UNIVERSITY OF DELAWARE
DEPARTMENT OF MATHEMATICAL SCIENCES

MATH 221 – Calculus I Spring 2008

Course Information

Credit Hours: Three

Sections/Time/Location:
Lecture Section 010: 8:00 – 8:50AM, Mon, Wed & Fri /Room: 204 KRB
Lecture Section 011: 9:05 – 9:55AM, Mon, Wed & Fri /Room: 204 KRB,
Lecture Section 012: 1:25PM - 2:15PM, Mon, Wed & Fri /Room: 130 SHL.
Text and Bibliographic Materials Required: *Calculus and Its Applications,* by Goldstein, Lay and Schneider, 11th Edition. **Optional workbook**: *Oh, Calculus – A workbook for MATH 221,* by Georgia B. Pyrros, Kendall/Hunt Publishing Company (any edition).
Calculator Policy: A graphing calculator is required (TI-86 or below).
During class, we use the TI-83 Plus graphing calculator.
Instructor Information
Professors: Dr. Cristina Bacuta (cr*bacuta@math.udel.edu)* – course coordinator
Patricia Schwarzkopf *(pas@math.udel.edu)*
Teaching Assistants:
Rachel Bauer (*bauer@math.udel.edu)***,** Jenna Lee Bratz (*bratz@math.udel.edu),*
Quan Deng *(deng@math.udel.edu)*
Web Page: Current students may access the course webpage on **MyCourses** using their UDelNet ID at https://www.udel.edu/mycourses/
Catalog Course Description: Topics include functions, graphing functions, limits, derivatives, exponential and logarithmic functions, and integration. It requires two years of high school algebra and one year of geometry. Credit cannot be received for both MATH221 and MATH 241. (*Note*: A precalculus background is strongly recommended).
Course Attendance Policy: Class attendance is required.
Attendance of every lecture and discussion class is recommended. In the lecture, we introduce the concepts, prove important results, make theoretical connections among topics and present special cases and examples. The discussion class is designated for applications and reviewing homework type problems. College attendance policy as outlined on pages 61-62 of the 2007-2008 Undergraduate Catalog will be followed.

"Absences on religious holidays not listed in University calendars, as well as absences due to athletic participation or other extracurricular activities in which students are official representatives of the University, shall be recognized as excused absences when the student informs the instructor in writing during the first two weeks of the semester of these planned absences for the semester. Absences due to similar events which could not have been anticipated earlier in the semester will be recognized as excused absences upon advance notification of the instructor by an appropriate faculty adviser or athletic coach." If you must be absent, you are still responsible for the work due. If you know that you will be absent ahead of time, let your instructor and your TA know and make arrangements to get the work done ahead of time. Excused absences must be confirmed in writing. For example, if serious illness, family emergencies, or other crises occur during the term, you should contact the Dean of your college (Arts and Sciences, Business, Engineering, etc.) as soon as possible, who can assist you in notifying faculty and in validating for your instructors what has happen. If you have more than a few unexcused absences, I will meet with you to discus the situation.

Course Schedule and Activities

Midterm Exam I: From 5 PM to 7 PM on Friday, March 14, 2008.

Midterm Exam II: From 5 PM to 7 PM on Friday, May 2, 2008. (Lecture 10 in 120 SMITH, Lecture 11 in 130 Smith and Lecture 12 in 140 Smith Hall).

Final Exam: May 27, 2008 from 3:30 PM to 5:30 PM. The Final Exam will be cumulative, worth 150 points and will take 2 hours. . (Lecture 10 in 120 SMITH, Lecture 11 in 130 Smith and Lecture 12 in 140 Smith Hall).

Note: In previous semesters, the MATH 221 final was scheduled in the last day of finals, so please plan accordingly. ***All three exams are all-multiple-choice.***

Quizzes: There will be **six** 60 point 50 minute quizzes given during lecture time as scheduled below. The five best quizzes will be retained to compute your quiz total, worth 300 points. The quiz questions will come from topics covered in lecture, recitation, the assigned reading and homework. The date and the material for each quiz will be announced in class and posted on MyCourses. Please check the score and the deducted points within the first 24 hours after you received the quiz or the exam. No points will be given after that.

Tentative schedule of quizzes (subject to change at any time):

Quiz 1: Friday, February 22, 2008
Quiz 2: Friday, March 7, 2008
Quiz 3: Wednesday, March 26, 2008
Quiz 4: Friday, April 11, 2008
Quiz 5: Wednesday, April 23, 2008
Quiz 6: Friday, May 16, 2008

Make-ups: ***No make-up exams or quizzes will be given.***

No electronic devices (including cell phones), other than your graphing calculator, are allowed during quizzes and exams.

Grades: Grades are not negotiable and can not be discussed through e-mail.

Grades will be based on 600 points:

150 points for the midterm exams,
300 points for the quizzes,
150 points for the final exam

Grading Scale

D - = [350 - 369]	D = [370 - 389]	D+ = [390 - 409]
C- = [410 - 429]	C = [430 – 449]	C+ = [450 – 469]
B- = [470 – 489]	B = [490 – 509]	B+ = [510 – 529]
A- = [530 – 549]	A = [550 - 600]	

Scholastic Dishonesty Policy: All University of Delaware Policies regarding ethics and honorable behavior apply to this course. Please see The Chapter on Academic Honesty of the Student Guide to University Policies: Code of Conduct on the web at http://www.udel.edu/stuguide/07-08/code.html#honesty

Cheating receives a failing grade.

Accessibility for Students with Disabilities*: If you are a student with a disability and wish to request accommodations, please contact 1) the ADA Office located at 413 Academy Street, in Room 165 in the Office of Human Resources, or call (302) 831-4563, or 2) the Academic Enrichment Center located at 148 South College Ave. , or call (302) 831-2805 . Information regarding your disability will be treated in a confidential manner. Because many accommodations require early planning, requests for accommodations should be made as early as possible.*

Preparatory reading is required before you come to class.

Lecture	Sections and Topics	Before Class Reading Pages	After Class Homework Problems
1	**1.2** The Slope of a Curve at a Point	59-67, 71-75	**1.2**: 19-38
2	**1.3** The Derivative	79-85, 87-88	**1.3**: 28-88
3	**1.4** Limits and the Derivative	93-99	**1.4**: 1-60
4	**1.4** Infinity and limits and **2.1**. Asymptotes	99-100;147-148	**1.4:** 61-72
5	**1.5** Differentiability and Continuity	103-106	**1.5:** 1-26; 29-34
6	**1.6** Some Rules of Differentiation	109-114	**1.6**: 1-62
7	**1.7** More About Derivatives; **1.8** The Derivative as a Rate of Change	118-121; 126-130	**1.7**:1-36; **1.8**: 1-18
8	**1.7** More About Derivatives; **1.8** The Derivative as a Rate of Change	121-124; 130-132	**1.7:** 37-42; **1.8:** 19-32
9	**2.1** Describing Graphs of Functions	141-147	**2.1**: 1-25, 35-40
10	**2.2** The First and Second Derivative Rules	153-158	**2.2:** 20-44
11	Review		
12	Review		
13	**2.3** Curve Sketching	163-170	**2.3:** 1-47
14	**2.4** Curve Sketches (Conclusion)	174-177	**2.4**: 1-9, 23, 33-36
15	**2.5** Optimization Problems	179-185	**2.5:** 1-24
16	**2.7** Applications of Calculus to Business & Economics	199-206	**2.7**: 1-9; 12-18b
17	**3.1** The Product and Quotient Rules	215-219	**3.1**: 1-67 odd
18	**3.2** The Chain Rule and the General Power Rule	224-228	**3.2:** 1-60
19	**3.3** Implicit Differentiation	231-236	**3.3:** 1-30
20	**4.1** Exponential Functions **4.2** The Exponential Function e^x	246-248; 249-252	**4.1:** 1-42; **4.2:** 12-46
21	**4.3** Differentiation of Exponential Functions	255-258	**4.3**: 1-48
22	**4.4** The Natural Logarithm Function **4.5** The Derivative of ln x	260-263; 266-268	**4.4**: 1-44; **4.5**: 1-36
23	**4.6** Properties of the Natural Logarithm Function	269-272	**4.6:** 1-54
	5.1 Exponential Growth and Decay	278-284	**5.1**: 1-15
24	Review		
25	Review		
26	**6.1** Antidifferentiation	317-324	**6.1:** 1-65
27	**6.1** Antidifferentiation exercises		
28	**6.2** Areas and Riemman Sums	327-332	
29	**6.3** Definite Integrals and the Fundamental Theorem of Calculus	336-341	**6.3:** 1-50
30	**6.4** Areas in the xy -Plane	347-352	**6.4:** 1-11, 17, 19, 21, 29
31	Review		
32	Review		