COURSE OUTLINE
(Synchronized Online Component)

Continuity of Learning: Due to social distancing requirements, this class will include a variety of online and technology enhanced components to reinforce continuity of learning for all enrolled students. Before the drop/add deadline, students should decide whether the course plan on the syllabus matches their own circumstances.

Instructor Information:
Name: Jin-Hong Park, PhD in Statistics
Email: parkj@cofc.edu
OAKS will be used for this course throughout the semester to provide the syllabus and class materials, which will be regularly posted.
Virtual Office Hours: 3 – 4PM on Monday and Wednesday. Others are available via email or a personal Zoom meeting if necessary.

Course Meeting: Zoom Meeting at 1:40 – 2:55PM on Monday and Wednesday*
* All students must have access to a computer equipped with a web camera, microphone, and Internet access. Please turn camera on so that Zoom and I check your attendance correctly. Also please turn speaker off unless you have a question.

Course objectives: This course is designed to develop quantitative skills along with critical and interpretive judgment. It focuses on both methodology and applications in statistics. It provides students for advanced courses in statistics or methodological tools in their research disciplines, by approaching real world problems and analyzing real data. Emphasis will be placed on the elements of sound statistical reasoning.

Course Prerequisite: MATH 105 with a C- or better or MATH 111 or MATH 120

Course Student Learning Outcomes: By end of the course, students will be able to
1. Summarize data by using methods of descriptive statistics.
2. Choose appropriate inferential procedures and apply them to make inferences about populations.
3. Understand the capabilities and limitations of statistical methods
4. Use appropriate technology, such as R, to perform various statistical procedures
5. Interpret results and draw conclusions from statistical analysis.

Gen Ed Student Learning Outcomes: Students will
1. Model phenomena in mathematical terms.
2. Apply models and establish conclusions.
3. Demonstrate an understanding of the supporting theory apart from any particular application.
These outcomes will be assessed on the tests.


Course Topics:
Descriptive Measures (Ch.3)
Probability Concepts (Ch.4)
Discrete Random Variables (Ch.5)
The Normal Distribution (Ch.6)  
Sampling Distribution of the Sample Mean (Ch.7) 
Confidence Intervals for One Population Mean (Ch.8) 
Hypothesis Tests for One Populations Mean (Ch.9) 
Inferences for Two Population Means (Ch.10) 
Inferences for Population Proportions (Ch.12) 
Inferences for Population Standard Deviations & Chi-Square Procedures (Ch.11&13) 
Regression, Correlation and ANOVA (Ch.14-16) 

Statistical Software: Students will learn how to use a statistical package, R software, for computations of projects and assignments.

Grading Policy:
1. Four tests and Final Exam (80%)*
2. Projects (20%)**
3. Homework***
* Each test is 20% of your course grade. The lowest one will be dropped. Hence, I do NOT plan on giving make-up tests. Final Exam is a comprehensive test.
** The projects are take-home assignments using R statistical package.
*** Homework problems are Problem Sets on the study guides. It is expected that you study by yourself. Not required to submit but an important course material for tests and a final exam.

Project Policy:
1. A student who does not submit more than two projects will get F in this course.
2. Just an answer without detailed procedure will not be accepted for a credit.
3. Just R output without interpretation will not be accepted for a credit.
4. All work should be shown in a neat and orderly manner.

Grades:
A: 90 or above; A-: 87-89; B+:83-86; B: 80-82; B-: 77-79; C+:73-76; C: 70-72; C-: 67-69; D+: 63-66; D: 60-62; D-:57-59; F: 56 or below

Attendance Policy:
1. Full participation in all classes is expected for all students.
2. A student who misses five classes will get WA or F in this course.
* The camera must be turned on during all classes. If your camera is off, it will be counted as an absence. If you are more than 10 minutes late or leave earlier, it will be counted as an absence.
** Students will be responsible for making up the classes for all absences including but not limited to personal illness, COVID-related illness, a requirement that they isolate or quarantine, or the need to care for a family member who is ill due to COVID.

Midterm Policy:
Instructor strongly recommends withdrawing this course if your midterm grade is less than 60%.

Important Dates:
January 17: MLK holiday, No class 
January 18: Last day of drop/add
February 2: Test 1 
February 28: Test 2 (covers the first half) 
March 7 & 9: Spring break (no classes) 
March 25: Last day for students to withdraw with a W
March 30: Test 3
April 25: Test 4 (covers the second half)
TBA: Final Exam

**Recording of Classes (via ZOOM):**
Class sessions will be recorded via both voice and video recording. By attending and remaining in this class, the student consents to being recorded. Recorded class sessions are for instructional use only and may not be shared with anyone who is not enrolled in the class. The main goal of the recording is that students make up the classes for all absences including but not limited to personal illness, COVID-related illness, a requirement that they isolate or quarantine, or the need to care for a family member who is ill due to COVID. *The recorded lecture is uploaded in Oaks for a week or so.*

**College Honor Code:**
Any violation of the College's Honor Code will be reported to the Honor Board. For more details, see [http://studentaffairs.cofc.edu/honor-system/](http://studentaffairs.cofc.edu/honor-system/), and the Student Handbook at [http://studentaffairs.cofc.edu/honor-system/studenthandbook/](http://studentaffairs.cofc.edu/honor-system/studenthandbook/)

**Accommodations for Students with Disabilities:**
If there is a student in this class who has a documented disability and has been approved to receive accommodations through the Center for Disability Services/SNAP (Students Needing Access Parity), please discuss this with me during my office hours.

**Attendance Verification:** Only students officially registered (graded or auditing) for this course may attend class. During the week following the drop/add deadline, the professor will verify student enrollments in this course. Any student appearing on the class roll but determined not to have attended the class even once will be removed.

**NOTE:**
1. I will utilize email/OAKS to announce the important schedules fairly often. Therefore, it is important that you check your email/OAKS regularly. I encourage you to contact me via email.
2. The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.
3. The final exam and test 4 will not be returned to you based on the college policy.