

King Fahd University of Petroleum and Minerals
Department of Mathematical Sciences
Syllabus of Math 131 (Finite Mathematics)
Term: 052: February 12 – June 10, 2006

(Course Coordinator: Dr. Raja Mohammad Latif)

Textbook: *Introductory Mathematical Analysis for Business, Economics, and the life and Social Sciences*, by Ernest F. Haeussler, Jr. Richard S. Paul, & R. J. Wood, 11th Ed. (2005).

(Supplementary notes: *Mathematics with Applications*, by Lial & Hungerford, 7th Ed. 1999).

| Week | Dates | Section | Material | Homework |
|--|--|------------------|--|--|
| 1 | Feb.12 – 15 + Feb. 16* Thursday* | 1.1 | Applications of Equations | 4,12,16,20, 28, 33, 36, 43 |
| | | 1.3 | Applications of Inequalities | 2, 4, 6, 7, 9, 10, 12 |
| | | 3.1 | Lines (Review) | 12, 32, 58, 64, 71, 69, 71 |
| 2 | February 18 - 22 | 3.2 | Applications and Linear Function | 16, 17, 18, 20, 24, 26, 31 |
| | | 3.3 | Quadratic Functions | 27, 29, 31, 34, 36, 39, 40 |
| | | 3.4 | Systems of Linear Equations | 26, 28, 29, 34, 37, 39, 41 |
| 3 | Feb. 25 - March 01 | 3.5 | Nonlinear Systems | 6, 9, 12, 14, 15, 16 |
| | | 3.6 | Applications of Systems of Eqns. | 8, 15, 17, 18, 19, 20, 25 |
| 4 | March 04 -08 | 7.1 | Linear Inequalities in Two Var. | 16, 18, 20, 22, 24, 28, 29 |
| | | 7.2 | Linear Programming | 10, 13, 14, 15, 16, 17, 18 |
| | | 7.3 | Multiple Optimum Solutions | 1, 2, 3, 4 |
| 5 | March 11 -15 | 6.4 | Reduction in Matrix Algebra | 17, 23, 27, 29, 30, 31, 32 |
| | | 6.5 | Reduction in Matrix Algebra | 8, 10, 12, 19, 21, 24 |
| | | 7.4 | The Simplex Method | 5, 8, 12, 16, 17, 18, 19 |
| Exam | March 15 | Wed. | Major Exam I | Time & Location: TBA |
| 6 | March 18 – 22 | 7.8 [^] | The dual ([^] Exclude Example 3) | 4, 10, 12, 13, 14, 15, 17 |
| | | 5.1 | Compound Interest | 8, 10, 12, 18, 19, 23, 24, 26 |
| | | 5.2 | Present Value | 4, 8, 10, 11, 14, 16, 21 |
| 7 | March 25-29 | 10.3 | Interest Compounded Continuo | 5, 10, 12, 14, 16, 19, 20 |
| | | 5.3 | Annuities | 16, 18, 22, 24, 26, 28, 29 |
| Midterm Break: Saturday – Sunday, April 01 – 02, 2006 | | | | |
| 8 | April 03 – 05 | 8.1 | Basic Counting Principle | 6, 8, 10, 22, 25, 26, |
| | | 8.1 | & Permutations | 29, 32, 35, 36, 38, 40 |
| 9 | April 08 – 12 | 8.2 | Comb and Oth. Counting Prin. | 10, 14, 18, 23, 25, 26, 30, 33 |
| | | 8.3 | Sample Spaces and Events | 3, 6, 9, 14, 22, 26, 28, 29 |
| 10 | April 15 – 19 | 8.4 | Probability | 4, 10, 16, 19, 21, 23, 24, 27, 31 |
| | | 8.5 | Conditional Probability | 2, 9, 12, 14, 16, 17, 23, 24, |
| Exam | April 19 | Wed. | Major Exam II | Time & Location: TBA |
| 11 | April 22 -26 | 8.5 | Conditional Probability (Cntd.) | 26, 36, 37, 39, 41, 49, 51 |
| | | 8.6 | Independent Event | 2, 7, 13, 20, 23, 25, 27, 29, 31, 35, 36 |
| 12 | April 29 – May 03 | 9.1 | Dis. Rand. Var. & Exp. Value | 4, 5, 9, 11, 15, 16, 18, 20 |
| | | 9.2 | The Binomial Distribution | 4, 5, 10, 12, 17, |
| 13 | May 06 - May 10 | 9.2 | The Binomial Distribution (Cntd.) | 19, 20, 23, 25, 26 |
| | | 16.2 | The Normal Distribution | 2, 10, 14, 17, 19, 20, 21 |
| 14 | May 13 - May 17 | 16.3 | Normal Approx. to Bin. Dist. | 1, 3, 5, 6, 7, 8, 9, 10 |
| | | Sup. 11.1 | Frequency Distributions; Measures of Central Tendency | 2, 4, 9, 11, 13, 15, 20, 22, 23, 25, 27, 35, 37, 39, 43, 44 |
| 15 | May 20 – 24, May 27 - 28 | Sup. 11.2 | Measures of Variation | 5, 8, 10, 12, 13, |
| | | | Review & Catch Up | 24, 25, 26, 33, 36 |

Final Exam (Comprehensive) date will be announced later on by the Registrar Office.
DN grade will be enforced from Nine unexcused absences according to the KFUPM policy.