INSTRUCTOR: Gus Rainsford EMAIL ADDR: rainsfor@math.rutgers.edu

OFFICE HOURS: Room 208 Hill Center Busch Campus (unless announced otherwise): "drop-in" on Mondays, Tuesdays, and Thursdays 3:00 - 4:30 PM, by appointment on Fridays 3:00 - 4:00. Office hours may be possible on some Wednesdays by appointment.

NOTE 1: Math 135 is primarily for students interested in the biological sciences, business, economics, and pharmacy and may be followed by Math 136 or Math 138. Math 151-152-251 is the sequence for students in the mathematical and physical sciences, engineering, and computer science. It is possible to take Math 152 after Math 135, BUT NOT recommended. More importantly, the prerequisite for Math 251 is Math 152; neither Math 136 nor Math 138 satisfies this prerequisite. Students who may need to take Math 152 or 251 should start their study of calculus with Math 151, (not 135), and students who decide after taking Math 135 that they may wish to take Math 251 will need to make up the missed material on their own and should follow Math 135 with Math 152.

NOTE 2: (CHANGE OF CLASS DAYS) On Tuesday Nov 20, Rutgers will follow Thursday’s schedule of classes. On Wednesday Nov 21, Rutgers will follow Friday’s schedule of classes. (We have lecture on Wednesday Nov 21 instead of Tuesday Nov 20.)

PREREQUISITE: PreCalc or appropriate performance on the placement test in mathematics.

TEXT: Custom Edition for Rutgers University - Calculus And Its Applications Volume 1, or the complete (contains vol 1 and vol 2) “blue cover” Custom Edition for Rutgers University.

AUTHOR: Strauss, Bradley, and Smith

CALCULATOR: A Graphing Calculator may be used in this course for some homeworks, some webwork problems, and perhaps some quizzes. Calculators will NOT be permitted on any exams.

COURSE TOPICS: We will cover Chapters 1.1 through 5.5. Notice: The material in Chapter 1.1-1.3 is considered review material. It is expected that you have learned this material in a previous course such as Precalculus. If this material is new to you or you have difficulty in doing these problems, you may want consider dropping down to one of the Precalculus courses.


EXAMS: A departmental formula sheet will be distributed for the exams. No materials other than the formula sheet provided may be used on exams. Calculators, cell phones and other related electronic devices will not be used on the exams. You may not leave the room and then return to finish the exam.

Midterm Exam I is tentatively scheduled for Friday October 12 in our class unless announced otherwise.

Midterm Exam II is tentatively scheduled for Tuesday November 27 in our class unless announced otherwise.

The Final Exam will be comprehensive. It is scheduled on Monday December 17, 4:00 PM - 7:00 PM. The room for the final will be announced in class.
MISSED EXAMS: If you miss taking an exam (for some sound documented reason), you must bring in a formal letter from the dean’s office stating you had a valid reason for being absent on the date the exam was given in order for your absence to be excused. For such an excused absence, the problems on the final exam which cover the material tested on the missed exam will be selected to be the replacement or “makeup” for the missed exam. **No other replacement or makeup exam will be given for any reason. NO EXCEPTIONS!** You must contact either me, or the math office 445 2390 within 3 days of the missed exam. **Missed exams, which are not excused, are recorded as a 0 grade.** If Rutgers cancels classes, (for snow storms etc), on the day of an exam, the exam will be given on the first day we meet when our class resumes.

SPECIAL NEEDS: If you require special accommodations during exams or in class, you must see the Rutgers Office of Disability Services and discuss your case with them. Requests for special accommodations will NOT be honored without a letter from the Rutgers Office of Disability Services requesting the accommodations. Such letters must be presented in a time frame sufficient to allow for the accommodation to be met. To insure your needs will be met this semester, please see the Dean of Disabilities Services ASAP. For more information go to [http://disabilityservices.rutgers.edu](http://disabilityservices.rutgers.edu)

WEBWORK: There is an online Web-based component to this course called WebWorK in which students work on selected problems and submit answers online. Each student gets different versions of the problems to solve. These will be graded by the online system. Your score is based on how many answers you finally get right. Each week, a WebWorK assignment will be given by the WebWorK Coordinator. WebWorK assignments MUST be done ONLINE and SUBMITTED ONLINE by the DUE DATE and TIME. Do not wait until the last minute to do the webwork assignments. Late webwork assignments WILL NOT be accepted. System bottlenecks tend to occur just before the deadline for web assignments and the system can become quite slow. Written or email solutions for the webwork problems WILL NOT be accepted (NO EXCEPTIONS!). If you don’t have your own computer at home from which you can log onto webwork, you can use the computers in the computer labs at Rutgers.

SAKAI: There is a sakai site (sakai.rutgers.edu) for sections 44,45,46,48,49,50.

QUizzes: Each week, unless announced otherwise, a quiz will be given in the recitation class by your TA. Makeup quizzes are not given. Missed quizzes are given a zero grade. The two lowest grades will be dropped. The remaining scores be used to compute your quiz score.

ACADEMIC INTEGRITY: Students are expected to do their own work and abide by the restrictions regarding calculators and testing aids such as formula sheets. Violations will result in a zero grade for the assignment, exam or quiz and possible failure for the course and or further academic discipline for all involved.

CLASS PARTICIPATION: You are responsible for attending all class meetings (lectures and recitations). Poor attendance will be a factor in deciding borderline grade situations. You are responsible for all material covered in class as well as all announcements made in class. Homework assignments, and announcements regarding quizzes and exams, etc. will NOT be sent to students via email or phone. Make arrangements with other students to get class notes and any announcements in the event you miss class. Not knowing the day of an exam is NOT an acceptable excuse for missing the exam.
HOMEWORK: Homework problems are listed on the math department 135 course page. Students are encouraged to do them all, as they are practice problems for exams and quizzes. They are NOT graded. Announcements may be made in class regarding updates to this list of homework problems.

1.1 (Preliminaries) 2, 4, 14, 7-19 Odd, 24,30,34, 25-40 odd, 42, 55.
1.2 (Lines in the Plane) 2, 4, 12 3-29 Odd, 20, 24, 32, 35-45 odd, 46-51, 55, 63.
1.3 (Functions and Graph) 2, 10, 12, 16, 28, 30, 32, 34, 40, 48, 50, 64, 1-65 odd, 66.
1.4 (Inverse Functions) 1-17 odd.
2.1 (Limit of a function) 1-6, 11, 12, 15, 28, 19-45 odd.
2.2 (Algebraic Computation of Limits) 6, 8, 12, 14, 18, 20, 24, 30, 1-32 odd, 40, 54, 36-57 odd.
2.3 (Continuity) 12, 28, 34, 38, 40, 44 1-43 odd.
2.4 (Exponential and Logarithmic Functions) 13-38, 42, 46, 47, 48, 56, 59, 61, 69.
3.1 (Intro to Differentiation) 6, 8, 10, 12, 14, 22, 26, 27, 30, 33, 36, 42, 45, 47, 48.
3.2 (Techniques of Differentiation) 3, 6, 8, 9, 12, 14, 15, 18, 22, 24, 25, 29, 31, 33, 35, 37, 41, 43.
3.3 (Derivatives of Trig, Exponential and Log Functions) 7-30, 37, 41, 45, 46, 47, 48, 52.
3.4 (Rates of Change) 3, 5, 6, 8, 13, 14, 18, 21, 23, 24, 36, 41, 50, 51, 55.
3.5 (The Chain Rule) 3-46, 48, 50, 51, 52, 54, 56, 60.
3.6 (Implicit Differentiation) 1, 4, 7, 8, 11, 13, 14, 15, 18, 33, 34, 35, 36, 39, 43, 44, 46, 51, 55, 60, 62.
3.7 (Related Rates) 2, 3, 4, 9, 13, 15, 16, 17, 18, 22, 23, 24, 25, 26, 27, 28, 33, 40, 42.
3.8 (Linear Approximation and Differentials) 3, 4, 8, 13, 19, 20, 23, 25, 28, 29, 32, 34, 35, 40, 42, 44, 45
4.1 (Extreme Values of Continuous Functions) 3, 4, 5, 7, 11, 12, 18, 20, 26, 28, 30, 31, 33, 37, 43, 51, 53, 55.
4.2 (The Mean Value Theorem) 7, 10, 21, 22, 27, 30.
4.3 (Curve Sketching) 3, 6, 7, 12, 13, 17, 18, 21, 24, 26, 27, 29, 32, 36, 38, 41, 42, 44, 49.
4.4 (Curve Sketching with Asymptotes) 5-23, 23, 27, 29, 30, 32, 35, 38, 40, 42, 47, 48.
4.5 (L’Hôpital’s Rule) 1, 3, 4, 5, 6, 7, 10, 12, 13, 14, 19, 21, 27, 28, 32, 33, 42, 45, 46.
4.6 (Optimization in Physical Sciences) 3, 4, 5, 7, 8, 10, 11, 12, 13, 15, 16, 17, 19, 20, 21, 23, 24, 26.
4.7 (Optimization in Business) 1, 3, 4, 5, 6, 7, 8, 10, 12, 13, 16, 17, 18, 21, 23, 24, 25, 26, 27, 28, 35, 33, 36, 39, 45.
5.1 (Antiderivatives) 1-14, 17-28, 40, 41, 43, 44, 46.
5.2 (Area as the Limit of a Sum) 3, 6, 11, 18, 21.
5.3 (Riemann Sum) 1, 3, 4, 5, 6, 7, 9, 11, 13, 17-29.
5.4 (Fundamental Theorem of Calculus) 1-17 odd, 21-49 odd, 2, 10, 16, 22, 26, 32, 36, 44, 46, 51, 54, 57.
5.5 (Integration by Substitution) 1-44 odd, 6, 10, 12, 24, 26, 32, 40, 42, 46, 51, 53, 58.