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

OFFICE HOURS: Hill 208, Monday, Tuesday, and Wednesday after class (unless announced otherwise). I can also be available on most Thursdays after class by appointment.

Fourth of July: There WILL be classes Monday July 2, Tuesday July 3 and Thursday July 5. There WILL NOT be classes on Wednesday July 4.

Math 152 and SAS Core Requirements: Math 152 satisfies the Quantitative Reasoning (QQ) goals and Formal Reasoning (QR) goals for the SAS Core Curriculum.

QQ: Formulate, evaluate, and communicate conclusions and inferences from quantitative information.

QR: Apply effective and efficient mathematical or other formal processes to reason and to solve problems.

For further information, please see http://sasundergrad.rutgers.edu/academics/requirements/core

PREREQUISITE: Calculus: Rutgers Math 151, or Math 135 plus Supplementary Work or appropriate performance on the placement test in mathematics. You are expected to know PreCalc and Calc I thoroughly (including exponential, log, trig and inverse trig functions, (without the aid of a formula sheet or a Calculator)!

TEXT: Calculus with Early Transcendentals, Second Custom Edition for Rutgers University. Note: The Custom Edition contains information about workshops as used at Rutgers University. This information can be seen at http://www.math.rutgers.edu/courses/151/151Syllabus/1m.pdf

NOTE: The first Edition Custom or otherwise is NOT approved for this course.

Author: Jon Rogawski. Publisher: Freeman Custom Publishing.

CALCULATOR: A Graphing Calculator may be used for some workshops and possibly some quizzes. Calculators will NOT be permitted on exams.

GRADING: Quizzes: 50 pts  Workshops: 75 pts  Exam 1: 100 pts  Exam 2: 100 pts  Final: (comprehensive) 200 pts  Total: 525 pts

EXAMS: Exams are closed book: notes, books etc are NOT permitted. Formula sheets are NOT permitted. Calculators may NOT be used on exams. Midterm I is tentatively scheduled for Thursday July 12 . Midterm II is tentatively scheduled for Wednesday Aug 1. The Final Exam will be comprehensive and will be held on Wednesday August 15, 10:00 AM - 1:00 PM. Please Note: This is a 3 hour exam. The room will be announced in class. Please note: Firm dates for Midterm Exams exams will be announced in class.

MISSED EXAMS: Makeup exams are not given; there are no exceptions. If you are absent on the day of an exam (for some acceptable reason), you must bring in a formal letter from the dean’s office in order for your absence to be excused. You must contact either me, or the math office 445 2390 within 3 days of the missed exam. For such an excused absence, the final will count for the missed exam. Missed exams, which are not excused, are recorded as a 0 grade.
CLASS PARTICIPATION: You are responsible for attending all class meetings. Poor attendance will be a factor in deciding borderline grade situations. You are responsible for all material covered in lecture as well as all announcements made in lecture. 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 lecture notes and any announcements in the event you miss lecture. Not knowing the day of an exam is NOT an acceptable excuse for missing the exam.

NET ID: See http://netid.rutgers.edu to setup your net id so you can have access to various rutgers sites, including rutgers email, sakai, transcripts and grades.

SUMMER SESSION - USEFUL INFORMATION : See http://summersession.rutgers.edu

This site has much useful information for students in taking summer courses at Rutgers.

Among many other items of information, it contains the following:

- Dates and deadlines for registration, bill payment, adds, drops, withdrawals, etc.
- Click on Next Steps to get a drop down list for various info in Net Id, Photo Id, bookstore, parking etc.
- Click on Academic Resources to get a drop down list for various tabs with information about Learning Resource Centers, libraries, disability services among other matters of interest.

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

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 workshop, quiz, homework, or exam in question and possible failure for the course and or further academic discipline for all involved.

See http://academicintegrity.rutgers.edu/policy-on-academic-integrity

WORKSHOPS: During this course, workshop problems will be assigned in class. Workshops must be handed in during class. They will NOT be accepted via email. Late workshops will not be accepted. The lowest workshop grade will be dropped.

QUIZZES: Each week, in addition to a workshop assignment, unless announced otherwise, short quizzes will be given as announced in class. Makeup quizzes will not be given. As such the two lowest quiz scores will be dropped. The remaining scores will be used toward your grade.

Self - Review Problems for Calc I

Chapter 1 Review: 21, 23, 43, 47, 49  Chapter 2 Review: 21, 31, 43, 47, 55, 61, 71

Chapter 3 Review: 7, 53, 57, 69, 75, 93, 103, 113, 119, 121

Chapter 4 Review: 11, 23, 39, 52, 63, 68, 75, 87, 97, 105

Chapter 5 Review: 9, 25, 33, 41, 55, 69, 75, 91, 99  Chapter 6 Review: 6, 9, 11

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HOMEWORK PROBLEMS: Students are encouraged to do all the problems as they are practice problems for exams and quizzes. Homework problems will not be graded. Updates to the homework problems on the syllabus may be announced in lecture and/or in the workshop class. The actual order of topics in lecture may differ somewhat from the order listed below. Any such changes will be announced in class.

6.1 Area between Two Curves (review) 1, 5, 6, 8, 9, 10, 16, 20, 23, 24, 28, 31, 34, 37, 46, 61
6.2 Volumes, Average Value 5, 9, 13, 14, 15, 17, 28, 29, 35, 43, 56, 61, 62
6.3 Volumes of Solids of Revolution 9, 13, 15, 24, 25, 27 – 36, 43, 45, 49, 50, 53, 56
6.4 Cylindrical Shells 11, 12, 17, 18, 27, 33 – 44, 49, 50, 56, 57
6.5 (Work) 9, 10, 15, 17, 21, 29, 34, 35, 37, 41, 42, 43
7.1 Integration by Parts 9, 10, 14, 18, 19, 23, 24, 26, 28, 31, 34, 36, 37, 43, 47, 50, 54, 67, 68, 71, 76, 81
7.2 Trigonometric Integrals 8, 11, 17, 18, 20, 21, 27, 30, 34, 42, 43, 44, 46, 51, 56, 63, 71, 72, 73
7.3 Trigonometric Substitutions 11, 14, 17, 20, 22, 23, 29, 32, 33, 35, 38, 54, 55, 57, 58, 59, 60, 61
7.4 Integrals with Hyperbolic Functions 1 – 16, 41, 42, 43
7.5 Partial Fractions 1, 7, 12, 14, 16, 25, 30, 36, 37, 41, 46, 47, 48, 49, 57, 59, 60, 66, 69
7.6 Improper Integrals 7, 11, 12, 14, 19, 26, 27, 31, 32, 38, 39, 43, 44, 46, 51, 53, 56, 58, 63, 66, 80
7.8 Numerical Integration 7, 10, 15, 24, 25, 26, 31, 35, 36, 52, 53, 59
8.1 Arc Length & Surface Area 4, 9, 10, 14, 15, 16, 19, 20, 22, 23, 25, 26, 29, 30, 36, 37, 39, 40, 45, 46
9.1 Solving Differential Equations 5, 6, 10, 12, 20, 25, 27, 28, 33, 37, 38, 42, 43, 45, 46
9.2 Models 3, 5, 8, 12, 15, 17, 21, 22, 25, 26, 29
9.3 (Graphical Methods -No Euler’s Method) 2, 9
8.4 Taylor Polynomials 8, 11, 14, 15, 17, 18, 21, 22, 24, 28, 31, 49, 50, 51, 53, 55, 57, 64
10.1 Infinite Sequences 10, 13, 18, 19, 24, 26, 33, 39, 40, 41, 45, 50, 59, 62, 65, 68, 73, 75, 76, 83, 85
10.2 Infinite Series 1b, 2c, 6, 12, 14, 17, 22, 25, 28, 30, 31, 35, 40, 41, 42, 45, 48
10.3 Series with Positive terms 5, 9, 10, 12, 13, 17, 20, 21, 25, 26, 30, 41, 43, 46, 52, 55, 57, 59, 64, 67, 69, 73, 79, 80
10.4 Absolute and Conditional Convergence 6, 7, 13, 19, 20, 22, 25, 28, 29, 33, 37, 39, 44
10.5 Ratio Test, Root Test 2, 7, 10, 15, 19, 37, 38, 41, 44, 45, 48, 50, 52, 54, 22, 24, 25, 26, 28, 31, 32, 33, 59
10.6 Power Series 3, 6, 10, 11, 15, 18, 22, 25, 27, 30, 33, 34, 37, 38, 40, 41, 44, 48, 51, 52, 55, 60, 61
10.7 Taylor Series 7, 10, 13, 15, 18, 19, 23, 30, 33, 38, 40, 42, 52, 54, 57, 39, 41, 60, 69, 80, 88, 89
11.1 Parametric Equations 6, 8, 13, 14, 17, 19, 20, 22, 25, 32, 37, 41, 43, 43, 45, 51, 54, 62, 69, 83, 18, 44
11.2 Arc Length and Speed 5, 8, 12, 13, 19, 21, 23, 27, 29, 30, 11, 22, 28, 31
11.3 Polar Coordinates 3 – 10, 14, 15, 19, 22, 23, 24, 27, 28, 41, 48, 50, 25, 29, 30, 35, 45, 47, 49
11.4 Area and Arc Length in Polar Coordinates 2, 3, 7, 8, 10, 13, 14, 18, 24, 28, 31, 11, 22, 27, 30
12.7 Cylindrical and Spherical Coordinates 9, 13, 15, 19, 27, 31, 39, 45, 49, 51, 55, 63, 67, 73