

DONGGUAN UNIVERSITY OF TECHNOLOGY

School of Economics and Management

Course Syllabus

2020 Spring

Course Information

Course Code	0810015
Course Title	Statistics
Instructor	Ye Wang
Class	2018 International Economics and Trade (International Business Industry-University International Program) 2018 Economics and Finance (Financial Management Industry-University International Program)
Course Category	<input checked="" type="checkbox"/> Compulsory <input type="checkbox"/> Elective
Credit(s)	3
Total Hours	48
Hours Per Week	3 hours
Practical Hours	0
Lab Practice Hours	0
Classroom	R1308, GuanCheng Campus;
Time	Wednesday (week1-week16): 8:30-10:10 & 10:25-12:00 Friday (week1-week8): 8:30-10:10 & 10:25-12:00
Office Hour	Thursday, 10:30am-12:30pm at 3207 Guancheng Campus; by appointment (wangye@dgut.edu.cn)
Required Textbook	Statistics for Business and Economics (13th edition). Cengage Learning, 2015.
Supplementary Materials	None
Prerequisites	None
Course website	Ulearning

Course Description

This course is an introductory course of Statistics in using quantitative methods for inquiry in the social and behavioral sciences. It emphasizes the fundamental concepts and procedures of descriptive and inferential statistics. Hypothesis testing and estimation, confidence intervals, probability, random variables, normal distribution, sampling and sampling distributions, and the comparison of two populations will be addressed. The teaching goal for this term is two-fold. Firstly, I would like to introduce the language of statistics. Then, with this language in hand, we shall turn our attention to conducting the academic research and solving real-world problems.

Course Learning Objectives (LOs)

After completing the course learning, the student will be able to:

LO1: Demonstrate the usefulness of descriptive and inferential statistics as part of quantitative research methodology.

LO2: Identify the appropriate statistical methods according to circumstances.

LO3: Carry out basic statistical analyses of research data by using minitab and Excel.

LO4: Develop the critical thinking to analyze the implications of data.

Assessment and Grading

The final score is composed in attendance and class participation (15%), homework (30%), midterm exam (20%), and final exam (35%).

The date of exam is in the tentative schedule. All problems in exam will be multiple choice questions, which mean you should choice one from four or more candidates of answer. The detailed grading is as following:

	Standard	Notes	LO1	LO2	LO3	LO4
Attendance and class participation, 15%	If you are late or leave early, your grade will be taken one point each time. The class participation is composed of two parts, one is from online records (5 points), another part is from in-class records (10 points).	If you are taken more than 2 points away, I will reserve your right to participate final exam.		✓		
Homework assignments, 30%	There will be three homework assignments throughout the semester.	The deadline of the assignments will be announced when the homework is assigned.	✓	✓		✓
Midterm exam, 20%	Questions for 100 points on the test paper and will be weighted to 20% in your grade.	Closed book exam.	✓		✓	
Final exam, 35%	100 points for the final exam.	Closed book exam.			✓	✓

Policies:

➤ Attendance Policy

Students cannot incur more than two unexcused absence for whole semester.

➤ Participation Policy

Students should participate every in-class discussion and experiment.

➤ Policy on Assignments and Quizzes

All assignments and exam should complete by yourself. Late assignments will be accepted without penalty only in cases of legitimate absences and only if the student has contacted the lecturer in advance regarding the reasons for the late assignment. If you miss a class, you are supposed to get previous class material from one of your student contacts. See the rubrics of assessment event for the

detailed of evaluation.

Before/After Class - Students should expect to spend an adequate amount of time on reviewing the textbook, course handouts and finalizing the group homework before the due day. To keep up with the flow of the course, students are strongly recommended to complete the relevant reading materials and to have the coming individual/group presentations/activities conscientiously prepared before the class.

➤ **Plagiarism**

If it is caught that you take another person's work, ideas, or words, and using them as if they were your own, then the corresponding assignment will be scored zero. You can use others' work in a proper way of referencing.

➤ **Classroom Policies**

- English - You are highly encouraged to speak English in the class and actively exchange your ideas, opinions and critical thinking with others. Make sure to speak English even during small-group or paired activities.
- Late coming student should provide a reasonable excuse based on the microeconomic theory and share it in class. If there is no excuse, treat as absent.
- If there is a question, stop the instructor any time, and ask for an answer. Your question is others' question with a very high probability.
- Please be considerate of your fellow students during class presentations. Talking during the presentation will result in a 1% deduction from your final grade.

Session Plan:

Week/Date	Topic/Focus and Difficulty/Ethical and Political Learnings (choose at least 3 weeks to perform the practice or implication of ethical and political insights from this course)	Activities	LO
1/ Mar.4&6	Topic: Introduction. Focus: introduction to data and statistics (chapter 1).	Lecture, in-class discussion and in class practice. (90 minutes)	1,2,4

	<p>Difficulties: understand the breadth of statistical applications in business and economics.</p> <p>Ethical and political learning: discussions of ethical guidelines for statistical practice.</p>		
2/Mar.11&13	<p>Topic: Descriptive statistics.</p> <p>Focus: chapter 2.</p> <p>Difficulties: how to construct the tabular and graphical displays to data.</p>	Lecture, in-class discussion and in class practice. (90 minutes)	1,4
3/Mar.18&20	<p>Topic: Descriptive statistics.</p> <p>Focus: chapter 3.</p> <p>Difficulties: understand the purposes of measures, and compute the mean, variance and coefficients.</p>	Lecture, in-class discussion and in class practice. (90 minutes)	1,2
4/Mar.25&27	<p>Topic: Probability.</p> <p>Focus: chapter 4.</p> <p>Difficulties: the three methods commonly used for assigning probabilities and understand when they should be used.</p>	Lecture, in-class discussion and in class practice. (90 minutes)	1,2
5/ Apr.1&3	<p>Topic: Discrete probability distributions.</p> <p>Focus: chapter 5.</p> <p>Difficulties: work with probabilities involving the different kinds of discrete probability distributions.</p>	Lecture, in-class discussion and in class practice. (90 minutes)	2,3
6/ Apr.8&10	<p>Topic: Continuous probability distributions.</p> <p>Focus: chapter 6.</p> <p>Difficulties: work with probabilities involving the different kinds of continuous probability distributions.</p>	Lecture, in-class discussion and in class practice. (90 minutes)	2,3

7/ Apr.15&17	Topic: Sampling and sampling distributions; Focus: chapter 7. Difficulties: what simple random sampling is and how simple random samples are selected.	Lecture, in-class discussion and in class practice. (90 minutes)	1,2,3
8/ Apr.22&24	Topic: Mid-term Review. (Apr.22) Mid-term exam (Apr.24) Focus: chapter 7.	Lecture, in-class discussion and in class practice. (90 minutes)	1,2,3
9/ Apr.29	Topic: Interval Estimation & Hypothesis Tests Focus: chapter 8&9. Difficulties: how to construct and interpret an interval estimate of a population mean and / or a population proportion.	Lecture, in-class discussion and in class practice. (90 minutes)	3,4
10/ May.6	Topic: Hypothesis Tests. Focus: chapter 9. Difficulties: use critical values to draw hypothesis testing conclusions.	Lecture, in-class discussion and in class practice. (90 minutes)	3,4
11/ May.13	Topic: Statistical inference about means and proportions with two populations. Focus: chapter 10. Difficulties: the difference between two population means when the samples are independent and when the samples are matched.	Lecture, in-class discussion and in class practice. (90 minutes)	2,3,4
12/May.20	Topic: Inferences about population variances & Comparing Multiple Proportions, Test of Independence and Goodness of Fit. Focus: chapter 11&12.	Lecture, in-class discussion and in class practice. (90 minutes)	2,3,4

	Difficulties: understand the role of statistical inference in developing conclusions about the variance of a single population.		
13/May.27	Topic: Guest speaker speech. Focus: applications of data analysis. Ethical and political learning: Discussions of applications of data in various industries.	Lecture, in-class discussion and in class practice. (90 minutes)	4
14/June.3	Topic: Experimental design and analysis of variance. Focus: chapter 13.	Lecture, in-class discussion and in class practice. (90 minutes)	2,3,4
15/June.10	Topic: Simple linear regression. Focus: chapter 14. Difficulties: the differences between the regression model, the regression equation, and the estimated regression equation.	Lecture, in-class discussion and in class practice. (90 minutes)	3,4
16/June.17	Topic: Multiple regression. Focus: chapter 15. Difficulties: interpret and use computer output to develop the estimated regression equation.	Lecture, in-class discussion and in class practice. (90 minutes)	3,4
(optional)	Topic: Regression analysis: model building. Focus: chapter 16. Difficulties: how analysis of variance and experimental design problems can be analyzed using a regression model.		2,3,4
Total	48 hours		

<p>Date: 2020.2.14</p> <p>Reviewed by Chih-Yuan Hung</p> <p>Signature <i>Chih-Yuan Hung</i></p> <p>Director of Department of International Business and Management</p>	
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