

SYLLABUS FOR MA 103, FINITE MATHEMATICS

Prof. Hal Martin

e-mail: hmartin@nmu.edu

Office Number: 3011 New Science Facility (NSF 3011)

Office Phone: 906-227-1591

Office Hours: 8:30 – 8:50 A.M., Monday through Thursday;
11:00 – 11:50 A.M., Monday, Wednesday, Thursday;
and by appointment.

Text: Finite Mathematics, second edition, by G. C. Berresford and A. M. Rockett

Course Description and Overview:

This course is designed primarily for students in business and the social sciences and psychology. MA 103 builds on algebraic skills learned in MA 100 or equivalent courses. There are three main components to the course: theory of interest (Chapters 1 and 2), linear programming (Chapters 3 and 4), and probability (Chapter 5). We do not have time in this course to cover each of these topics in depth. Therefore, the course consists of a brief introduction to each of these subjects. More advanced courses cover each of these topics in greater detail.

Chapter 1 is a prerequisite for Chapter 2. Chapter 2 is a brief introduction to the theory of interest, which theory is important in the mathematics of finance. And so, Chapters 1 and 2 together constitute our unit on the theory of interest.

Theory of Interest:

Chapter 1, Sections 1.1 – 1.6.

Chapter 2, Sections 2.1 – 2.4.

Systems of linear equations and matrix algebra are important topics for linear programming. Students who take courses in linear programming beyond MA 103 would be expected to know a little about matrix algebra. Matrices are used in a variety of other places as well. For example, an application to economics is given in the last section of Chapter 3. Therefore, in our unit on linear programming, we will study matrix algebra.

Linear Programming:

Chapter 3, Sections 3.1 – 3.5.

Chapter 4, Sections 4.1 – 4.2.

Many students in MA 103 will eventually take a course in statistics, often MA 171. An understanding of statistics is founded upon an understanding of probability. Chapter 5 constitutes a brief introduction to the theory of probability.

Theory of Probability:

Chapter 5, Sections 5.1 – 5.6.

Tentative Exam Schedule, (Fairly definite, but subject to change):

Exam 1, Thursday, 09/06/07, Sections 1.1 – 1.6.
Exam 2, Wednesday, 09/26/07, Sections 2.1 – 2.4.
Exam 3, Thursday, 10/11/07, Sections 3.1 – 3.5.
Exam 4, Thursday, 10/25/07, Sections 4.1 – 4.2.
Exam 5, Thursday, 11/08/07, Sections 5.1 – 5.4.
Exam 6, Thursday, 11/29/07, Sections 5.5 – 5.6.

Grading:

The grade on the final exam will be entered as two grades. Therefore, there will be a total of eight exam grades at the end of the course. The lowest of these eight exam grades will be dropped and a numerical average taken of the remaining seven exam scores. The usual grading scheme will be followed: 93 – 100 is an A; 90 – 92 an A-; 87 – 89 is a B+; 83 – 86 a B; 80 – 82 a B-; 77 – 79 a C+; 73 – 76 a C; 70 – 72 a C-; 67 – 69 a D+; 63 – 66 a D; 60 – 62 a D-; less than 60, an F. This scheme of grading is a minimum guarantee. The grading may be a little more liberal than indicated above.

Laptop Policy: The use of laptops and other electronic devices, except for hand held calculators, will not be permitted during exams. When you are in class, I expect your undivided attention. Therefore, the use of laptops during class periods is not permitted.

Note:

This course satisfies the Foundation of Natural Science/Mathematics requirement. Students who complete this course should be able to demonstrate a basic understanding of mathematical logic; use mathematics to solve scientific or mathematical problems in college classes; express relationships in the symbolic language of mathematics; and appreciate the role of probability and statistics in analyzing natural phenomena.

Disability Services:

If you have a need for disability related accommodations or services, please inform the Coordinator of Disability Services in the Disability Services Office at 2001 C.B. Hedgcock. The office may be contacted by going in person, or by telephone at 227-1700, or by e-mailing disserv@nmu.edu. Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state and university guidelines.

SCHEDULE AND ASSIGNMENTS

WEEK 1.

Monday, August 27, 2007.

Tuesday, August 28.

Wednesday, August 29.

Thursday, August 30.

WEEK 2.

Monday, September 3. Labor Day ~ no classes.

Tuesday, September 4.

Wednesday, September 5.

Thursday, September 6.

WEEK 3.

Monday, September 10.

Tuesday, September 11.

Wednesday, September 12.

Thursday, September 13.

WEEK 4.

Monday, September 17.

Tuesday, September 18.

Wednesday, September 19.

Thursday, September 20.

WEEK 5.

Monday, September 24.

Tuesday, September 25.

Wednesday, September 26.

Thursday, September 27.

WEEK 6.

Monday, October 1.
Tuesday, October 2.
Wednesday, October 3.
Thursday, October 4.

WEEK 7.

Monday, October 8.
Tuesday, October 9.
Wednesday, October 10.
Thursday, October 11.
Friday, October 12. Planning Day ~ no classes for the entire university this day.

WEEK 8.

Monday, October 15.
Tuesday, October 16.
Wednesday, October 17.
Thursday, October 18.

WEEK 9.

Monday, October 22.
Tuesday, October 23.
Wednesday, October 24.
Thursday, October 25.

WEEK 10.

Monday, October 29.
Tuesday, October 30.
Wednesday, October 31.
Thursday, November 1.

WEEK 11.

Monday, November 5.
Tuesday, November 6.
Wednesday, November 7.
Thursday, November 8.

WEEK 12.

Monday, November 12.
Tuesday, November 13.
Wednesday, November 14.
Thursday, November 15.

WEEK 13.

Monday, November 19.
Tuesday, November 20.
Wednesday, November 21, No Classes.
Thursday, November 22, Thanksgiving.

WEEK 14.

Monday, November 26.
Tuesday, November 27.
Wednesday, November 28.
Thursday, November 29.

Week 15.

Monday, December 03.
Tuesday, December 04.
Wednesday, December 05.
Thursday, December 06.

WEEK 16. FINAL EXAM WEEK.

Wednesday, December 12, 2007. Final Exam from 10:00 A.M. until 11:50 A.M.