Information Sheet For Introductory Statistics   Spring 2024
MATH10.29 / CRN 01228
Instructor: Teck Ky
Day and Time: Lecture T & Th 4:00 PM-6:15 PM. Room: MLC108
Office Hours: Tuesday from 2:30 PM to 3:30 PM   Room: Food Court

Text: <u>Statistics: Understanding Uncertainty,</u> (Fourth Edition) Frank Soler
Labs: <u>Will be given in the Mathlab</u>
Calculator: I recommend that you buy TI-83 or TI-+84 for this course.

Topic: This course will cover selected topic from chapters 1-12, including graphical and numerical descriptive methods, probability, random variables and their distributions, sampling distributions, the central limit theorem, confidence intervals, hypothesis testing, z and t procedures, simple linear regression, one-way analysis of variance, and applications of the Chi-squared statistic.

Relationship of the course to College Mission: One aspect of the College's mission is to enable our students to realize their highest potential and to achieve their educational goals. Statistical literacy is as necessary as reading and writing literacy for competence in today's world. This class will help you foster a critical attitude towards statistical arguments, and will help provide intuition about statistics which can sometimes be lost behind the mathematical formulas. We will use the latest technology to explore and simulate data.
I am here to teach you and to help you to learn how to learn the contents in this course, and you need to come to class to learn these contents. To be on time for every lecture is not only a goal but also a responsibility.

Writing Across Curriculum Part: Students will use complete sentences to explain procedures and summarize the problems from the textbook, quizzes, and computer labs.

Laboratory projects: Two computer lab assignments will be given this quarter.
You will learn how to use the programs from the Minitab and EXCEL programs with your assignments. Extensive EXCEL programs and the Minitab demonstrations will be done in lecture and lab. These programs are available in S42 or S44.

Accommodation: If you have a learning or physical need that will require special accommodation, please make an appointment with our Disabled Students Program and inform me of your needs.

Reading Regularly = Understanding Class Material.
Homework: Mathematics is learned by doing problems. You can not learn mathematics just by watching me during class or asking me to solve the problems for you.
Mathematics is a lot like playing an instrument or sport. Becoming proficient require

practice, practice, practice. The problems from our textbook and in-class-practice problems are your opportunity to practice. Please try to maintain a constant level of effort. The problems will be assigned daily. You are expected to do all problems assigned. You may discuss homework problems with your classmates (it is encouraged!), but you must turn in your original work. Turn in all your homework problems on the day you come to take the exam. Do not fall behind. Write on one side of the paper only. Staple multiple pages together. **No late homework will be accepted.**

Quizzes: Frequent quizzes on homework will be given at the end of the class period. There will be no make-up for missed quizzes.

Exams: There will be two 100-minute exams. Make-up exam will be allowed only under exceptional and justifiable circumstances, and you should be prepared to substantiate your case with some documentation. The exams will be given on **May 7** and **June 4**. The final exam will cover the entire course and will be given on **Thursday, June 27**, **from 4:00 PM to 6:00 PM**.

Attendance: Regular and punctual attendance is expected of each student. Please come to class on time. To be on time for every lecture is not a goal but also a responsibility. I am here to help to do well in this course. But if you don't come to class, I cannot help you. I understand taking this course and juggling life may be tough. To help you manage your time, I have provided you with the course calendar for this quarter. However, if unforeseen circumstance arises and you miss material, please contact me and let me know so that we can figure out a plan for you to get back on track with the calendar for this course. If you stop participating with this course and don't inform me, I may drop you. You also have the option to drop this course yourself, if you choose to stop participating. April 19 is the last day to drop without a W, and May 31 is the last day to drop with a W.

Evaluation: Grade will be determined on the basis of total points earned. The following scale will be used.

Homework	30	**A**	426-450
Labs	30	**A-**	400-425
Quiz	40	**B+**	374-399
Exams	200	**B**	348-373
Final	150	**B-**	322-347
		C+	297-321
		C	272-296
		D	247-271
		F	000-246

Week #	Topic	section	Problems
	Text: Statistics: Understanding Uncertainty, Fourth Edition		The following schedule is tentative, subject to change any time.
	Topic	**section**	**Problems**
1	Uncertainty, Randomness & Data	1.1	2 & 4; more on handout
	Uncertainty, Randomness & Data	1.3	2 to 10
	Uncertainty, Randomness & Data	1.4	1 to 10
	Data production and random sampling	1.5	3 & 4: more on handout
	The how and why of designing statistical experiements	1.6	5 and 7a-7c only
	Mastery Problems for chapter 1		11 and more in class
	How are data described?	2.2	1 & 4: more on handout
	Describing the center of data	2.3	1, 2, 4, 6, 7, and 10
2	Describing the spread of the data	2.4	1, 6, 7, and 8
	Chapter 2 problems		3, 9, 12, 13 (a to d only), and 15
	Mastery Problems for chapter 2		1 and more in class
	Sample spaces and probability models	3.2	1, 5, and 6
	Conditional probability	3.5	4, 6, 10: more on handout
3	Chapter 3 problems		1 and 2
	Mastery Problems for chapter 3		1, 2, 4a, 4c, 4d
	Discrete probability distribution	4.1	2, 3, and 5`
	Expected Value	4.2	2, 3, 5, 6.
4	The binomial distribution	4.4	1, 2, 3, 4, 6, 17, 25
	The Poisson distribution and Review for exam1		Will be given in class.
	Mastery Problems for chapter 4		1a, 1b, 1c, 6a, 6b, 6c
5	**Review and Exam1**		**Tuesday, May 7**
	Uniform Dist.	5.3	4 and more in class
	How to apply the Normal distribution	5.5	12, 18, 19, 20
	Mastery Problems for chapter 5		3(a to f only)
	The Central Limit Theorem & its applications	Ch. 6	5a, 5b, 5d, 6,
6	Test Yourself chapter 6		3 and 5
	Mastery Problems for chapter 6		2 (a to d only)
	Confidence Interval and find sample size	Chapter 7	1, 2, 3, 4, 6 (a-d only), 9, 14
7	Mastery Problems for chapter 7		2(a to e only),
	Confidence Interval with small sample size	9.2	1, 2, 6: more on handour
	Confidence Interval for population standard deviation	9.5	2, 3, and 5a only
8	Hypothesis testing about a population mean when sigma is known	8.1	1, 2, 3, 6, 12
	Hypothesis testing about a population proportion and Type I and Type II errors	8.1	12 and more in class
9	**Review and Exam 2**		**Tuesday, June 4**
	Mastery Problems for Chapter 8		3, 4 (a-d only), 6
	Hypothesis testing about a population mean when sigma is unknown	9.2	7 and more in class
	Chapter 9 problems		7 and 9; more in class
	Comparing two population paremeters	10.3	2 and 3
10	Mastery Problems for chapter 10		7 (a and c only) and more
	One-Way Analysis of Variance	11.3	3 and more in class
	Test Yourself chapter 10		1, 2, 7, 8
11	Applications of the Chi-square distribution	11.1	1, 4, 5
	Applications of the Chi-square distribution	11.2	3, 4, 5, 6
	Simple Linear Regreesion Analysis	12.1	1, 2, 3, and more in class
12	Review for final.		
	Final Examination		**Thursday, June 27: 4:00 PM to 6:00 PM**

Student Learning Outcome(s):

• Organize, analyze, and utilize appropriate methods to draw conclusions based on sample data by constructing and/or evaluating tables, graphs, and numerical measures of characteristics of data.
• Identify, evaluate, interpret and describe data distributions through the study of sampling distributions and probability theory.
• Collect data, interpret, compose and evaluate conjectures, and communicate the results of random data using statistical analyses such as interval and point estimates, hypothesis tests, and regression analysis.

Office Hours:

T,TH   02:40 PM   03:35 PM   In-Person   Food Court