

## *Course Syllabus*

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### **Course Information**

STATISTICAL DECISION MAKING (STAT 1342)

FALL2016

Section	Time	Instructor	Room
1342.001	T/Th 8:30 am- 9:45 am	Cheng Wang	FO 2.208
1342.002	T/Th 10:00 am-11:15 am	Cheng Wang	FN 2.204

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### **Instructor's Contact Information**

**Name:** Cheng Wang

**Email:** [cxw113020@utdallas.edu](mailto:cxw113020@utdallas.edu) (I check my email regularly)

**Office Hour:** TBA

**Office Location:** FO 1.210

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### **Course Prerequisite, Co-requisites, and/or Other Restrictions**

MATH 1306, MATH 1314, or equivalent

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### **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.

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### **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

Text: Understanding Basic Statistics Sixth edition Brace/Brace

- Textbook, calculator and lecture notes should be brought to each class period. Students will be working problems in class.

### Suggested Course Materials

A scientific calculator is required (permitted on exams)

No additional course materials requested

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### Tentative Assignments and Academic Calendar

**Homework** will be assigned via E-Learning, collected in class, graded, and returned in class. No online submission, please! There will be 12 homework assignments posted on E-Learning and expected to be turned in for grading (IN CLASS ONLY!) The highest 10 of the 12 scores will be scaled to 100%.

**Quizzes** There will be a quiz in class each week. There will be tentatively 12 quizzes. The highest 10 of the 12 scores will be scaled to 100%.

**Exams** There will be two midterms and a comprehensive final exam.

Topics and exams	Chapters
Getting Started	1
Organizing Data	2
Averages and Variation	3
Correlation and Regression	4
Elementary Probability Theory	5
The Binomial Distribution	6
Normal Curves and Sampling Distribution	7
Exam I	<b>Tuesday Oct 4<sup>th</sup> class in class</b>
Estimation	8
Hypothesis Testing	9
Exam II	<b>Tuesday November 15<sup>th</sup> in class</b>
Inferences about Differences	10
Final (cumulative)	<b>Tuesday December 6<sup>th</sup> in class</b>

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### Important Dates and Holidays

Fall Break	<b>Mon. Nov. 21 – Wed. Nov. 23</b>
Thanksgiving	<b>Thurs. Nov. 24 – Sat. Nov. 26</b>
Exam I	<b>Tuesday Oct 4<sup>th</sup> in class</b>
Exam II	<b>Tuesday November 15<sup>th</sup> in class</b>
Final	<b>Tuesday December 6<sup>th</sup> in class</b>

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### Grading Policy

Your final class grade will be determined based on the following weighting.

- **Homework 15%**
- **Quizzes 10%**
- **Exam I and Exam II 25% each, Total of 50%**
- **Final Exam 25%**

There will be no make-ups.

Grading Scale:

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

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### Couse & Instructor Policies

Attendance Policy: You are expected to attend and participate in all class sessions. If you are absent from any meeting, you may inform me in advance. You are also responsible for dropping the course if you choose to stop attending classes.

Conferences: You are welcome to confer with me during office hours Late Homework/Quizzes: Given an extension only if you are on university duty or with a doctor's note.

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### UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

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***The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Instructor.***