of at least A-.

A student with an average of at least 80% (440 points) will receive a grade of at least B-.

A student with an average of at least 65% (357 points) will receive a grade of at least C-.

A student with an average of at least 50% (275 points) will receive a grade of at least D-.

**COLLABORATION and ACADEMIC INTEGRITY.** Students are encouraged to work cooperatively on practice problems. There is quite a bit of evidence that this sort of collaboration improves performance in calculus courses. However, all work submitted for grading must be the work of the individual submitting the work. No collaboration is permitted on work submitted for grading. Copying another student's homework is a violation of the University Code of Conduct. Submission of work prepared by a tutor or other individual whether employed by Lehigh or not is also a violation of the University Code of Conduct.

In particular, if it is suspected that work submitted is work copied from another student's work or the work of some other individual, such as a tutor, teaching assistant or faculty member, a grade of '0' will be assigned and the matter may be referred to the appropriate disciplinary committee.

Students are advised to read and to observe the university policy on Academic Integrity which can be found along with other information at the web site:

<http://www.lehigh.edu/~inprv/academicintegrity.html>

excerpt:

**Lehigh University Undergraduate Student Senate  
Statement on Academic Integrity**

We, the Lehigh University Student Senate, as the standing representative body of all undergraduates, reaffirm the duty and obligation of students to meet and uphold the highest principles and values of personal, moral and ethical conduct. As partners in our educational community, both students and faculty share the responsibility for promoting and helping to ensure an environment of academic integrity. As such, each student is expected to complete all academic course work in accordance to the standards set forth by the faculty and in compliance with the University's Code of Conduct.

**OFFICE HOURS and MATH. HELP CENTER.** Students are strongly encouraged to make regular use of the help provided by the faculty and teaching assistant during office hours and through the Mathematics Help Center. Office hours for the faculty and teaching assistants will be posted on the course web page. Hours of operation of the Mathematics Help Center will be posted on the bulletin boards in Christmas-Saucon Hall.

**STATEMENT ON DISABILITIES.** The Office of Academic Support Services in the Dean of Students office addresses requests for accommodations for learning and/or physical disabilities for undergraduate and graduate students. For more information, visit the web site at: <http://www.lehigh.edu/~inacsup/disabilities/>

**ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES:** If you have a disability for which you are or may be requesting accommodations, please contact both your instructor and the Office of Academic Support Services, University Center 210 (610-758-4159) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted.