

IUSB M111

MATHEMATICS IN THE WORLD

Instructor:

Text: For All Practical Purposes, 7th Edition

Calculator: (Minimal) A calculator that has at least a square root key. You may use your calculator on all exams and quizzes.

Office:

Office Hours

A “Computer Literacy” component is part of this class. There will be two assignments dealing with statistics and the use of Microsoft Excel.

HOW GRADES ARE DETERMINED

Exams 1,2,3,4	4x10%	40%
Final Exam	Comprehensive	30%
Excel Assignments	2 x 10%	20%
Participation	See Comments below	10%

Grading Scale:
(Percent)

90 – 100 = A- to A
70 – 80 = C- to C+

80 – 90 = B- to B+
60 – 70 = D- to D+

SCHEDULE

Days	Chapter	Topics
3 Days	Ch. 5	Individuals and variables Exploring data: Histograms and Pie Charts Exploring data: Mean, Median, Quartiles, 5-Number Summary, Box Plots Variance and Standard Deviation Normal Distributions: Shape, Quartiles, 68-95-99.7 Percent Rule
2 Days	Ch. 6	Display relationship between two random variables: Explanatory and Response Variables, Scatterplots Regression Lines, Estimation and Prediction Based Upon the Regression Equation Correlation and Least Squares Regression Excel Assignment #1 – Linear Regression Exam 1 – Chapters 5 and 6
4 Days	Ch. 7	Sampling and Surveys, Population Bad Sampling Methods, Bias, Simple Random Sampling, Random Tables, Variability Experiments, Treatments, Observational Studies

		Confounding and The Placebo Effect Parameters and Statistics, Sampling Distribution of Sample Proportions 95% Confidence Interval for a Population Proportion, Margin of Error Excel Assignment #2 – Charting Survey Data and Margin of Error
4 Days	Ch. 8	Random Phenomenon, Sample Spaces, Events Discrete Probability Models, Probability Histograms, Probability Rules Equally Likely Outcomes, Counting Techniques, Mean of a Probability Model Statistical Inference, Sampling Distribution of Sample Means The Central Limit Theorem Exam 2 – Chapters 7 and 8
2 Days	Ch. 1	Basics of Graphs: Vertices, Edges, Valence Euler Circuits and Euler’s Theorem The Chinese Postman Problem, Circuits with Reused Edges
3 Days	Ch. 2	Hamiltonian Circuits – The Traveling Salesman Problem Nearest Neighbor and Sorted Edges Algorithms Kruskal’s Algorithm – Minimum Cost Spanning Trees Tasks and Order-Requirement Graphs Critical Path and Optimal Completion Time
3 Days	Ch. 3	The List Processing Algorithm Dependent and Independent Tasks Exam 3 – Chapters 1, 2, 3
3 Days	Ch. 4	Review of Linear Equations and Inequalities Mixture Charts, Resource Constraints, Feasible Regions Profit Formula and the Corner Point Principle – Optimal Solutions Mixture Problems: Various Combinations of Resources and Products
2 Days	Ch. 18	Geometric Similarity – Proportional Growth Relationship between Linear Scale, Area, and Volume Exam 4 – Chapters 4 and 18
2 Days	Ch. 19	Translational, Reflective, and Rotational Symmetry Spiral, Phyllotaxis, and Fibonacci Numbers Golden Ratio and Geometric Average
2 Days		Review for Comprehensive Final Exam

Free Math tutoring is available at the Mathematics Department (NS-310, 520-4335); check schedule at www.iusb.edu/~sbmath during the first week of the class.

Free tutoring is also available through the Academic Learning Center 520-5022

ADA STATEMENT

If you have a disability and need assistance, special arrangements can be made to accommodate most needs. Contact Director of Disabled Student Services (Administration Building, room A120, telephone number 520-4832), as soon as possible to work out the details. Once the director has provided you with a letter attesting to your needs for modification, bring the letter to me
