

MATHEMATICS 201-103-RE
Calculus I Commerce Studies

FALL SEMESTER 2006

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Prerequisite: Secondary V Mathematics 536 (or equivalent)

Textbook: Single variable Calculus: Early Transcendentals, 5th ed. By James Stewart
Brooks/Cole Publishing

General objective: In Calculus I, students will learn to apply the methods of differential Calculus to the study of function models in the field of Social Science.

Outline:

The course will cover the following material:

Review: Functions:	Chapter 1, sections 1, 2, 3, 5, 6
Limits, Continuity:	Chapter 2, sections 1, 2, 3, 5, 6
The Derivative:	Chapter 2, sections 7, 8, 9
Differentiation:	Chapter 3, sections 1, 2, 4, 5, 6, 7, 8
Applications:	Chapter 3, sections 10, 11 Chapter 4, sections 1, 2, 3, 4, 5, 7

Teaching methods: Class time will be devoted to lectures and problem solving. During problem solving sessions, students are encouraged to work in groups. Problems taken from the book will be suggested after each session. They indicate the level of difficulty of the problems that the students are expected to solve.

The book will be followed closely and it is absolutely essential that each student has a copy and brings it to every problem solving session.

Additional exercises will be provided by the instructor.

Evaluation

There will be a quiz every week. The lowest mark of all quizzes will not be counted.

There will be four term tests. The exact dates will be announced at least one week prior to the tests.

Attendance is required for all term tests and quizzes. No possibility of making up test or quiz exists unless a written medical notice is presented immediately after student's recovery.

Assessment plan:

Quizzes	15%	Tests	85%
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Each term test is worth 20%, and the final test is worth 25%.

Suggested Problems

Chapter 1.

- 1.1 p.22: 1, 5, 7, 9, 11, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 39, 41, 43, 45, 47, 49, 51, 53, 57, 59, 61, 63
- 1.2 p.35 : 1, 3, 5, 7, 9, 11, 13, 15
- 1.3 p.46 : 3 – 49 odd numbers
- 1.4 p.62: 1 –25 odd numbers
- 1.5 p.74 1 –58 odd numbers

Appendix D (Trigonometry)

- p.A32 : 1, 7, 11, 21, 23, 31, 33, 35, 41, 43, 55, 57, 61, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87

Chapter 2

- 2.2 p.102: 1, 3, 5, 9, 13, 15, 19, 21, 23, 25, 27, 29, 35
- 2.3 p.111: 1, 3, 7, 9, 13, 15, 19, 21, 25, 27, 29, 31, 33, 39, 41, 43, 45, 47, 49, 51, 53
- 2.5 p.133: 3, 5, 7, 9, 11, 13, 17, 19, 23, 27, 35, 37, 39, 41, 43, 45, 47
- 2.6 p.146: 3, 7, 9, 11, 13, 15, 17, 19, 21, 27, 31, 33, 37
- 2.7 p.155: 5, 7, 9, 11, 13, 15, 17, 19, 23, 25
- 2.8 p.162 1, 3, 5, 7, 9, 15, 17, 19, 21, 23, 25
- 2.9 p.173: 3, 5, 7, 9, 11, 13, 15, 21, 23, 25, 27, 29, 31, 33, 35, 37, 41, 43, 45

Chapter 3

- 3.1 p.191: 3, 5, 7, 9, 13, 15, 17, 21, 23, 27, 43, 45, 47, 53, 59, 61
- 3.2 p.197 : 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 31, 33, 35, 39
- 3.4 p.216 : 3, 5, 9, 11, 13, 15, 19, 23, 29, 33, 35, 37, 41
- 3.5 p.224 : 3, 5, 9, 11, 13, 15, 17, 19, 23, 25, 27, 29, 31, 35, 37, 39, 41, 43, 45, 51, 53, 57, 61
- 3.6 p.233 : 1, 3, 7, 9, 13, 15, 19, 21, 25, 29, 31, 25
- 3.7 p.240 : 1, 3, 7, 9, 13, 15, 17, 19, 23, 25, 27, 31, 33, 35, 39, 43, 53, 57
- 3.8 p.249 : 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 27, 29, 3
1, 35, 37, 39, 41, 43, 45, 47
- 3.10 p.260 : 3, 5, 7, 9, 11, 13, 15, 17, 25
- 3.11 p.267 : 5, 7, 31, 33, 35

Chapter 4

- 4.1 p.285 : 3, 7, 9, 11, 13, 21, 25, 29, 31, 33, 37, 39, 41, 43, 45, 47, 49, 51, 55, 57, 61, 63, 65
- 4.2 p.295 : 1, 3, 5, 7, 11, 13, 15, 17, 19, 21, 23, 25, 27
- 4.3 p.304 : 1, 5, 7, 9, 15, 17, 19, 23, 25, 33, 37, 41, 43, 45
- 4.4 p.313 : 1, 3, 5, 9, 13, 15, 17, 19, 21, 25, 29, 31, 33, 37, 39, 41, 45, 47, 51, 53, 55, 61, 63
- 4.5 p.323 : 1, 5, 9, 11, 15, 21, 23, 25, 27, 29, 31, 33
- 4.7 p.336 : 3, 5, 7, 9, 11, 13, 15, 17, 29, 31, 33