

COURSE SYLLABUS

Course Information STATISTICAL DECISION MAKING

SPRING 2020 STAT 1342

Section	Call No	Course Meeting Times	Class Room
1342.001	20948	M W 8:30 AM – 9:45 AM	GR 3.302

Professor Contact Information

DR. YULY KOSHEVNIK

FA 2.408

972-883-4178

yuly.koshevnik@utdallas.edu

OFFICE HOURS:

M W 1:30 – 2:30

T R 5:30 – 6:30 OR F 12:00 – 2:00

Teaching Assistant:

To Be Announced Later

Course Pre-requisites, Co-requisites, and/or Other Restrictions

MATH 1306, MATH 1314, or equivalent

Course Description – Principles of quantitative decision making: summarizing data, modeling uncertainty, loss functions, probability, conditional probability, random variables. Introduction to statistics: estimation, confidence intervals, hypothesis testing, regression.

Student Learning Objectives/Outcomes

This course will give students a working knowledge of the ideas and tools of practical statistics. Students will develop skills listed below.

- Graphical presentation of data – histograms, stem and leaf display, scatter plots for regression data.
 - Explanation of NUMERICAL SUMMARIES (such as mean, median, variance and standard deviation, correlation and regression summaries).
 - Basics in Probability Theory (probability rules, independence and conditional distributions, continuous distributions and density functions, random variables, and their expected values, as well as other moments).
 - Sampling distributions of various statistics with application of statistical inferences based on descriptive statistics.
 - Statistical Inferences (such as hypothesis testing and confidence intervals).
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Required Textbooks and Materials

Understanding Basic Statistics (by C. H. Brase and C. P. Brase) 7th Edition (or 6th Edition)

ISBN: 978-1-305-25406-0 / ISBN 13: 978-1-111-82702-1

(Additional Source) Fundamentals of Statistical Thinking: Tools and Applications (by Yuly Koshevnik) First Edition. **ISBN: 9781516511631**. The book is now available for purchase in both print and digital formats through the student e-commerce store (<https://students.universityreaders.com/store/>).

Textbook, lecture notes, calculator, and scratch paper should be brought to each class period.

Common policies can be seen from <http://provost.utdallas.edu/syllabus-policies/>

COURSE SYLLABUS

IMPORTANT DATES & HOLIDAYS	
CLASSES START	MONDAY, JANUARY 13
MARTIN LUTHER KING'S DAY	MONDAY, JANUARY 20
CENSUS DAY/ DROP WITHOUT A "W"	WEDNESDAY, JANUARY 29
EXAM 1	WEDNESDAY, FEBRUARY 12
DROP (APPROVAL REQUIRED)	TUESDAY, FEBRUARY 25 – THURSDAY, MARCH 26
DROP WITH WL	TUESDAY, FEBRUARY 25 – THURSDAY, MARCH 26
EXAM 2	WEDNESDAY, MARCH 11
SPRING BREAK – NO CLASSES	MONDAY, MARCH 16 – SUNDAY, MARCH 22
EXAM 3	WEDNESDAY, APRIL 8
LAST REVIEW	MONDAY, APRIL 27
EXAM 4 (LAST)	WEDNESDAY, APRIL 29
LAST DAY OF CLASSES	WEDNESDAY, APRIL 29

Course & Instructor Policies

Announcements:	HW and Quiz days will be announced in class and via E-Learning.
Homework:	Homework will be assigned, collected in class, graded, and returned in class. No online submission, please! There will be TEN homework assignments posted on E-Learning and expected to be turned in for grading (IN CLASS ONLY!) Homework assignments 7 – 10 are ONLINE and should be submitted according to instructions posted on E-Learning . Work is to be complete and written with proper mathematical notation. Homework <u>will not be accepted</u> after deadline, no exceptions. Solution will be posted via E-Learning AFTER submission.
Quizzes:	There will be TEN quizzes. Quizzes 7 – 10 scores will duplicate the corresponding homework assignments (7 – 10)
Exams:	FOUR major intermediate exams will be given. Dates and time are shown in the schedule.
Calculator:	A scientific calculator and Tables 2 – 5 from the book are required. All electronic devices are NOT permitted in class or during exams.

Grading Policy

Your course grade will be determined based on the following weighting:

Homework Assignments (**collected in class only**) **10%**

Quizzes (**conducted in class only**) **10%**

FOUR Intermediate Exams (**see schedule**) $20\% + 20\% + 20\% + 20\% =$ **80%**

Make-up exams will only be permitted for students who demonstrate valid reasons to miss the scheduled exam. **No on-line homework submission and no make-up quiz.**

Grading Scale:

[97, 100]	[93, 97]	[90, 93]	[87, 90]	[83, 87]	[80, 83]	[77, 80]	[73, 77]	[70, 73]	[67, 70]	[63, 67]	[60, 63]	[0, 60]
A+	A	A -	B+	B	B -	C+	C	C -	D+	D	D -	F

COURSE SYLLABUS

TENTATIVE COURSE OUTLINE		
Days	Topics	Chapters
01/13 – 01/22	Introduction: Grading Policy, Rights and Duties	1 – 2
	Graphical and Tabular Descriptive Techniques	
01/20	Martin Luther King's Day – No Classes	
01/22 – 01/27	Numerical Summaries	3
	HW 1 => 01/22 Quiz 1 => 01/27	1 – 2
01/29 – 02/03	Correlation and Regression	4
	HW 2 => 01/29 Quiz 2 => 02/03	3 – 4
02/05 – 02/10	Probability Rules / Distributions	5
	HW 3 => 02/05 Quiz 3 => 02/10	4 – 5
02/10	First Exam Review	
02/12	Exam 1	
02/17 – 02/24	Binomial Distributions with Applications	6
	HW 4 => 02/17 Quiz 4 => 02/19	5 – 7
	HW 5 => 02/24 Quiz 5 => 02/26	5 – 7
02/26 – 03/09	Normal Curves and Sampling Distributions	7
	HW 6 => 03/02 Quiz 6 => 03/04	7
03/09	Second Exam Review	
03/11	Exam 2	
03/16 – 03/22	Spring Break – No Classes	
03/23 – 03/25	Estimation and Confidence Intervals	8
	HW 7 => 03/30 Quiz 7 => 03/30	7
03/30 – 04/01	Hypothesis Testing: Z and T tests	8 – 9
	HW 8 => 04/06 Quiz 8 => 04/06	
04/06	Third Exam Review	
04/08	Exam 3 - ONLINE	
04/13 – 04/15	Matched Pairs	Sec. 10.1
	HW 9 => 04/15 Quiz 9 => 04/15	
04/15 – 04/27	Inferences About the Population Proportion	7 – 9
	Comparing Population Proportions	Sec 10.3
	Comparing Two Population Means	Sec. 10.2
	Various Chi-Squared Tests	11.1 – 11.3
	HW 10 => 04/22 Quiz 10 => 04/22	9 – 11
04/27	Course Overview and Exam 4 Review	
04/29	[Last] Exam 4 – ONLINE	

These descriptions and timelines are subject to change at the discretion of the Professor.