

Columbus State Community College
Mathematics Department
STAT 1350 Student Syllabus

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Course Number: STAT 1350 **Course Name:** Elementary Statistics **Sem/Yr:** Spring 2022
Course Section: 009L **Meeting Times:** Live Online via Zoom, MW 3:00 – 4:20 pm
Credit Hours: 3 semester credits (3 lecture hours per week)
Prerequisite: A grade of “C” or higher in MATH 1025 or placement into MATH 1075

DESCRIPTION OF COURSE

STAT 1350 is designed to acquaint students with statistical methods used in gathering and analyzing data. The course includes survey methods, graphical displays of data, descriptive statistics, the Normal distribution, correlation and linear regression, basic concepts in probability and simulation, sampling distributions and the Central Limit Theorem, confidence intervals, and significance testing.

WHAT IS STATISTICS?

Statistics is the art and science of working with data. Big Data is everywhere as websites, social media apps, business, and other entities collect all kinds of information about customers. Statistics looks at data like this in a variety of ways, including graphs and summary statistics and talking about what different populations might look like. In this class, you will learn the language of statistics – the words we use and the meanings behind them as well as the process of statistics. How do we look at this data in ways that help us make decisions and improve well-being? How do we learn from statistical summaries presented by others? In other words, how do we understand what others are attempting to tell us through graphs and statistics? These are some of the ideas you’ll engage with this semester.

COURSE GOALS

- To introduce students to the elements of statistical thinking.
- To develop competence in working with data.
- To acquaint the student with statistical reasoning and enable them to think critically about statistical information they encounter daily.

REQUIRED MATERIALS

- Access code for Achieve (available through Bookstore).
- Textbook is optional (e-book comes with Achieve access): Moore & Notz, *Statistics: Concepts & Controversies* (10th ed.). ISBN: 978-1-319-27247-0.

- **A graphing calculator is REQUIRED.** The Texas Instruments' TI-84 (regular, Plus, Silver, etc.) graphing calculator is strongly recommended, fully supported, and approved for use during proctored assessments.
- Other graphing calculators may be permitted. If you own a different calculator, please check with your instructor to see if your calculator will be allowed during their proctored assessments.

ATTENDANCE POLICY

This section of STAT 1350 meets “live online,” which means we have two sessions per week where everyone is online together in Zoom (linked through Blackboard). By selecting this section, I assume you have that time available each week and you have the necessary technology to engage in the online class sessions. The pace of this class is such that it will not be advisable to miss any sessions. If you know you will be absent, please inform me in advance. When you are absent, it will be your responsibility to look on Blackboard for the uploaded lecture, notes and announcements. While attendance does not factor into your grade, I will record attendance for my own records. You are expected to be an active participant for the entire class.

LATE WORK AND MAKE-UP POLICY

No late work will be accepted. Any assignments not completed by the assigned due date without a pre-approved extension will receive a zero. Extensions may be granted on a case-by-case basis at the discretion of the instructor. It is the responsibility of the student to contact the instructor well in advance.

There are two exams in STAT 1350: a Midterm and a Final. Each exam will be available for a window of four days so that you can choose when to take the exam based on your own schedule. If you are not able to complete an exam during its scheduled window, please reach out to me so we can work on alternatives.

GRADING

Grading Scale:

- A = 90 – 100%
- B = 80 – 89%
- C = 70 – 79%
- D = 60 – 69%
- E/EN = up to 59%

(Note a “C” is the minimum most students need to “pass” or transfer this course to another institution. Check with your advisor for specific requirements.)

NOTE: I will record a failing grade (of either E or EN) if you earn less than a 60% in the course. I will record the E grade for those students who attempted at least 70% of the coursework, and I will record

the EN grade for those students who did not attempt at least 70% of the coursework. CSCC considers both the E and EN grades failing grades.

Grades in this course will consist of four components: **Homework (35%), Labs (15%), a Midterm (25%) and a Final (25%).**

- **35% – Homework:** Each chapter we cover will have an associated online “LearningCurve” assessment through “Achieve”.
- **15% – Labs:** Weekly Labs to practice content of the week utilizing real world data and examples. These will be graded for quality and accuracy.
- **25% – Midterm:** A departmental Midterm covering Units 1 – 6 from weeks 1 – 8 of the course.
- **25% – Final:** A departmental Final covering Units 7 – 11 from weeks 10 – 16 of the course. Note that this is NOT comprehensive and therefore only focuses on content from the second half of the semester.

ONLINE HOMEWORK

For each chapter we discuss in class, there is a “LearningCurve” assessment on the publisher’s website. You purchased access to this online system (Achieve) at the beginning of the semester. The “LearningCurve” assessment is a series of questions that review the content to help you determine what you are understanding and where you might need to review. You answer questions (each with varying points) until you hit a target score. Once you hit that target score, you have completed the LearningCurve for that chapter, and you will earn the full points possible. There will be 22 of these assessments that together account for 35% of the total grade.

WEEKLY LAB ACTIVITIES

There will be 11 weekly in-class collaborative Labs scheduled throughout the semester. Labs will be graded for correct analysis. Labs will account for 15% of the total grade.

The main purpose of these Labs is to pull course content together to analyze a given set of data in the context of a real-world statistical application. When there is a Lab for the week, there will be dedicated class time to work on it, where we will break into small groups. The hope is to be able to complete a large portion of each Lab during our live class session. There may be Labs that require some “finishing touches” outside of class time. There is one Lab per Unit.

MIDTERM AND FINAL

Halfway through the semester, there will be a departmental Midterm that accounts for 25% of the total grade. At the end of the semester, there will be a departmental Final worth 25% of the total grade. Questions will be a mix of short answer and multiple choice. If you have completed the other assignments for the course, you will be prepared for the Midterm and the Final. A set of practice questions will be provided to help students prepare for the Midterm and the Final.

These will both be administered through Blackboard and available during the time periods shown below.

- **MIDTERM** – Testing window is from 12:01 am Thursday, March 10 to 11:59 pm Sunday, March 13.
- **FINAL** – Testing window is from 12:01 am Saturday, May 7 to 11:59 pm Tuesday, May 10.

Prior to the Midterm and the Final, there will be an announcement with more specific instructions for how to access and complete these.

COURSE CALENDAR AND COURSE OVERVIEW

<i>Units of Instruction</i>	<i>Chapter(s)</i>	<i>Lab</i>
1. Sample Surveys	1 – 4	Lab 1
2. Experiments	5 – 6	Lab 2
3. Data Ethics and Measurement	7 – 9	Lab 3
4. Graphical Displays of Data	10 – 11	Lab 4
5. Descriptive Statistics	12	Lab 5
6. Normal Distribution	13	Lab 6
7. Correlation and Regression	14 – 15	Lab 7
8. Probability and Simulations	17 & 19 – 20	Lab 8
9. Sampling Distributions	18 & 21 along with others	Lab 9
10. Confidence Intervals	21	Lab 10
11. Significance Testing	22 – 23	Lab 11

SEE 'Course Overview, Calendar, and Due Dates' section located in the 'Course Information' tab on Blackboard.

- Course Overview document that contains information about which Units are covered on each Test.
- Course Calendar gives a tentative day-by-day schedule of when we will cover what topics and when we will have Labs.
- Due Dates outlines when each assignment will be due, subject to change.

NOTE: I may make modifications to the syllabus, course calendar, assignments, etc. based on the needs of the class as a whole. Any changes will be communicated as early as possible.

ACADEMIC INTEGRITY

All students taking courses at Columbus State Community College must familiarize themselves with and uphold the Student Code of Conduct. While this includes the entire Code, students in STAT 1350 should pay particular attention to the sections on plagiarism and cheating. All work you submit for this course must be your own. Copying answers from others (including current or former students and various online resources) or sharing your answers with others so they can copy them is not allowed.

All known violations of the Student Code of Conduct will result in your instructor reporting the violation to the Office of Student Conduct at CSCC. Penalties for such violation vary depending on the nature of the violation and any past history a student has with the Office of Student Conduct.

Columbus State Community College and its employees hold copyright in the exams, lectures, and other course materials. This copyright encompasses student notes and other summaries or reproductions of the College's course materials. These materials are made available to students for their personal use only and may not be distributed for commercial purposes without the College's express written consent. Violation of the College's copyright may result in referral to the Office of Student Conduct and disciplinary action up to and including dismissal.

If you are unsure whether what you are doing is in violation of the Student Code of Conduct, please ask your instructor so they may guide you appropriately.

STATEMENT ON DIVERSITY, EQUITY, AND INCLUSION

The CSCC Mathematics Department faculty value diversity of thought, perspective, and experience, and respect your identities (including but not limited to race, gender identity or expression, class, sexual orientation, religion, and ability). The education, rights, and well-being of all students are encouraged and cultivated. Our goal is to foster and support safe and inclusive learning environments with equitable opportunities for all students to participate, contribute, and succeed.

LAST DAY TO WITHDRAW FROM COURSE

If you should decide to drop this course, but do not officially do so through Records & Registration, a failing grade will be recorded on your transcript. **The last day to drop this course is Monday, March 28th, 2022.** No drops will be allowed after that date. Drop forms are available from the Counseling/Advising Center and from Records and Registration.

INSTITUTIONAL LEARNING GOALS

This course addresses the following Columbus State general education goals:

- Critical Thinking
- Quantitative Skills

INSTRUCTIONAL METHODS

Instructional methods may include face-to-face or video lectures or demonstration, face-to-face or virtual discussion, individual or group activities including the use of visual aids, graphing calculators, computers and/or other technologies. Students may be expected to participate in these activities during class and/or outside of class. Instructors may require class participation, collaborative learning, and peer review.

NOTE TO STUDENTS

To master this course material, the Mathematics Department recommends that the student should be prepared to spend an average of 9 hours per week on this course.

ASSESSMENT

Columbus State Community College is committed to assessment (measurement) of student achievement of academic outcomes. This process addresses the issues of what you need to learn in your program of study and if you are learning what you need to learn. The assessment program at Columbus State has four specific and interrelated purposes: (1) to improve student academic achievements; (2) to improve teaching strategies; (3) to document successes and identify opportunities for program improvement; (4) to provide evidence for institutional effectiveness. In class you are assessed and graded on your achievement of the outcomes for this course. You may also be required to participate in broader assessment activities.

FINANCIAL AID REPORTING REQUIREMENTS

All instructors are asked to report student attendance and engagement at various points throughout the semester in accordance with federal financial aid guidelines. If you are not participating, or have stopped participating, you may be administratively dropped from the course if this is the case.

Reporting windows for Autumn and Spring terms are roughly Weeks 4 and 10. The reporting window for Summer term is roughly Week 4. To be Counted as Participating: The student has established regular, consistent pattern of course participation (as demonstrated by completed course assignments, participation in classroom/practicum activities or participation in online discussion boards - which are all indicators of active engagement).

TUTORING RESOURCES

The following are ways of obtaining free tutoring:

- You can always access tutoring by logging in to your Blackboard course and clicking the small green “n” at the top right of your screen. That “n” stands for “NetTutor,” where you can go to get course-specific tutoring from trained professionals.
- The Learning Resource Center (DH room 313) during the posted hours. **You will be required to sign in and out using your CougarID number.** Tutoring is also available at the Dublin, Westerville, and Reynoldsburg branch locations. LRC hours at these locations change each semester. For additional information, please visit:
<http://www.csc.edu/academics/departments/math/tutoring.shtml>.
- Peer Tutoring – sign up for Peer Tutoring in WD 1095. This is not always an option, as it depends on the availability of a student volunteer who has taken STAT 1350. Sometimes this is only one peer tutor per semester, and their schedules are limited.
- Depending upon availability, a walk-in tutoring session may be held on Saturdays from 9am–1pm. Contact Peer Tutoring at 287-2474 for additional information.

- Online Tutoring - You can post a question to our Math Tutoring Forum on Blackboard OR setup an appointment for a live one-on-one online tutoring session via the web. To find out more, sign into Blackboard and look for “**Math Tutoring**” in the “**My Organizations**” section.

COUNSELING SERVICES

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating, and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. Services are available to assist you with addressing these and other concerns you may be experiencing. Counseling Services are FREE of charge for all enrolled students. Counseling Services at Columbus State are only offered at the College’s downtown Columbus campus. If you are attending classes in Delaware or at a Regional Learning Center and are in search of counseling services closer to home, a list of community providers can be found at the Counseling Services website below. To schedule an appointment or to learn more about mental health services at Columbus State or in your local community, contact Counseling Services at 614-287-2818. You may also obtain more information by visiting the Counseling Services office located in NH Room 010 or via the web at: www.cscs.edu/services/counseling.

STUDENT ADVOCACY

Team members in Student Advocacy are dedicated to helping students resolve issues so they can stay focused on achieving academic and personal success. A keyway we provide help is to connect students to College and community resources. We also offer tips on how to best access and utilize these resources and services.

Below is a partial list of common areas of need for students and some key resources for support. This list does not encompass all possible needs and resources; the information and links are provided for your convenience and should not be considered an endorsement of any resource referenced. For individual assistance, contact a Peer Advocate. You can also visit www.cscs.edu/services/essential-needs/.

Hands on Central Ohio	Child Care
Job & Family Services	Health Care Coverage
Legal Aid Society of Columbus	Mental Health
Food	Transportation
Housing	Financial Literacy/Wellness
Utilities	Employment

ELECTRONIC DEVICES IN THE CLASSROOM

As a courtesy to your fellow classmates and instructor, please turn off your cell phone, beeper, or anything else that might cause a disturbance during class. The use of any electronic device capable of wireless communication (phone, computer, pager, etc.) is **strictly prohibited** during any proctored assessment (test, quiz, etc.)

COLLEGE SYLLABUS STATEMENTS

You can find Columbus State Community College required College Syllabus Statements on College Policies and Student Support Services at www.csc.edu/academics/syllabus.shtml or on the College website – Quick Links – “Syllabus Statements”