

SYLLABUS FOR MA120 APPLIED MATHEMATICS

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Text: *Mathematics with Applications in the Management, Natural, and Social Sciences* by Lial, Hungerford, and Miller (ninth edition, Addison-Wesley 2007).

Exercises: The course will cover as much of the following topics, with the indicated exercises, as time allows.

Chapter 1. Algebra and Equations

1.1: 24–26,52,53. 1.2: 18–20,24,25,40,41. 1.3: 15,16,29–32,65–68.

1.4: 9–12,23,24,37,38,49,51. 1.5: 40–42,50–53,86.

1.6: 13,14,36–38,66,67,70,71,75,78. 1.7: 14–17,35–37,50,51.

Chapter 2. Graphs and Lines

2.2: 8,31–34,47,52–55. 2.3: 6–9.

Chapter 3. Functions and Graphs

3.1: 4–7,13–15. 3.2: 8,9,28,31. 3.4: 44–46. 3.5: 2–4.

Chapter 5. Mathematics of Finance

5.1: 39–43. 5.2: 45–47,51,52. 5.3: 49–51,60,61. 5.4: 37,39,43,44,48.

Chapter 8. Sets and Probability

8.1: 41–44,64–66. 8.2: 21,24,27. 8.3: 11,16. 8.4: 15,32,56,61.

8.5: 5,6,37–40,58,59. 8.6: 17,18,24,25.

Chapter 9. Counting and Further Topics in Probability

9.2: 26,55,62,63,69. 9.3: 29–31. 9.4: 19–22,34.

Chapter 11. Differential Calculus

11.1: 32–37,44–47. 11.3: 5,6,11,12. 11.4: 6,7,24–26. 11.5: 6–8,20–22,43,44,66.

11.6: 5,24–26,31. 11.7: 35–36,40,46,47,64.

Chapter 12. Applications of the Derivative

12.1: 10,11,22,23. 12.3: 9–11,17,18,40–44,50.

Chapter 13. Integral Calculus

13.1: 18–25,43–35. 13.2: 6–10,42,43. 13.3: 1,3,13. 13.4: 1,8,9,34,35,45.

Grading and Procedures: The course is broken down into 9 units as follows: Final, 3; Three exams, 3; Exercises, 2; and Attendance, 1. The two percentage-wise worst units are dropped, and the rest are given equal weight in calculating the grade. Make-up exams will usually not be given; any missed in-class exam will become one of the units to be dropped from the grade. Exercises will be regularly assigned and collected.

Incompletes and Withdrawals: The incomplete grade *I* is given only in exceptional cases to students who have maintained a good record through much of the course and suddenly find themselves in difficult circumstances (illness, death in the family). Others who find early on that they are not keeping up are urged to drop or withdraw from the course. Please be aware of the last date to process a Withdrawal.

University Warning: Students are expected to know and understand provisions of the CAS Academic Conduct Code. Plagiarism or cheating in general is not tolerated, and standing procedures will be implemented for anyone suspected of such behavior.