Math 2311 Introduction to Probability & Statistics Course Syllabus/ Departmental Policies Website: www.math.uh.edu/~irina Email: <u>irina@math.uh.edu</u>

Online Sessions

We have created a course that has many of the features of a face-to-face class. There are special requirements for an online class and a detailed description of all aspects of the course is given in the Course Policies posted on my website.

You must have access to a computer and a fast internet connection. The class will meet in an online classroom on days indicated in the calendar. You will be able to see and hear my lectures. You will also be able to communicate with me through the class chat line. If your schedule will not allow you to attend the live sessions, a recording of it will be posted on my website for you to watch and listen to before the next class session. Continue reading for more details on this and all other course information.

Prerequisites: MATH 1310: College Algebra or MATH 1311: Elementary Mathematical Modeling.

Access Codes are purchased at the campus bookstore at the register. Once purchased, enter the code into the online form at casa.uh.edu by the deadline. Students who have not entered a valid access code by the deadline will be denied access to their course account and will not be able to submit coursework until they enter a valid access code.

Textbook: The text can be found online in your CourseWare/CASA account. All students *must buy an access code from the bookstore* to continue using the book and do assignments in CASA.

Announcements will be made during class and/or via email. Students are responsible for information about the course that is emailed using the email address that the students provide to the CourseWare site or the My UH site. Your teacher cannot update either profile for you; you are responsible for having a good email address on file in both places. Your teacher reserves the right to make changes to the syllabus/policies of the course and to announce such information as needed. You are responsible for knowing the content of any announcements concerning changes.

Email: Students are responsible for information about the course that is emailed to them using the email address that the students provide to the My UH site. It is the student's responsibility to keep the email address on file current and to make arrangements for email from the instructor, UH, and CourseWare to reach the student. If you are forwarding your UH email account to any other (yahoo, hotmail, etc), note that email rejection by these sites does NOT excuse you from finding out what your instructor has sent.

Website: Information about the course, including Class Notes, Syllabus, Homework etc. is posted on my website.

Grades: Grades will be determined as follows: Quizzes 10% Homework 9% Test 1 (in - class) 27% Test 2 (in - class) 27% Test 3 (in - class) 27%

Grading: If x is your semester numerical score:

А	x > 93	B-	$80 \le x < 83$	D+	$67 \le x < 70$
А-	$90 \le x < 93$	C+	$77 \le x < 80$	D	$63 \le x < 67$
B+	$87 \le x < 90$	С	$73 \le x < 77$	*D-	$50 \le x < 63$
В	$83 \le x < 87$	C-	$70 \le x < 73$	F	Below

Grades are NOT rounded up. So, for example, in order to earn an A as a letter grade, you must have an average that is 93.0% or better. 92.99% is an A-.

Peoplesoft ID Number: You can find this number in your peoplesoft account. You will need to provide this number on each test you take.

Exams: Three in-class exams (Test 1, Test 2, and Test 3) will be given. No one can exempt from either exam.

Retests: There will be no "re-tests". If you earn a score that is not satisfactory to you, that is unfortunate but is no cause for you to be allowed to take the test again.

Remote Students: Those that live more than 100 miles from the UH campus need to email their instructor regarding remote administration of the exams. It will be the student's responsibility to find a university or testing center that will administer the exam. The student will also need to work with Distance Education to set this up. Email: Tim Bretzke at <u>DEproctoring@uh.edu</u>.

Online Quizzes: You will take quizzes online via CourseWare. Click on "Online Assignments" tab of your course page on CourseWare. You may take each quiz up to 20 times; your highest score on the quiz will be the grade that is recorded. You must wait 10 minutes between attempts. Please note the schedule for the quizzes. You are responsible for knowing the expiration date on each quiz. In the event conflicting dates are posted online, the one that applies is the due date listed on the "Online Assignments" tab on CourseWare. Do not wait until the last afternoon to begin working on an online quiz. CourseWare has a finite number of "logins" that can be accommodated per hour and being unable to log on is not an excuse for missing a quiz; neither are viruses or hardware failures. There are no make-ups for online quizzes. If you ever run into any technical problems, please do not email me, email tech support.

Homework: Assigned homework is generally due at midnight of the day after the lecture on the material. Homework must be submitted 10 minutes prior to the deadline in an online EMCF in your CourseWare account. Your teacher will explain how to use the EMCF at the beginning of the semester.

There are no make ups for homework assignments. Two of your lowest homework scores will be dropped before calculating your average for the semester to allow for illnesses or excused absences of any sort. See the homework assignments and due dates on your teacher's website.

Technical problems on CASA site: Technical questions can be resolved by sending email to technical support by using the link on the CourseWare log-in page. Your teacher does NOT have any authority to fix or change anything on the CourseWare site; you must contact CourseWare tech support if there is a problem.

Extra Credit: You will be able to earn extra credit towards your tests by taking practice tests via your CASA account. You can take each practice test up to 20 times. Ten percent of each Practice Test 1, Practice Test 2, and Practice Test 3 will be added to the corresponding scores.

Calculators: Calculators are permitted in Math 2311. We'll be using a free program called R-Studio.

Accommodations for Students who have Disabilities: A current Student Accommodation Form (SAF) must be presented in a timely manner for accommodations to be approved. No retroactive accommodations will be provided. Accommodations for undergraduate mathematics courses that could change the essential nature of the course or provide an unfair advantage to one student over another student will not be approved. Notably, in the event that calculators and/or formula sheets are allowed for all students in a course, then all students may have them. If, however, calculators and/or formula sheets are not allowed to anyone, then no one may have them. Accommodations that are listed on your SAF that would NOT change the essential nature of a course or provide an unfair advantage may be approved (e.g. an extra set of class notes for lecture, testing at CSD, extended time*...). Please review these with your teacher during conference hours for the class (not immediately before or after a lecture). *If you run over the time listed in your accommodations, you will be penalized in proportion to the unauthorized amount of time that you used. For example, if your accommodations state that you are allowed 150 minutes on a test and you use 165 minutes on a test, you will lose 10% of the test score that you earn, since you went overtime by 10%.

"Incomplete" An incomplete ("I") may be given if all of the following criteria are met:

- The reason is a compelling NON-ACADEMIC reason.
- You have completed virtually all the course assignments.
- You have a passing grade on this work.

Incompletes are NOT available to students who have done little of the coursework nor for students who have failing grades on what they have done. See your instructor to fill out and sign the Incomplete contract – this is required and must be signed in advance of an I being posted. Imminent failure is not an acceptable reason to be awarded an incomplete.

Cheating will not be tolerated. See page 8 of the Student Handbook for consequences.

The Completion Forms: If you are using financial aid and fail the course, you need to provide this form to your instructor at the end of the semester.

Dropping the course: You are responsible for making arrangements to drop the course if you wish to do so. If you wish to drop the course, complete the online process at my.uh.edu before the deadline. Your instructor cannot drop you for any reason. Pay attention to the deadline and check your course enrollment status on my.uh.edu to make sure your drop has been processed.

The material covered in the course is listed below:

Chapter 1 Exploring Univariate Data

Section 1.1 Types of Data

Section 1.2 Mean and Median

Section 1.3 Standard Deviation and Variance

Section 1.4 Range, IQR and Finding Outliers

Section 1.5 Graphs and Describing Distributions

Chapter 2 Introduction to Probability

Section 2.1 Counting Techniques, Combinations and Permutations

Section 2.2 Sets and Venn Diagrams

Section 2.3 Basic Probability Models

Section 2.4 General Probability Rules

Chapter 3 Discrete Distributions

Section 3.1 Random Variables

Section 3.2 Binomial Distributions

Section 3.3 Geometric Distributions

Chapter 4 Continuous Distributions

Section 4.1 Density Curves

Section 4.2 The Normal Distribution

Section 4.3 Standard Normal Calculations

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Section 4.4 Sampling Distributions of \bar{x} and \hat{p}

Chapter 5 Bivariate Data

Section 5.1 Scatter Plots

Section 5.2 Correlation

Section 5.3 The Least Squares Regression Line

Section 5.4 Residuals

Section 5.5 Non-Linear Models

Section 5.6 Relations in Categorical Data

Chapter 6 Samples and Experiments

Section 6.1 Sampling

Section 6.2 Designing Experiments

Section 6.3 Simulating Experiments

Chapter 7 Estimation

Section 7.1 Margins of Error and Estimates

Section 7.2 Confidence Interval for a Proportion

Section 7.3 Confidence Interval for the Difference of Two Proportions

Section 7.4 Confidence Interval for a Mean

Section 7.5 Confidence Interval for the Difference of Two Means

Chapter 8 Tests of Significance

Section 8.1 Inference for the Mean of a Population

Section 8.2 Sample Proportions

Section 8.3 Inference for a Population Proportion

Section 8.4 Comparing Two Means

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Section 8.5 Comparing Two Proportions

Section 8.6 Goodness of Fit Test

Section 8.7 Inference for Two-way Tables

Chapter 9 Inference for Regression (Optional)

Section 9.1 Confidence Intervals

Section 9.2 Test for Slope of Regression Lines