

MATHEMATICAL METHODS FOR BUSINESS

STUDY GUIDE

Students can only take the waiver exam once. An official letter from the Program Management office will be sent to students letting me know if they have passed or failed the exam.

Listed below is a preparatory syllabus to help you study for the Mathematical Methods for Business Waiver exam. The waiver exam is graded on a pass/fail level and the passing grade is 70.

Students should purchase this book for additional study help. ***The text to use is Budnick, Frank. Applied Mathematics for Business Economics and the Social Sciences. 4th edition, NY: McGraw Hill, 1993. ISBN:0-390-16226-4***

The exam is comprised of short answer questions, where you pick the correct answer from the choices given. Longer exam questions the work must be shown. There are no essay type questions. All the questions are quantitative in nature and some require a written interpretation of your answer.

The topics covered in the short answer questions will cover all the material with no particular emphasis. Expect ten (10) short answer questions each worth 5 points. There will be five longer questions each worth 10 points. Listed below are the topics for the longer questions:

1. Determining the equation of a straight line, given key information.
2. Break-even determination
3. Matrix application or solving a system of equations
4. Linear programming problem
5. Optimization using derivatives

Students are allowed to use a calculator. Please bring with you pencils and erasers for the exam. The derivative formulas are attached to the waiver exams. Students will have to remember the other formulas. ***You cannot bring in any sheet with formulas.***

Listed below are Chapters from the book to use as a guide in studying:

Topic	Required Reading
A review of algebra	Any algebra text can be used for a basic review
Some Preliminaries	Chp 1, pages 3-16 and 26-29
Functions and Graphs, Linear Equations	Chp 4, and in Chp 2 pages 35-38 and 45-68.
Linear Functions: Applications	Chapter 5
Systems of Linear Equations, matrix algebra	Chpt 3, pages 97-103, Chp 9, pages 357-372
Linear Programming	Chp 10, pages 437-468
Differentiation: Ave & instant. rate of change	Chp 15, pages 600-629, 635, 650-652
Optimization: Methodology	Chp 16, Pages 657-687
Optimization: Application	Chp 17, Pages 705-715
Chapters	Problems
1	Following page 10: 17, 19, 21, Following page 19: 17, 19, 21, Following page 32: 1, 3, 7, 9
4	Following page 165: 1, 3, 7, 9, Following page 178: 1, 3, 5, 11, 29, Following page 180: 39, 41, Following page 189: 1, 3, 7.
2	Following page 41: 1, 3, 4, 5, Following page: 54: 1, 5, 23, 27, 39, 43, Following page 62: 5, 7, Following page 74: 1, 3, 7, 37.
5	Following page 204: 5, Following page 216-7: 3, 5, 7(a-c), Following page 236: 1, 3 (use Profit = TR-TC), 5 (same)
3	Following page 107: 3, 5, 11, 15, 19
9	Following page 363: 1, 3, 5, 7, Following page 375-6: 3, 7, 9, 17, 27
10	Following page 456: 1, 3, 11, 13, 21, 22
15	Following page 606: 1, 3, Following page 607: 23, Following page 620: 1, 3, Following page 627: 1, 5, 9, 13, 15, 19, 27, 28, 32, 33, 35, 39, 41, Following page 640: 1, 3, 5, Following page 653: 3, 5, 15
16	Following page 686: 1, 3, 4, 5, 6
17	Following page 724-5: 1, 2, 3, 4, 8