# King Fahd University of Petroleum and Minerals <br> Department of Mathematical Sciences 

Syllabus of Math 131 (032)<br>Course Coordinator: Dr. A. Umar<br>(Course Instructor: ; Office Rm<br>Tel. )

## Course \# : Math 131

Title : Finite Mathematics
Textbook: Introductory Mathematical Analysis for Business, Economics, and the life and Social Sciences, by Ernest F. Haeussler, Jr. \&Richard S. Paul, 10 ${ }^{\text {th }}$ ed. (2002). (Supplementary notes from Mathematics with Applications, by Lial \& Hungerford.)

| Week | Date | Section | Material | H/Work |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Feb.14-18 | $\begin{aligned} & 2.1 \\ & 2.3 \\ & 4.1 \\ & 4.2 \end{aligned}$ | Applications of Equations <br> Applications of Inequalities <br> Lines (Review) <br> Applications and Linear Functions | $\begin{aligned} & 12,16,28,33 \\ & 4,6,9,10 \\ & 10,16,56,72 \\ & 18,20,24 \\ & \hline \end{aligned}$ |
| 2 | Feb.21-25 | $\begin{aligned} & 4.3 \\ & 4.4 \\ & 4.5 \end{aligned}$ | Quadratic Functions (Review) Systems of Linear Equations Nonlinear Systems | $\begin{aligned} & 26,27,30 \\ & 16,24,28,34 \\ & 6,10,12 \\ & \hline \end{aligned}$ |
| 3 | Feb. 28- <br> Mar. 03 | $\begin{aligned} & 4.6 \\ & 7.1 \\ & 7.2 \end{aligned}$ | Applications of Systems of Eqns. Linear Inequalities in Two Var. Linear Programming | $\begin{aligned} & 6,15,18,22 \\ & 2,4,20,28 \\ & 4,6,16,18 \end{aligned}$ |
| 4 | Mar. 06-10 | $\begin{gathered} 7.3 \\ 6.4-6.5 \\ 7.4 \end{gathered}$ | Multiple Optimum Solutions Reduction in Matrix Algebra The Simplex Method | $\begin{aligned} & 2,4 \\ & \mathbf{6 . 5}: 8,10,21,20,24 \end{aligned}$ |
| 5 | Mar. 13-17 | $\begin{aligned} & \hline 7.4 \\ & 7.8 \\ & \hline \end{aligned}$ | The Simplex Method (cont'd.) The dual | $\begin{aligned} & \hline 4,8,16,18,19 \\ & 4,6,12,13 \\ & \hline \end{aligned}$ |
| 6 | Mar. 20-24 | $\begin{gathered} \hline 8.1 \\ 11.3 \\ 8.2 \end{gathered}$ | Compound Interest <br> Interest Compounded Continuously <br> Present Value | $\begin{aligned} & 2,10,12,22 \\ & 2,6,10,12 \\ & 2,6,8,11 \end{aligned}$ |
| 7 | Mar. 27-31 | 8.3 | Annuities | 16,18,22,24,26 |
| 8 | Apr. 03-07 | $\begin{aligned} & 9.1 \\ & 9.2 \end{aligned}$ | Basic Counting Principle and Perm Comb and Other Counting Prin. | $\begin{aligned} & \hline 5,14,21,36 \\ & 2,5,11,33 \\ & \hline \end{aligned}$ |
| 9 | Apr. 10-14 | $\begin{aligned} & 9.3 \\ & 9.4 \end{aligned}$ | Sample Spaces and Events Probability | $\begin{aligned} & 2,6,8,22,29 \\ & 4,10,18,24 \end{aligned}$ |
| 10 | Apr. 17-21 | $\begin{aligned} & 9.4 \\ & 9.5 \\ & \hline \end{aligned}$ | Probability (cont'd) Cond. Prob. and Stoc./ Proc. . | 2,9,12,38 |
| 11 | Apr. 24-28 | 9.6 <br> SupplemNotes | Independent Event Frequency Distributions | 2,7,15,25 |
| 12 | May 01-05 | SupplemNotes | Measures of Central tendency, Measures of Variations. | $\begin{aligned} & \text { 11.1-1,20,35, } \\ & 39,45 ; 11.2- \\ & 2,7,24,26 \end{aligned}$ |
| 13 | May 08-12 | $\begin{aligned} & \hline 10.1 \\ & 10.2 \\ & \hline \end{aligned}$ | Discrete Rand Var. and Exp Value The Binomial Distribution. | $\begin{aligned} & \hline 6,9,14,18 \\ & 4,10,15,20 \\ & \hline \end{aligned}$ |
| 14 | May 15-19 | $\begin{aligned} & \hline 10.2 \\ & 18.2 \\ & \hline \end{aligned}$ | The Binomial Distribution (cont'd.) The Normal Distribution | 2,8,9,20,22 |
| 15 | May 22-26 | 18.2 | The Normal Distribution (cont'd.) Review and catch-up |  |

*Suggested times for Exams \#1 \& \#2: Tuesday, Mar. $16^{\text {th }}$ and Wednesday, Apr. $21^{\text {st }}$, respectively
*KFUPM policy with respect to attendance will be enforced.
*Final exam: To be announced later (Comprehensive).
*DN policy will be adopted according to KFUPM regulations (from 9 absences)

