MATHEMATICS 1040

Introduction to Statistics and Probability (3 credits)

Textbook: Elementary Statistics – Picturing the World, by Ron Larson and Betsy Farber (fourth edition)

Prerequisites: C or better in Math 1010 (Intermediate Algebra), or at least score of 23 on the math portion of the ACT, or the appropriate score on Math Placement Exam (Testing Center). This means that you should be able to manipulate variable expressions, work with simple linear equations and graphs, work with fractions, exponents and radicals.

Course: Math 1040 is the introductory statistics course. We will learn how data is collected, organized, analyzed and interpreted, how to determine the probability that an event will occur, how to create and use probability distribution, how to recognize normal (bell-shaped) distributions and how to use their properties in real-life applications.
Statistics and probability are applicable to a wide variety of academic disciplines, from the natural and social sciences to the humanities, government and business.
The course is based on chapters 1 – 5 and chapter 9. You are expected to read each section that we cover. We will also try to bring and analyze recent newspaper/magazine articles that describe the results of a statistical study.

Homework: Homework problems are assigned for each section. Homework will not be collected, but I strongly recommend that you do these problems.

Quizzes: Approximately every 2 weeks there will be a quiz covering the material that we have done. The problems will be very similar to the text or examples that we have done in class; or the assigned suggested homework problems. No make-up quizzes will be given, but the 2 lowest quiz scores will be dropped.

Exams: You will have 3 exams (50 minutes each). You MUST bring a valid ID to the exam. No make-up exams will be given (regardless of the reason), but the lowest exam score will be dropped. Please plan ahead of time.

Final Exam (comprehensive): 2 hour exam

Grading policy: Your grade will be based on:

Quizzes	20%
Exams (2)	40% (20% each)
Final exam	40%

Calculators: You will need a calculator for this course. A scientific calculator will be sufficient.

ADA Statement: The Americans with Disabilities Act requires that reasonable accommodations be provided for students with physical, cognitive, systemic learning, and

psychiatric disabilities. Please contact me at the beginning of the semester to discuss any such accommodations that you may require for this course.

Tutoring: The Rushing Math Center offers free drop-in tutoring, a computer lab, and study areas for undergraduates. The Rushing Student Center is adjacent to the LCB and JWB. The hours are: 8 am – 8 pm Monday-Thursday and 8 am – 6 pm on Friday. The tutoring center opens the second week of classes.

DAILY SCHEDULE OF LECTURES FOR MATH 1040 - TENTATIVE

WEEK	LECTURE	SUGGESTED PROBLEMS
#1 8/25-8/29	1: Intro to the course 2: Algebra review 3: Algebra review; Quiz #1 (Algebra);	Diagnostic Test
#2 9/1-9/5	1: Labor Day Holiday 2: 1.1 – An Overview of Statistics 3: 1.2 – Data Classification	p. 8: 1-37 odd,41 p. 15: 1-23 odd
#3 9/8-9/12	1: 1.3 – Experimental Design 2: 2.1 – Frequency Distributions and Their Graphs 3: Quiz #2 (1.1-1.3); 2.1 (cont.)	p. 25 : 1-36 all p. 49: 1-41 odd
#4 9/15-9/19	1: 2.2 – More Graphs and Displays 2: 2.2 (cont); 2.3 – Measures of Central Tendency 3: 2.3 (cont.)	p. 62: 1-31 odd, 35 p. 74: 1-55 odd
#5 9/22-9/26	1: 2.4 – Measures of Variation 2: Quiz #3 (2.1-2.3); 2.4 (cont.) 3: 2.5 – Measures of Position	p. 92: 1-43 odd p. 109: 1-49 odd
#6 9/29-10/3	1: Review (for Exam #1) 2: **EXAM #1** (Chapters 1 and 2) 3: 3.1 – Basic Concepts of Probability and Counting	p. 142: 1-59 odd
#7 10/6-10/10	1: 3.1 (cont.) 3.2 – Conditional Probability and the Multiplication Rule 2: 3.2 (cont.) 3: 3.3 – The Addition Rule	p.154: 1-35 odd p. 165: 1-1-25 odd, 29
FALL BREAK (OCTOBER 13 - OCTOBER 17)		
#8 10/20-10/24	1: 3.3 (cont.) 3.4 – Additional Topics in Probability and Counting 2: Quiz #4 (3.1-3.3); 3.4 (cont.) 3: activity	p.178: 1-49 odd
#9	1: 4.1 – Probability Distribution 2: 4.1 (cont);	p. 201: 1-45 odd

10/27-10/31	4.2 – Binomial Distribution 3. 4.2 (cont).	p. 215: 1-31 odd
#10 11/3-11/7	1: 4.3 More Discrete Probability Distributions 2: Review (for Exam #2) 3: **EXAM #2** (Chapters 3 and 4)	p.226: 1-23 odd
#11 11/10-11/14	1: 5.1 – Intro. To Normal Distributions and the Standard Normal Distributions 2: 5.1 (cont.) 5.2 – Normal Distributions: Finding Probabilities 3: 5.2 (cont.)	p. 248: 1-61 odd p. 257: 1-29 odd
#12 11/17-11/21	1: Quiz #5 (5.1-5.2); 5.3 – Normal Distributions; Finding Values 2: 5.3 (cont.) 3: 5.4 – Sampling Distributions and Central Limit Theorem	p. 266: 1-45 odd p. 278: 1-39 odd
#13 11/24-11/28	1: Quiz #6 (5.3) 5.4 (cont.) 2: 5.5 – Normal Approximations to Binomial Distributions 3: Thanksgiving Holiday	 p.291: 1-27 odd
#14 12/1-12/5	1: Review (for Exam #3) 2: **EXAM #3** (Chapters 5) 3: activity	
#15 12/8-12/12	1: Review (for Final) 2: Review (for Final) 3: Review (for Final)	

FINAL (Comprehensive)