Hunter College of CUNY **STAT 113 ELEMENTARY PROBABILITY AND STATISTICS** **Fall 2022 SYLLABUS**

Course Description: ***An Introduction to applied statistics and statistical computing. Hands-on data analysis. Graphical inference. The five number summary, box plots, scatterplots, normal probability plots. Elementary probability. Statistical estimation and hypothesis testing. Linear regression. Students are expected to analyze real data sets and write reports***. Prerequisites: C or better in MATH 101 or equivalent; Pre or Co-Req ENGL 120, or permission of the Statistics Advisor.

Expected Learning Outcomes:

At the end of the course, students in STAT 113 will be able to

- demonstrate an understanding of basic Probability and Statistics
  - Interpret and draw appropriate inferences from quantitative representations, such as formulas, graphs, or tables.
  - Use algebraic, numerical, graphical, or statistical methods to draw accurate conclusions and solve mathematical/statistical problems.
  - Represent quantitative problems expressed in natural language in a suitable mathematical/statistical format.
  - Effectively communicate quantitative analysis or solutions to mathematical and statistical problems in written or oral form.
  - Evaluate solutions to problems for reasonableness using a variety of means, including informed estimation.
  - Apply mathematical/statistical methods to problems in other fields of study.
- use a computer-based data-analysis package to analyze data and
- write reports on analyses using non-technical language.

Section: 11300.11
Course Days: Tuesday and Friday
Time: 10:00am to 11:15am
Room: In Person Hunter North 305
Instructor: Connie Liang
Email: Plian@hunter.cuny.edu (please allow me 24 hours to reply email)
Office Hours: Monday 11:20 to 12:20pm Thursday 11:20 to 1:20pm

Course Coordinators: Prof. Sandra Clarkson, sclarkso@hunter.cuny.edu; Prof. Bill Williams, wwilliam@hunter.cuny.edu
Department Office: Department Chairperson: Prof. Barry Cherkas, bcherkas@hunter.cuny.edu

Your Course Sites: aleks.com and StatCrunch or R or JASP or SPSS.
Technical Requirements: Online Students must have a computer with a camera and a stable internet connection; In-person students will have computers in the classroom but will also need access to a computer for working on ALEKS outside of class time. If you do not have this, spaces are available in the Hunter College Library where you can do your work and take your exams. See

https://hunter.cuny.edu/focus/information-for-students/ and scroll down for both Study Spaces and Computer Labs and Student Technology Resources.

Working with ALEKS

You will sign into the program on the first day of class. Although you will be able to access the materials for several classes before you must purchase them, please arrange to have money available for the purchase when the time comes. Your deadlines will not be extended. If you must purchase ALEKS through Shakespeare because of a scholarship, let us know. The price is higher through that vendor. If you need emergency funding for housing or food, contact https://ww3.hunter.cuny.edu/studentaffairs/view.php?id=16.

Instructions for the student:
Your Class Code is: please check the announcement
Your Financial Aid Access Code is: please check the announcement
The Financial Aid Access Code does not add an additional two weeks to your account.
NOTE: This code gives you temporary access to ALEKS for a two-week period. Once the code expires, you will be locked out of your ALEKS account until you purchase a regular Student Access Code. It is highly recommended that you purchase the Student Access Code BEFORE the two weeks expire to prevent interruptions with your ALEKS account.
1. To log into ALEKS using the Financial Aid Access Code, go to: http://www.aleks.com.
2. Click on the "SIGN UP" link located in the menu at the upper-right of the page.
3. Enter your Class Code in the box and click on "Continue."
4. Verify that you are registering for the correct class and click on "Confirm."
5. Continue with the registration process until your account has been set up successfully.
6. On the Apply Access page, enter the 20 character Financial Aid Access Code and click "Continue."
7. Next you will see a page with the date your temporary access expires, click "Continue."
8. You will arrive at the My Classes page.
9. You can extend your access to your new class at any time by selecting "Extend access" from the class tile menu and enter your new access code. You do not need to create a new ALEKS account to continue your class.
Enjoy your class.

IMPORTANT: ***For each hour you spend in class, you are expected to spend another three(3) hours outside of class working on the material.*** However, depending on your level of preparation, you may have to spend more time in order to progress satisfactorily or you may spend less time because you come in knowing a lot. Each assignment has a due date. Missing a due date has consequences. Hard work is important but it does not guarantee you a grade. If you find you are not progressing as you would like, it is up to you to seek more help from your instructor or from the ***Dolciani Mathematics Center*** on the 7th floor in the Hunter College Library and also online. Do not fall behind. Deadlines will not be extended. When you do not complete work on time, you lose points.

Knowledge Checks. In your first class, you will take a knowledge check or KC. Although there are 156 modules in the course, your KC may identify material that you already know and can skip. You will do one KC after each completed module. Depending on how you do on each KC, you may be able to skip material, or you may be sent back to redo material that you have forgotten. At the end of the course, there is a required, scheduled final knowledge check--5% of your grade comes from the KCs. At the end of the course, there is a required, scheduled knowledge check--5% of your grade comes from the KCs.

Learning vs Mastery. The ALEKS program is set up to identify what you know and what you still need to work on. For that reason, if is important to do the work on your own. The Modules are what you will be tested on in the midterms. The post-module KC will show whether you have mastered the material in an Module or whether you need to go back and review material. It is wise to do the KC immediately after completing the module. Clicking "don't know" on a KC may mean that you complete it more quickly, but it will ultimately also mean that you are required to repeat material before moving forward. You must complete a post-module KC prior to taking each exam.

CLASS and EXAM RULES: Be on time to class. Use the class time to get answers to questions you may have. Organize so that you do not have to leave the room while taking an exam. During the test, you are not allowed to access any other screen other than that of the actual exam. If there is any evidence that you have done that, your exam will be voided and you will be subject to disciplinary action. The ALEKS calculator will be available for most of the exam. If it is not available for a particular problem, you are to do that problem by hand.

SCRAP PAPER: Put your name and Instructor's name on your scrap paper. Number your questions, show your work--where obviously necessary-- and circle the final answers. You will be required to hand in your scrap paper after an exam. Failure to turn it in at the end of the exam--or turning in only a portion of it--will result in a five(5) point deduction in your number grade for the exam.

WORKING WITHIN ALEKS: Your instructor will introduce you to ALEKS and there are a number of YouTube videos to also help you with the program. Once you take your initial Knowledge Check, you will be assigned the modules that you are to learn. Each time you log in, you will see what you are to do next. All the deadline dates must be met for you to do get full credit for the modules. That is, in order to earn 35 points for the Modules, all material must be completed on time.

The deadlines can be found here:

Please check course material

COURSE GRADING:

To earn a grade of A or A+, you must have an average of 92.5 or above (97.5 for an A+) and:

1. **At least 98% of the modules must be completed *on time* and your final Pie score must be 100%. (These constitute 35% of your grade).**
2. **You must take four (4) exams. All are counted. [Test 8 cannot be taken unless you have completed 100% of Module 8 by the deadline.]. These exam grades contribute 30% of your final grade.**
3. **You must complete all four(4) Data Day assignments (20%) and a REQUIRED semester-long independent data project (2%) all on time.**
4. **You must take the final exam (10% of your final grade).**
5. **You should take the final KC. (5% of your grade)**
6. **If 1-5 are done, you will automatically receive 3% extra credit for completing OBJ 8 and taking Exam 8. Be advised that you must have 100% of Obj8 complete by the deadline in order to take EXAM 8.**

Your letter grades are determined by the standard Hunter College system of grading. Items 1-6 are required for an A or A+ but completion does not guarantee an A or an A+.

To earn A- to C, you are responsible for the following:

1. **You must complete at least 75% of *each* of Modules 1-7 on time and must have a final pie score of 85% or more. The more work you complete on time, the more likely it is that you will receive an A-. This contributes 35% of your final grade.**
2. **You must take exams 1, 2 and 3. All are counted and contribute 30% of your final grade.**
3. **You must complete the four(4) Data Day assignments on time (20% of your grade).**
4. **You must take the final exam (10% of your grade).**
5. **You should take the final KC. (5% of your grade)**
6. **Extra Credit (5%). Check the syllabus for details - I will use the attendance**

Your letter grades are determined by the standard Hunter College system of grading but the maximum you are allowed is an A- ; you are not guaranteed a C, but if you do 1-6, it is highly likely that you will earn a C or better.

The Grade Breakdown:

Mastery Work on ALEKS modules	**35%**	There are seven (7) modules required of all students and one additional module (Module 8) for students attempting to meet requirements for an A or A+. You will receive 25% credit for ***completing work by the given due dates***; for work not completed by the due date but completed by the end of the class, you will receive an additional 10%. The last possible date to complete work on any module is 12/9/2022. So, if all the work is completed by the module due dates, you get 35 full points--25 for completing 100% of the modules on time plus the 10 additional points for PIE Mastery of 100%. If you complete half of the modules (50%) by the module due date and then complete all the rest by the end of the semester, you will get 12.5 points for completing half by the module due dates and an additional 10 points for having 100% pie competition by the end of the semester--22.5 total points.
Scheduled Knowledge Check	**5%**	There is a Knowledge Check (KC) at the beginning and end of the course and one at the end of each Module. The Post-Module KCs will identify what you still need to know prior to your Midterm Exams. The KCs are required in this course.
Video Assignments	**0%**	There are a number of **optional** video assignments. These are very useful if you are having problems with a particular topic. I urge you to look at these--most are very short. These are not required and contribute nothing to your grade but will make

		learning topics easier. Missing these assignments will not block you from moving forward but missing them may make it harder to learn.
Tests	**30%**	There are three required midterm tests on the material you are learning in this course plus a final exam. Students attempting to receive an A will take a fourth exam. See above dates. The tests count 30% of your grade. You may only take exam 4 if you have completed 100% of Module 8. ***There are no make-up tests. Look at the schedule now and mark the date***. A missed exam is a test grade of zero. Your tests will be graded and you will be given feedback when all scheduled test days are past (so, when everyone has taken Test 1, you will be able to see what you missed, etc.). So, if your exam average is 80, you will receive 80% of 30 or 24 points toward your final grade. If you have a legitimate reason to miss an exam, and if you contact the instructor, with documentation, within 24 hours of the exam time, you may be able to take a makeup ***in-person*** on the Reading Day after the last day of classes at the end of the semester.
Final Exam	**10%**	The final exam will be on 12/14/2022 It will be given on Blackboard. You will have an online final exam review available to you beginning Sunday 12:30am prior to the last day of classes until 8am the morning of your final. The final exam contributes 10% of your grade. You will be able to see your grade for the exam on Blackboard.
Data Days	**20%**	You and your class will be using SPSS to analyze data during the semester. Your instructor will teach you what you will need for the particular assignment on the class prior to each DataDay. . If you miss class, get notes from a friend. Four(4) class periods will be set aside for the DataDay assignment. Work needs to be completed by 10 minutes after the end of your class. Your work will be graded and you will be given feedback within 7 days. If you miss DataDay, there is a makeup available but there is a 10% penalty. You will lose 2 points out of the 20 possible for that assignment. The data part of the course counts 20% of your grade. Students working toward an A will do an ***additional*** semester-long independent data project in addition to the DataDay assignments. The DataDay assignments are directly related to the semester long project so they will be helpful to all. On DataDays, be sure to come to class on time so you can complete the work.
Independent Data Project--Required for an A in the course.	**2%**	The Independent Data Project counts 2% of the final grade but must be completed satisfactorily and on time by any student in order to receive an A. Students not eligible for an A will receive no points for doing this. This is extra credit. All students have the option of earning exactly 100 points during regular assigned work and 5 points extra credit. This is a TURNITIN project and cannot show more than 20% of the project, or any part of the project, to be copied from other sources in order to get credit. You must do the work entirely on your own.
Extra Credit	**Up to 5%**	**For students going for an A, this is satisfied by completing Obj 8 and taking Test 4. For all other students, this extra credit is for class attendance**

Additional Resources

The Dolciani Math Learning Center is a multi-media/tutorial Center providing computer-asssisted tutorials, workshops and tutoring for students across the College who need assistance in mathematics and statistics. In the Fall semester there will be both online and onsite services. Visit their website (www.hunter.cuny.edu/dolciani) and be sure to check your email for details on specific events throughout the semester.

Attendance: Attendance is required and will be taken at every class. Your instructor may use multiple ways to help you learn the material. If you are not going to be able to attend on a particular day, notify your instructor ahead of time.

Emergency Situatons

We have all dealt with emergency situations this past year, including power and internet outages. If that happens to you, either causing you to miss class or giving you problems during an exam, you need to communicate clearly with your professor about your situation as soon as it is rectified. Don't wait until the end of the semester to list all the reasons you were not able to be a part of the class. And don't wait until the instructor contacts you.

Calculators

ALEKS Calculators are allowed during the tests for certain problems. Other calculators, phones and tablets are not allowed during tests--except for the final exam; you may use a simple 4-function or scientific calculator on the final. Use of technology is not allowed during tests except for the technology ALEKS allows you. If you have to do calculations by hand on the modules work, expect to do the same kind of calculations on the test. And show the work on your scrap paper. If you are doing calculations, write down what you are calculating.

GENERAL INFORMATION:

1) It is your responsibility to have access to Blackboard with a working Hunter student email address so that you can be reached through the email system in Blackboard. Any change in your student email must be simultaneously changed in Blackboard. Contact the student help desk if there is a problem. It is your responsibility to check your Hunter email regularly for messages from your instructor. If you don't know how to do this, contact your advisor -- the name appears on the student view in CUNY First. If you do not have a general advisor, contact Student Affairs to get one.
2) Use of your cell phone is prohibited during class sessions unless you have an emergency.
3) You should make use of all your time. If your instructor completes a lecture or if you complete classwork before the end of class, log into ALEKS and work on the material during class.
4) Grades: Details of regular letter grading appears earlier in this syllabus.
    a) The last day to withdraw from the course with a grade of W is 12/14/2022. Please note that a grade of W may be interpreted by some as a failing grade.
    b) THERE ARE NO INCOMPLETES IN THIS CLASS.
    c) There are no P/NC grades allowed in this course
    d) If you stop attending and do not complete the course work, including the final exam, unless you officially withdraw, you will receive a grade of WU.
5) Attendance will be taken each class day. It doesn't count for you or against you but shows a certain commitment to the course and respect for your teacher.
6) You are expected to work 9 or more hours a week, plus class time, on this course. You may be able to complete the material in less time but it may take you more time. If you are not working this long and also not doing well, increase your time before complaining about the difficulty.
7) If you have taken this course before, work differently in the course this time. Tell your instructor and follow his/her suggestions for progressing. Make use of the video assignments. Go to the Dolciani Center for tutoring. Increase your hours working in the course. Drop the course if you cannot commit to the work.
8) If you need this course for your major and cannot pass it, even after taking it over, speak with your major advisor.
9) In this course, you will have many different ways to learn statistics. Please come prepared to work.

Syllabus Change Policy:
Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice. If any changes are made, a revised syllabus (Named Revised Syllabus xx/xx/xxxx --date changed) will be posted in the Course Materials section of Blackboard and an announcement will be posted and sent notifying you that this has been done.

I hope this is a productive semester for you and your classmates.

❖ **Hunter College Policy on Academic Integrity**

"Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures."

❖ **ADA Policy** (Suggested language from the Office of AccessABILITY)

"In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772- 4857 or (212) 650-3230."

❖ **Hunter College Policy on Sexual Misconduct**

"In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444).
b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link: *http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf*

A BRIEF DESCRIPTION OF ALEKS

Welcome! In this course we will use ALEKS, an adaptive program that creates a personalized path based on what you know, what you don't know and what you are ready to work on. ALEKS helps you learn, understand, and master content in your course so that you can be successful in this course and beyond!

What is ALEKS?

ALEKS is a learning platform from McGraw Hill Education that assesses what you already know, what you don't know yet, and what you're ready to learn throughout this course. Many of your course assignments will be delivered through ALEKS.

ALEKS Initial Knowledge Check

Within the first few days of your course, you will take your Initial Knowledge Check. The purpose of this check is to get to know you and to give you "credit" for any of the content of the course you may already know. This "credit" will be different for each student because each student has a unique math background – math courses taken, time since last math class, grades earned in those classes, etc. There is no right or wrong "grade" on the Initial Knowledge Check. Some students come in knowing about 10% of the course content. Comprehending more or less than 10% of the content is perfectly acceptable - you are in this course to learn the material, not to show that you already know it.

Your Path

The result of your Initial Knowledge Check is what ALEKS uses to create your own individualized learning path to work through the content of this course. You will next be asked to "Start your path." ALEKS will start by asking you to work through topics you are most ready to learn.

Continue on your path to learn and master new topics. Watch your progress as you begin to fill in your pie!

Non-Adaptive Assignments

In addition to your personalized learning path, you will also complete assignments that are not part of your adaptive pie in the form of homework, quizzes, tests or test preparation. These non- adaptive assignments will not affect your adaptive learning path, but they do provide important learning opportunities and will help you succeed in this course.

Additional Knowledge Checks

ALEKS periodically gives you automatic knowledge checks based on the time you have spent in ALEKS and/or the number of topics you have learned. These knowledge checks are designed to see how well you are retaining the topics you have learned so that you will be ready for tests/exams. These knowledge checks impact the topics that are in your pie; so, use the **SYLLABUS**

