STAT 121 Hybrid SUMMER 2014
Introduction to Statistics for the Social Sciences
Session I: May 27th – July 3rd

Instructor: Ms. Bonnie Kegan
EMAIL: bkegan1@umbc.edu
Contact Numbers: Mobile Phone: 410-507-9328 Work Phone: 301-763-7639

Face-to-Face Sessions: Thursdays 6:30pm – 8pm ENGR021
Virtual Office Hours: Mondays 8:45-10pm
(Go to Office Hours tab on Blackboard to launch session, requires JAVA)

Lecture Material: https://mycourses.acrobatiq.com **Course Key:** STAT121SU141
See further instructions for signing up and schedule of material on the Blackboard course page. The material on this site is your "textbook" for the course.
Statistical Analysis Software: Buy access at www.statcrunch.com
Calculator: You will need a basic calculator with a square root function for practice, quizzes and exams. A scientific calculator (TI-36X, or similar) is recommended.

Course Objectives: This course provides an introduction to statistical methods common to social science applications. Topics include: design of experiments, sample surveys, descriptive statistics, linear regression and correlation, elementary probability theory, sampling distribution theory, and principles of inference, including tests for means(1 and 2) and proportions, ANOVA, and Chi-square based inference.

By the end of this course, students should:

- Understand and remember the key ideas, concepts, and vocabulary of the subject. Examples in this course include the production of data through sample and experimental design, including the practical difficulties faced in designing samples and experiments that produce meaningful statistics; the description of sample data using graphics and numerical measures, regression and correlation, elementary probability theory, expected value, and inference for sample means, proportions, and 2-way tables. --> *This information will be discussed in the lectures. You will apply and use them in online quizzes, labs and in class exams*
- Be able to communicate the meaning of descriptive and inferential statistics in writing using the terminology of the subject correctly, and so that an audience with a non-statistical background could understand. --> *Quizzes, exams, and lab projects will address these skills.*
- Be able to communicate orally by discussing statistical ideas and concepts with the instructor as well as other students.--> *Group discussions, labs, and quizzes will contribute to this goal.*

Grading: Note the contribution of each graded item to your final grade below:

Item	Points	Percent	Grading
Blackboard Module Quizzes	300	30%	A 900 - 1000 points
Acrobatiq Checkpoints	50	5%	B 800 - 899 points
Acrobatiq Lab Exercises (5)	50	5%	C 700 - 799 points
Blackboard Lab Followup Quizzes(5)	200	20%	D 600 - 699 points
FINAL EXAM (July 3rd)	400	40%	F Less than 600 points
TOTAL	**1000**	**100%**	

COURSE POLICIES

E-MAIL:

- Compose and send ALL email to instructor using UMBC email.
- Email will be responded to within 24 hours, excluding weekends and holidays. If you need something answered on the weekend or in the evening text your question to my mobile phone!
- Remember, once sent, e-mail (or a text) is a permanent and official record of your concerns and a representation of yourself!

QUIZZES:

- Quizzes on the material covered in ACROBATIQ will be given in Blackboard. You are allowed to use notes. Quizzes account for 30% of your final grade.
- Only **one** attempt is allowed for each quiz. Be sure to only submit when you have answered all the questions.
- Students should pay close attention to quiz due dates. No late assignments will be accepted (without penalty).

ACROBATIQ CHECKPOINTS:

- Checkpoints will be graded on timely completion only. Please use them to assess your knowledge of the material and review the feedback provided by ACROBATIQ. These account for 5% of your final grade.
- NO EXTENSIONS will be granted for checkpoints. Due dates can be found on the schedule of online material included on this syllabus.
- Do not wait until the last minute to complete a checkpoint in case technical issues arise. Checkpoints are always due on TUESDAYS by midnight.

ACROBATIQ LAB EXERCISES AND FOLLOWUP QUIZZES

- Some Lab Activities found in the ACROBATIQ material will be required. The completion score shown in the ACROBATIQ My Scores section will be used as your score for the ACROBATIQ part of the activity.

- Followup assessments for each lab activity are on Blackboard. The assessment will ask questions related to the lab exercise. You can attempt each followup quiz **TWICE**. Pay attention to data entry directions.
- I strongly recommend opening up the lab followup and completing it IN PARALLEL with the lab exercise in ACROBATIQ.
- Completing the lab activities in ACROBATIQ will account for 5% of your grade.
- The Lab Followup Quizzes will account for 20% of your grade.

FACE TO FACE DISCUSSIONS:

- Students are encouraged to attend all face-to-face sessions. Be sure to view all related lecture material on ACROBATIQ and complete related activities ***before*** class meetings.
- Students are encouraged to work through each module in the ACROBATIQ course completing all *Learn by Doing, Did I Get This, My Response, StatTutor, Submit and Compare* activities. Modules should be completed as scheduled below.

FINAL EXAM

- The final exam will be given on **THURSDAY July 3rd 6:30-8:30pm**. You must be present to take the exam, unless alternative arrangements have been made with instructor in advance.
- Makeup exams will only be given under *reasonable circumstances* (i.e. illness, death in the family, car trouble, work conflicts etc.) and must be completed *within ONE week* of the test date.
- You should request a make-up exam **WITHIN 24 HOURS** of the missed exam (**BY PHONE-VOICE *not text***).
- Unexcused absences will receive a zero for the test. Be aware that your instructor *may request documentation* of your reasonable circumstance.

STUDENT CONDUCT:

- Please respect the rights of all members of the campus community by not disrupting or obstructing the teaching and learning process.
- Please turn off all cell phones before every class.

ACADEMIC INTEGRITY POLICY

By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal. To read the full Student Academic Conduct Policy, consult the UMBC Student Handbook, the Faculty Handbook, or the UMBC Policies section of the UMBC Directory.

<u>THIS IS A GEP course.</u> All general education mathematics courses:

- Have performance expectations demonstrating a level of mathematical maturity beyond Algebra II (high school intermediate algebra).
- Include development of analysis, synthesis and problem-solving skills, and introduce students to "ways of thinking" in mathematics.
- Introduce mathematical concepts and techniques that can be applied in further mathematics and/or other disciplines.
- Explore mathematical applications to other disciplines.

Discussion Schedule

Thursday date	**Material Covered**	**# of Module Checkpoints Due (each Friday)**	**Quiz (Due by following Monday)**	**Lab Activity**
5/29	Modules 1 and 2	3	Quiz 1 June 2nd	
6/5	Modules 3 and 4	4	Quiz 2 and 3 June 9th	**p55** Drinking Habits of College Students (Mod 3)
6/12	Modules 5, 6, and 7	3	Quiz 4 and 5 June 16th	**p83** Body Image and Academic Perf. of College Students (Mod 4)
6/19	Modules 8, 9, and 10 (until p 172)	5	Quiz 6 and 7 June 23rd	**p172** Cell Phones (Mod 10)
6/26	Modules 11 and 12	5	Quiz 8 June 30th	**p201** Analyzing Data from a Course Gradebook (Mod 11) **p207** Risk Factors for Low Birth Weight (Mod 12)
7/3	**FINAL EXAM**			

ONLINE MATERIAL AND ASSIGNMENT SCHEDULE

MODULE START BY DATE	**MODULE COMPLETE BY DATE**	**Online Course** https://mycourses.acrobatiq.com **Course Key:** STAT121SU141	**Due Dates of Graded Assignments (due by 11:59pm)**
5/27	5/28	Introduction and Learning Strategies, Producing Data: Module 1 Sampling **Sampling CHECKPOINT**	CP 5/30
5/28	5/30	Producing Data: Module 2 Designing Studies **Designing Studies CHECKPOINTS #1 and #2**	CP 5/30
5/31	6/3	EDA: Module 3 Examining Distributions **Examining Distributions CHECKPOINTS #1 and #2**	CP 6/6
6/3	6/6	EDA: Module 4 Examining Relationships **Examining Relationships CHECKPOINTS #1 and #2**	CP 6/6
6/6	6/9	Module 5 Probability and Module 6 Random Variables **Random Variables CHECKPOINT**	CP 6/13
6/9	6/13	Module 7: Sampling Distributions through Behavior of Sample Proportion **Sampling Distributions Checkpoint #1** **Sampling Distributions Checkpoint #2**	CP 6/13
6/13	6/16	Module 8 Intro to Inference and Module 9 Interval Estimation **Estimation Checkpoint**	CP 6/20
6/16	6/20	Inference: Module 10 Hypothesis Testing **ALL 4 Checkpoints**	CP 6/20
6/20	6/26	Inference: Module 11 Inference for Relationships **ALL 4 Checkpoints**	CP 6/27
6/26	7/1	Inference: Module 12 Inference for Relationships Continued **Case C->C and Q->Q Checkpoint**	CP 7/1
7/3	6:30-8:30pm	**FINAL (All Modules)**	**ENGR 021**