

Syllabus
Math 119: Calculus A
Fall, 1996

Instructors: Mario Borelli
Juan Migliore (course chair)
Chris Peterson

Text: Single Variable Calculus (third edition), by James Stewart

Comments on Text: (from Migliore) I didn't have any real problem with the text, and I would be willing to use it again next year if I were to teach the course. A consideration for me is the fact that there are potentially hundreds of students that would be interested in selling the book, so it should have the inside track. (Note: Math 120 uses the same book, of course.)

The course covered, essentially, the following. A photocopy of the table of contents is attached.

Chapter 0 Functions

(Graphs and a preview of calculus)

Chapter 1 Limits and Rates of Change

(Getting them used to limits, and talking about the notion of tangent line vs. secant line, instantaneous velocity vs. average velocity, etc.)

Chapter 2 Derivatives

(The usual material, including related rates and implicit differentiation. We omitted differentials and Newton's method.)

Chapter 3 The Mean Value Theorem and Curve Sketching

(The usual discussion of the first and second derivative tests, and curve sketching. Also applied max/min problems.)

Chapter 4 Integrals

(We may not finish the chapter. Just sigma notation, discussion of area, Fundamental Theorem of Calculus. But substitution may have to wait until next semester.)

On the following pages you will find the handout that was given to the students. After that will be a photocopy of the table of contents.

Mathematics 119, Fall Semester 1996-97

Are you in the right course?

Math 119-120 is intended for students planning to enter pre-professional or biology programs. **It is not intended for students who intend to major in engineering, physics, mathematics, or most of the chemistry programs. Those majors require Math 125-126.**

Instructor: Professor Juan Migliore
364 CCMB (On Juniper, just south of the library)
Phone: 631-7345

Office Hours: Monday 1:15–2:15
Tuesday 10:00–11:00
Wednesday 1:15-2:15
Or by appointment.

Tutorial Instructor: Paul Weiner

(The Tutorial instructor will also have office hours; these will be announced soon.)

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Classes, Tutorials and Help Sessions

Class meets at 10:40 AM MWF in DeBartolo 141. Students are required to attend these classes.

Each student is also assigned to a Thursday tutorial section. *It is your responsibility to know the time, place and section number of your tutorial section. You are not allowed to change tutorials.* At the tutorial, the previous week's homework will be returned. Students will then be encouraged to ask questions about that homework or about the current homework. The purpose of the tutorial is to help students master the material currently being covered.

In addition to the tutorials, the professor and the TAs will have office hours each week at which you can get assistance in understanding the course work and doing the homework problems. Times and rooms for the TAs' office hours will be announced soon.

In previous years, prepared overhead transparencies were used for this course. Copies of these, just as they appeared on the screen during the lectures, will be available in the reserve room of the Hesburgh library and in the Freshman Learning Resource Center. This course will roughly follow these notes, so they are a useful study guide.

Examinations, homework and grades

There will be three one-hour examinations and one final examination (whose dates, times and locations are listed below). Each one-hour exam will be worth 100 points. The final exam is a two-hour exam and will be worth 150 points. The final exam will cover all the material of the course. Homework grades will be scaled at the end of the semester so that there will be a total of 50 possible points for homework. So the total number of possible points for the semester is 500. Exams will be returned at the following tutorial session.

Homework will be due at the Thursday tutorial and returned the following week. Two or three assignments will be due each Thursday; specific assignments due each week will be announced in that week's lectures.

The main purpose of collecting and returning homework is to let you know if you are doing the problems correctly. The homework grade (50 points out of a total of 500) is designed to reward effort. Each problem is graded either 0 (if missing or complete nonsense) or 1 (for any honest attempt). So the total number of points on any assignment is simply the number of problems honestly attempted.

Both examinations and homework are conducted under the honor code. While cooperation in doing homework is permitted (and encouraged), copying is not. Exams are closed book and are to be done completely by yourself with no help from others. *Calculators are not allowed on the exams.*

A student who misses an examination will receive zero points for that exam unless he or she has written permission from the Dean of the First Year of Studies. (An excuse is almost certainly not going to be accepted if it is presented after the exam takes place.) Please be aware that travel plans are not considered to be a valid excuse by the Dean of the First year of Studies.

Exams

	Date	Time	Place
Exam 1	Tuesday, September 24, 1996	8:00 AM	STEP 100
Exam 2	Tuesday, October 29, 1996	8:00 AM	STEP 100
Exam 3	Tuesday, November 26, 1996	8:00 AM	STEP 100
Final	Monday, December 16, 1996	1:45 PM	

(Location of final exam will be announced later.)

Mathematics 119, Fall Semester 1996-97

HOMEWORK ASSIGNMENTS

Number	Assignment
1	p. A15 # 7-10, 21-23, 25-28, 31-33, 37-40
2	p. 14 # 2-4, 11-14, 20-22, 27, 31, 32, 41, 43, 44, 51-53
3	p. A22 # 1-8 p. A15 # 1-4
4	p. 50 # 2-6 p. 59 # 3-5, 7-10
5	p. 68 # 1, 15-20, 23, 24, 26
6	p. 68 # 27, 29, 31-33 p. 96 # 1, 4, 5, 6, 11, 12
7	p. 109 # 1, 3-5, 8, 11, 13-15, 23-26
8	p. 120 # 1, 2, 4, 10-13, 23, 24, 34, 36-39, 59, 60
9	p. 87 # 1, 2, 32-34, 37-39
10	p. A30 # 1-3, 7, 9, 10, 13-15, 23-30, 32
11	p. A30 # 42-46, 53, 54 (use only the identities on pages A27-A28) p. A30 # 65-67, 69-71
12	p. 137 # 1-8, 10-14, 16
13	p. 137 # 20-22, 24, 25, 27, 30, 32-34, 37
14	p. 144 # 9-11, 13, 17, 21-26, 35-38
15	p. 144 # 49-52, 57, 59, 60 p. 150 # 5, 8, 9, 13, 14, 16, 25
16	p. 155 # 3-6, 13, 14, 17-20, 27, 43, 44
17	p. 130 # 7, 8, 11, 12, 13, 16, 23, 24 p. 155 # 35-37, 40-42
18A	p. 160 # 1, 3, 7-12
18B	p. 160 # 16-18, 25, 26, 29, 30
19	p. 188 # 21-24, 31-33, 37, 38, 41-43, 47-50, 51
20	p. 199 # 3, 4, 12, 15, 16, 18, 20, 22, 23, 25, 26
21	p. 205 # 1, 4, 7, 8, 13, 14, 15, 17, 21-24
22	p. 216 # 9-14, 24, 36, 37, 39, 42
23	p. 224 # 4, 5, 15, 16, 28
24	p. 236 # 1, 3, 6-14
25	p. 236 # 22, 26-30, 32, 46
26	p. 249 # 2, 5, 8-10, 13, 15, 16, 27, 28, 35, 43, 44, 47, 48, 50, 53, 55
27	p. 262 # 2, 12, 13, 19, 21, 26, 29, 30 Additional (area) problems will be assigned
28	p. 271 # 1, 2, 3, 23, 24
29	p. 280 # 7, 9, 15, 16, 23, 24, 26, 34, 35
30	p. 291 # 5, 6, 9, 10-13, 17, 18, 23, 32, 46, 51, 52
31	p. 291 # 63-66, 69-72, 74, 79

SYLLABUS

REVIEW AND PREVIEW 2

1 Functions and Their Graphs 2

2 Types of Functions; Shifting and Scaling 17

5 A Preview of Calculus 39

1. LIMITS AND RATES OF CHANGE 46

1.1 The Tangent and Velocity Problems 46

1.2 The Limit of a Function 50

1.3 Calculating Limits using the Limit Laws 61

1.5 Continuity 80

1.6 Tangents, Velocities, and Other Rates of Change 90

2. DERIVATIVES 100

2.1 Derivatives 100

2.2 Differentiation Formulas 112

2.3 Rates of Change in the Natural and Social Sciences 122

2.4 Derivatives of Trigonometric Functions 131

2.5 The Chain Rule 138

2.6 Implicit Differentiation 146

2.7 Higher Derivatives 152

2.8 Related Rates 156

3. THE MEAN VALUE THEOREM AND CURVE SKETCHING 182

3.1 Maximum and Minimum Values 182

3.2 The Mean Value Theorem 190

3.3 Monotonic Functions and the First Derivative Test 195

3.4 Concavity and Points of Inflection 201

3.5 Limits at Infinity; Horizontal Asymptotes 206

3.6 Curve Sketching 218

3.8 Applied Maximum and Minimum Problems 231

3.10 Antiderivatives 244

4. INTEGRALS 258

4.1 Sigma Notation 258

4.2 Area 264

4.3 The Definite Integral 272

4.4 The Fundamental Theorem of Calculus 283

5. APPLICATIONS OF INTEGRATION 308

5.1 Areas between Curves 308

5.2 Volume 315

5.3 Volumes by Cylindrical Shells 326

5.4 Work 331

5.5 Average Value of a Function 335