University of International Business and Economics
International Summer School

STAT 220 Introduction to Statistics

Term: July 2 – August 2, 2018
Instructor: Dr. Edward C. Chang, Professor of Psychology
Home Institution: University of Michigan-Ann Arbor
Email: changec@umich.edu
Class Hours: Monday through Thursday, 120 minutes each day
Office Hours: TBD
Discussion Session: 2 hours each week

Total Contact Hours: 66 contact hours (45 minutes each)
Credit: 4 units

Course Description:
Statistics entails the collection, organization, analysis, and interpretation of numerical data. Hence, a key goal of this course is to guide students toward both a basic and applied understanding of statistics. We will accomplish this by exploring, evaluating, and discussing various topics covered in statistics, and by applying statistical techniques to analyze data using statistical software (e.g., SPSS). Films may be used to help reinforce ideas and issues presented in the lectures. This is a lecture class only. Students are expected to attend all lectures and participate in class discussions and activities.

Prerequisite:
None.

Course Goals:
A student who satisfactorily completes this course should:
Successful performance in this class will include learning about statistics at three levels. First, you will need to learn the language of statistics, the definitions/formulas and uses of technical/statistical terms. Second, you will learn the concepts behind statistics. Third, you will learn to apply your understanding of statistics in the real world by analyzing/interpreting data associated with everyday human behavior.

Required Textbook:
Privitera, G. J. (2014). Essential Statistics for the Behavioral Sciences (2nd ed.). Los Angeles: Sage. ISBN: 1452286906.
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Grading Policy:
In this course, grading will be based on the following:
EXAMS: There will be two exams. Each of the exams will contain 75 multiple-choice questions (2 points each). In general, exams will not be comprehensive. Each exam will only cover the lectures and readings for that range of dates. Approximately 60%-70% of each exam will be based on information presented in

class, including any films watched, the remainder will be based on assigned chapters from the textbook (even if the textbook material is not discussed in lecture). <u>All of the exams are required</u>. If you miss an exam, then you should try to contact me immediately.

RESEARCH ASSIGNMENTS: There will be five research assignments during the term. These assignments may include developing/designing a research study, discussing in greater detail a subject matter covered in class, or presenting some research ideas/research findings. In most cases, these assignments will need to be submitted to the instructor before the end of class. Each research assignment will be worth a maximum of 10 points, for a total of 50 points for all 5 assignments. If you do not provide an assignment as instructed, you will receive zero points.

CLASS PARTICIPATION: Regular attendance and class participation is expected. Failure to attend class or to participate in class activities will result in a lower grade. There is no use of smart phones or devices during class time. Computers may only be used when required for class projects/assignments only.

FINAL COURSE GRADES: Your final grade is based on the total number of points you earn on each of the two exams (total possible exam points = 300), and five research assignments (total possible points = 50). For example, based on the grading scale below, you will need to get 315 points or higher to achieve an A, 298 to 314 points to achieve an A-, and so forth.

Grading Scale:
Assignments and examinations will be graded according to the following grade scale:

A	90-100	C+	72-74
A-	85-89	C	68-71
B+	82-84	C-	64-67
B	78-81	D	60-63
B-	75-77	F	below 60

Class Rules:
Academic dishonesty is not tolerated. Students caught cheating will receive an F for that test and will be in jeopardy of failing the course.
No electronic devices are allowed for use in the classroom at any time.
Sleeping in class is inappropriate personal conduct and unacceptable behavior that will result in an unexcused absence.
At least one break will be given during each class period. Unless you have an emergency, please limit your departure from class to the allotted breaks.
The syllabus may be subject to change to respond to the needs of the class or to unforeseen circumstances.
Students should expect to spend two hours outside of each class session; readings in the textbook must be completed prior to the corresponding class meeting.
NO MAKE-UP TESTS OR EXAMS WILL BE GIVEN.

Attendance Policy:
Summer school is very intense and to be successful, students need to attend every session. If a student must miss class, a doctor's note is required for the absence to be excused. There are no unexcused absences.

Course Schedule:
The planned schedule sketched out below may be modified to suit the interests or abilities of the enrolled students or to take advantage of special opportunities or events that may arise during the term.

WEEK ONE (July 2 - July 5):
- Welcome! Overview of Class
- Introduction to Major Paradigms: Psychodynamic, Humanistic/Existential, Behavioral, Cognitive, Sociocultural, and Biological Perspectives
- Introduction to Statistics for Behavioral Sciences (**read Chapter 1**)
- Summarizing Data: Frequency Distributions (**read Chapter 2**)
- Summarizing Data: Central Tendency (**read Chapter 3**)

WEEK TWO (July 9 - July 12)
- Summarizing Data (**read Chapter 4**)
  - Probability and Norm Distribution (**read Chapter 5**)
  - Characteristics of Sample Mean (**read Chapter 6**)
  - **July 12** - **MIDTERM EXAM**

WEEK THREE (July 16 - July 19):
- Hypothesis Testing (**read Chapter 7**)
  - Testing Means: One Sample (**read Chapter 8**)
  - Testing Means: Two-Independent Samples (**read Chapter 9**)

WEEK FOUR (July 23 - July 26):
  - Testing Means: Related Samples (**read Chapter 10**)
  - One-Way Analysis of Variance (**read Chapter 11**)
  - Two-Way Analysis of Variance (**read Chapter 12**)

WEEK FIVE (July 30 – August 2):
- Correlation and Linear Regression (**read Chapter 13**)
  - Chi-Square Test (**read Chapter 14**)
  - **August 1 – FINAL EXAM**
  - Recap