JINAN UNIVERSITY
Introduction to Statistics

Lecturer: TBA
Time: Monday through Friday(June 17, 2019-July 19, 2019)
Office hours: 2 hours (according to the teaching schedule)
Contact Hours: 60 (50mins each)
Credits: 4
Location: MBA Center
Office: MBA Center 107
E-mail: TBA

Course Description
Statistics and probability constitute the mathematics of uncertainty. This is an introductory course that gives the students knowledge on both descriptive and inferential statistics. Topics include graphic and numerical representations of various types of data; probability and statistics, discrete and continuous probability distributions; sampling and estimations; statistical inferences.

Required Text
Introduction to Probability and Statistics, 14th Edition by William; Beaver, Robert J.; Beaver, Barbara M. Mendenhall (2006).

Course Hours
The course has 25 sessions in total. Each class session is 120 minutes in length. The course meets from Monday to Friday.

Course Assistants
The CA will run a weekly one-hour problem session on the relevant material. You are invited to attend as many of these problem sessions as you like. Their times and locations will be announced in the first class.

Homework

Specific homework exercises will be assigned. It is expected that you will read the sections and complete the assignments by the following class period. It is totally fine and, indeed, encouraged, to help each other solve homework problems, but it is not okay to turn in essentially identical solutions; once you have discussed the problems you should *write the solutions up on your own*. Not all homework problems will be graded. We will also have occasional quizzes possibly including 'pop' quizzes.

Exams

There will be four tests and one comprehensive final exam. No calculators or notes may be brought into the exams.

Evaluation

Final grades will be based on the following.

Attendance and Participation 5%
Homework and Quizzes 25%
Midterm Exams 40%
Final Exam 30%

Grading Scale：

The instructor will use the grading system as applied by JNU:

Definition	Letter Grade	Score
Excellent	A	90-100
Good	B	80-89
Satisfactory	C	70-79
Poor	D	60-69
Failed	E	Below 60

Make-Ups

This class will go by very quickly. I strongly recommend that you never miss class, since it will be very hard to make up the material you missed and, since mathematics is cumulative, you will run the risk of getting hopelessly behind. However, I understand that life happens, so up to two missed classes will not count against you. If you miss a test you must have an excellent documented reason and the standard procedure will be to put extra weight on your final exam.

Course Schedule

Week 1: Describing data and basic probabilities
- Discrete and Continuous variables, bivariate data
- Describing data with graph and numerical measures
- Basic probability

Week 2: Expectation, probability distributions
- Discrete/absolutely continuous expectations, conditional expectation
- Variance, covariance, correlation, generating functions
- Bayes' rule
- Binomial, Poisson, Hypergeometric probability distribution
- Normal distribution

Week 3: More on normal distribution, Sampling distributions and limit theorems
- Distribution approximation
- Sampling distributions,
- The law of large numbers, the central limit theory

Week 4: Large-sample estimation, test of hypotheses
- Point, interval and difference estimations
- Likelihood function, maximum likelihood estimation,
- Testing hypotheses and P-values
- Sample-size calculations
- Prior and posterior distributions, inferences based on the posterior

Week 5: Statistical inferences from small samples
- Student's distribution
- Small sample inferences

Academic Honesty:

Jinan University defines academic misconduct as any act by a student that misrepresents the students' own academic work or that compromises the academic work of another scholastic misconduct includes (but is not limited to) cheating on assignments or examinations; plagiarizing (i.e. misrepresenting as one's own work any work done by another); submitting the same paper, or substantially similar papers, to meet the requirements of more than one course without the approval and consent of the instructors concerned; sabotaging another's work within these general definitions, however, Instructors determine what constitutes academic misconduct in the courses they teach. Students found guilty of academic misconduct in any portion of the

academic work face penalties ranging from lowering of their course grade to awarding a grade of E for the entire course.

Note from Lecturer:

I am committed to seeing that you succeed in this course. I put significant effort into my teaching. Your part is to put comparable effort into your learning. My goal is to do whatever I can to insure your success in this course. Your goal should be the same. We are in this together! Together with hard work we can create a learning enjoinment that will lead you to great achievement of mathematical skills, concepts, and problem solving to give a solid background for your mathematics courses.

The instructor reserve the right to modify this syllabus at any time as deemed necessary. Any modification will be announced as soon as possible.