

MTH 229-01 INFORMATION

Calculus I – Summer 2009

SCHEDULE: MTW 10:30-11:35 171 Mathematics & Microbiology
Th 10:30-12:05 270 Mathematics & Microbiology

INSTRUCTOR: Dr. Richard Mercer

TEXTS: Calculus: Concepts and Contexts, 3rd Edition, Stewart
MTH 229 Laboratory Manual, Mercer

OFFICE: 236 MM, 937-775-2191 **OFFICE HOURS:** MW 9:30-10:30

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HOME PAGE: http://www.math.wright.edu/People/Richard_Mercer/

PREREQUISITE: MTH 131

Homework: Homework assignments will consist of problems from the text and laboratory assignments. Many of the problems from both sources require written answers; in those problems you must answer in complete sentences. ***Homework can only be submitted in class or in the box on my office door. Homework submitted elsewhere or late without approval will not receive credit. If you wish to submit late homework you must ask in advance; permission may or may not be granted.***

Each student must work problems from the text individually, but laboratory reports should be prepared jointly by lab partners -- two students working together on a lab should submit a single report with both names on it. If you do not have a lab partner or were unable to work together on the report, you must write the lab report yourself.

Laboratory: Every Thursday we will meet in a computer laboratory in 270MM. Laboratory attendance is required; there will be a sign-in sheet for each lab session. Each week a written report of the previous week's laboratory activities is due as part of your homework assignment. The laboratory manual is required for the course.

Calculators: Each student in Calculus I-IV and Differential Equations is required to have a graphing calculator, and is expected to bring it to class and to exams. If you already have a graphing calculator, you do *not* need to buy a new one for this class. Calculators capable of symbolic calculus (such as TI89 and HP50) will not be permitted on exams.

Exams: There will be midterm exams on Wednesdays July 8 and August 5. The final exam will take place on August 18 and 19. All exams will be closed book, and you should bring your graphing calculator and a photo ID.

Grades: The final exam counts for 35% of your grade, the midterms 17.5% each, homework and lab reports 30%. Your lowest weekly combined homework/lab score will be discarded. You may miss one laboratory session with no penalty; additional absences will count against your grade. The website contains a detailed explanation of how your course grades are computed. I reserve the right to give a grade no higher than your highest exam grade.

Web Site: http://www.math.wright.edu/People/Richard_Mercer/Classes/08S229/

Important Dates:

Last day to drop without a grade:	Tuesday, July 7
Midterm Exam:	Wednesday, July 8
Last day to drop with a grade of W:	Friday, July 31
Midterm Exam:	Wednesday, August 5
Last day of class:	Wednesday, August 19
Final Exam:	Tuesday-Wednesday, August 18-19

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Course Goals:

1. Learn the concepts, techniques, and applications of derivatives.
2. Learn to communicate mathematics in speech and writing.
3. Gain experience and problem solving skills in both independent and group situations.
4. Gain experience in appropriate use of technology.

About This Course: Calculus I introduces the idea of “derivative”, which contains the mathematics behind the ideas of “slope of a curve”, “instantaneous velocity” and “rate of change”. Chapter 2 deals with the concept of the derivative, Chapter 3 with algebraic computation of derivatives, and Chapter 4 with applications of derivatives. Therefore the class is very conceptual at the beginning, much more computational in the middle, and the emphasis is on problem solving at the end.

Homework #1: Due Thursday June 25 §2.6: 2, 5, 13, 15, 18, 26 §2.7: 2, 4, 5, 8, 18, 20, 22, 25, 28, 32	L01.1, L01.2 For L01.1, graph all 12 functions and write paragraphs on any six of your choice. L04.1a, L04.2, L04.3, L04.4, L04.5, L04.7
Homework #2: Due Thursday July 2 §2.8: 4, 6, 8, 10, 12, 22, 32, 38, 39 §2.9: 2, 6, 8, 11, 18, 24 §2.2: 1, 5, 10, 15, 20	L06.1, L06.2, L06.3, L06.4, L06.6 L10.1, L10.2ace, L10.4, L10.5
Homework #3: Due Thursday July 9 §2.3: 1, 9, 13, 16, 40 §2.4: 1, 4, 6, 16 §2.5: 1, 4, 9, 17, 22, 27	L11.1, L11.2, L11.4, L11.5 L12.1, L12.3, L12.4, L12.5
Homework #4: Due Thursday July 16 §3.1: 6, 10, 13, 16, 22, 38, 42, 43, 44, 53, 55, 60 §3.2: 1, 4, 6, 12, 20, 24, 32, 38, 40, 42, 43	L13.1, L13.3, L13.4, L13.5 L15.1, L15.4
Homework #5: Due Thursday July 23 §3.4: 4, 6, 7, 14, 19, 24, 27, 32, 34 §3.5: 7, 8, 12, 16, 25, 26, 28, 37, 43, 45, 54, 61, 64	L14.1bcde, L14.2, L14.4, L14.5 L16.1, L16.2, L16.3, L16.4, L16.6
Homework #6: Due Thursday July 30 §3.6: 1, 6, 19, 26, 30, 32, 35, 49, 53 §3.7: 4, 9, 10, 20, 25 §3.8: 4, 8, 18	L21.1, L21.2, L21.3
Homework #7: Due Thursday August 6 §3.3: 2, 4, 9, 14, 16, 19, 22 §4.1: 4, 8, 12, 16, 20, 25, 34	L20.2, L20.3, L20.4, L20.6, L20.7
Homework #8: Due Thursday August 13 §4.3: 5, 6, 12, 25, 28 §4.8: 4, 6	L24.1, L24.2, L24.3
Homework #9: Due Wednesday August 19 §4.2: 4, 8, 10, 37, 42, 46, 56, 58 §4.6: 8, 13, 18, 23, 32, 34, 38	L25.2, L25.3, L25.4, L25.5

IMPORTANT: LAB ASSIGNMENTS SUBJECT TO CHANGE!

Notes on Lab Reports: In each lab report, there is a Summary question where you are asked to write one or more paragraphs concerning the lab. Use this question as an opportunity to reflect on what you did and share your thoughts and reactions. I expect at least one paragraph per student for each Summary question.