Syllabus
CUNY York College, Fall 2019

Math 111: Introduction to Statistics and Probability
Class Times: Tuesdays, Room 1B03, Thursdays, Room 3H11B: 10:00 AM – 11:50 AM
Instructor: I. Ahamad
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Phone Number: (718)262-2535
Office Hours: By Appointment Only

Course Description (from the Bulletin): Elements of statistics, graphs, frequency distributions, measures of central tendency and measures of dispersion, elementary probability theory, counting, binomial and normal distributions.

Course Objectives:

- To acquaint the student with the fundamental applications of statistics and probability.
- To explain and use experiments, outcomes, probabilities, and odds.
- To use probability distributions, including binomial, normal, and sampling distributions for statistical inferences.
- To provide a foundation for the study of more sophisticated statistical applications.

Prerequisites: Math 102 (Intermediate Algebra) or passing the CUNY Math Assessment Test.

Required Textbook: Elementary Statistics: Picturing the World by Larson and Farber (Custom Edition for York College).

Other Materials needed: Scientific Calculator

Important Policies:
Homework:
Students will be given homework in order to practice the concepts learned in class.

Tests:
Four tests will be given during the semester (the dates will be announced in class). In addition to this, the class will end with a **cumulative** Final Exam.

Note: If a student is absent from a test, he or she must contact the instructor before or within 24 hours of the test in order to get a make-up test.

Make-Ups are only granted to those who provide a doctor's note or in extreme emergencies with verifiable documentation.

Grading Policy and Distribution:
Class attendance and participation – 5%
Homework – 10%
Tests – 60%
Final Exam – 25%

Attendance & Participation:
Students are expected to arrive promptly to each class. If a student misses a class, it is his or her responsibility to find out what materials were covered. Students are expected to attend class regularly, complete all the required assignments, take notes, and actively engage in activities. Attendance will be taken at all class sessions.

Class Conduct:
- Students are expected to show respect to the instructor and other students at all times.
- All cell phones should be turned off and out of sight during class. Placing or receiving phone calls or text messages during class is strictly prohibited. **Cell phones may not be used as calculators.**
- There should be no sleeping, eating/drinking, inappropriate talking in class or disruption of lectures.
- If students are not clear about something discussed in class, they should speak with the instructor.

Teacher Evaluations:
Student evaluation of teachers is now sent to the student's York College email addresses during the latter part of the semester.

Course Outline:
Chapter 1: Introduction to Statistics (Weeks 1 - 2)
- 1.1 An Overview of Statistics
- 1.2 Data Collection
- 1.3 Data Collection and Experimental Design

Chapter 2: Descriptive Statistics (Weeks 3 – 5)
- 2.1 Frequency Distributions and Their Graphs
- 2.2 More Graphs and Displays
- 2.3 Measures of Central Tendency
- 2.4 Measures of Variation
- 2.5 Measures of Position

Chapter 3: Probability (Weeks 5 – 8)
- 3.1 Basic Concepts of Probability and Counting
- 3.2 Conditional Probability and the Multiplication Rule
- 3.3 The Addition Rule
- 3.4 Additional Topics in Probability and Counting

Chapter 4: Discrete Probability Distributions (Weeks 9 – 10)
- 4.1 Probability Distributions
- 4.2 Binomial Distributions
- 4.3 More Discrete Probability Distributions

Chapter 5: Normal Probability Distributions (Weeks 10 – 12)
- 5.1 Introduction to Normal Distributions and the Standard Normal Distribution
- 5.2 Normal Distributions: Finding Probabilities
- 5.3 Normal Distributions: Finding Values
- 5.4 Sampling Distributions and the Central Limit Theorem
- 5.5 Normal Approximations to Binomial Distributions

Chapter 6: Statistical Inference (Weeks 13 – 15)
- 6.1 Confidence Intervals for the Mean (Large Samples)
- 6.2 Confidence Intervals for the Mean (Small Samples)
- 6.3 Confidence Intervals for Population Proportions
- 6.4 Confidence Intervals for Variance and Standard Deviation

Review for the Final Exam (Week 16)

Note: Please note that this is a tentative outline that is subject to change if needed as the semester progresses.

Important Policies

Policy on Academic Integrity, Cheating and Plagiarism:
Academic Dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion. Academic dishonesty includes cheating and plagiarism. This policy will be strictly adhered to. Students can familiarize themselves with this policy by downloading a copy in pdf form at http://york.cuny.edu/president/legal-compliance/legal-affairs/cuny-legal-policies-procedures/Academic-Integrity-Policy.pdf/view

Students with Disabilities:
Students with documented disabilities are entitled to receive accommodations, including extra time on exams, test, projects and assignments. The office of Services for Students with Disabilities is located within the Counseling Center in AC 1G02. For more information, go to: http://www.york.cuny.edu/student-development/ossd

Student Support Resources on Campus

The following offices and programs are available on campus to support students as needed. Please note that this is not an exhaustive list and other programs and offices do exist. When unsure you can conduct a search on the **York College website** located at www.york.cuny.edu or access the **York College Bulletin** (also searchable) online at

http://york.cuny.edu/search?SearchableText=york+bulletin
The **Collaborative Learning Center** located in the library (AC-1C18) offers tutoring for students in various subjects. Tutoring is free to students who schedule appointments with tutors at times that fit their schedule. If you are having difficulty in the course you are strongly advised to use this resource. For more information, please call (718) 262-2303.

The **Math Learning Center** at York College located in Room 3E07 provides various resources for York Students. The center provides a friendly environment with educated and knowledgeable tutors to help students with their Math classes. Some of the services and resources available to students at the MLC include: One-on-one tutoring in Math courses; group sessions; class materials for most math courses and laptops preloaded with all CAS Math programs to assist students to complete their assignments. You may register online for tutoring at: **www.yorkcollege.mywconline.com.** The MLC can also be reached by phone at (718)262-2710.

For a complete listing of **Tutorial Services** visit the web: www.york.cuny.edu/student/tutoring/ where you would see that a variety of tutorial programs are offered on campus.

The **Academic Computing and Educational Technology Center** provides technical support for students in utilizing Blackboard, the CUNY portal, York e-mail and other programs. There is a help desk located in the G-Wing of the Library (located on the 3rd floor). The IT help desk can also be reached by phone at (718) 262-5300 or via e-mail at helpdesk@york.cuny.edu. Additionally the center runs technology workshops for students. More information can be found online at http://york.cuny.edu/it/acet/academic-computing-and-educational-technology/

Computer Labs - A large number of Internet-capable computers are assigned to College-wide computer labs, specialized departmental labs, learning centers and the Library. The Classroom Building (C201) houses a College-wide drop-in computer lab.