

SYLLABUS
MAT 151
Statistics

Faculty Information

Instructor: Jerry L. Ashe, M.S. Mathematics
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Office: Elm 340
Phone: 254-1921 ext. 313
Office Hours: **Mon 7:30-08:00** , **Tue 7:30 -800** **Wed 7:30-08:00**
Mon 9:30-11:00 , **Tue 9:30 -11:00** **Wed 9:30-11:00**

Course Information

Course Title: Statistics
Course Number: MAT 151 WD1
Credit Hours: 3
Contact Hours: 3
Class Location: ELM 336
Class Meeting Time: M, T, W, 08:00- 09:20
URL: <http://www.coursecompass.com/ccindex.html>
Class ID: ashe25323

Course Description: This course provides a project-based approach to the study of basic probability, descriptive and inferential statistics, and decision making. Emphasis is placed on measures of central tendency and dispersion, correlation, regression, discrete and continuous probability distributions, quality control, population parameter estimation, and hypothesis testing. Upon completion, students should be able to describe important characteristics of a set of data and draw inferences about a population from sample data. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics.*

Prerequisite: Mat 080 or Mat 090

Textbook: Triola, *Elementary Statistics Using Excel*, Second Edition. ISBN: 0-201-77569-7
(Required of all students)

Course Goal: Upon completion, students should be able to describe important characteristics of a set of data and draw inferences about a population from sample data

Course Specific Competencies: Upon successful completion of the course, the student will be able to:

- Describe measures of central tendencies
- Use population parameter estimation
- Describe discrete and continuous probability distributions
- Understand quality control methods
- Use hypothesis testing methods

Reinforcement Experiences for General Education Cross-Curriculum Competencies

The course encapsulates reinforcement experiences for the general education cross-curriculum competencies:

- Communicate effectively in speaking, writing, reading, and listening.
- Locate, evaluate, and use information to analyze problems and make logical decisions.
- Apply math skills and/or natural science knowledge appropriately to organize, analyze and make information useful.
- Develop the ability to succeed as a self-directed learner.

Grading Policy: You will have 5 chapter tests and two cumulative final exams during the semester. Your chapter test average will account for 65 % of your final grade. Group Project Presentations will account for 10% of your final grade. *The Midterm and Final exam is mandatory and will count 25% of your final grade.* All tests will be closed book. *Makeup tests will not be given.* If for any reason it is necessary for you to withdraw from this class, you must complete the appropriate form and submit it to the Records and Registration Office by the deadline. If you quit attending class without completing the appropriate forms your grade will become an “F”. The final grade will be an average of all your test grades, A(90-100), B(80-89),C(70-79),D(60-69), F(below 60)

Inclement Weather Schedule:

The College will close when weather conditions are such that driving is hazardous.

The following procedure will be observed for inclement weather conditions:

1. Announcements concerning school operation will be made by 6:30 am on local radio and TV stations for day classes. A voice mail message will be recorded on the switchboard. If it appears that ice or snow may be cleared by mid-morning, the schedule below will be followed and all College personnel and students should report by 10am.
2. Closing or delaying the day programs does not automatically close evening classes. Announcements will be made on radio stations and the College switchboard no later than 3pm concerning the evening classes.
3. When weather conditions dictate early dismissal of the day or evening classes, the announcement will be made by telephone to each building on campus.
4. Commuters should exercise personal judgment concerning highway conditions regardless of College announcements, particularly those commuting from outlying areas.
5. Adjustments in the College calendar for days missed because of inclement weather will be made at the end of the semester.

Normal Class Time	Delayed Opening
8 am	10-10:40 am
8:30am	10:20-11 am
9 am.	10:45-11:25 am
9:30 am	11:05-11:45 am
10 am	11:30-12:10 pm
10:30 am	11:50am-12:30 pm
11 am	12:15-12:55 pm
11:30 am	12:35-1:15 pm
12 am	1-1:40 pm
12:30 pm	1:20-2 pm

1 pm	1:45-2:25 pm
1:30 pm	2:05-2:45 pm
2 pm	2:30-3:10 pm
2:30 pm	2:50-3:30 pm
3 pm	3:15-3:55 pm
3:30 pm	3:35-4:15 pm
4 pm	4 pm

Final Exam Policy: Will be the last day of scheduled class. See above Inclement Weather Schedule

Attendance Policy: To receive course credit, a student should attend a minimum of 80 percent of the contact hours of the class. Upon accumulating absences exceeding 20 percent of the course contact hours, the student may be dropped from the class with a grade of “U” at the discretion of the instructor. A tardy is defined as arriving late for class, leaving early, or being away from class without permission during class hours. Three tardies may constitute one absence.

Important Dates:

Summer Session - 2009

Registration: Current and Continuing Students	May 4 - 8
General Registration	May 11 - 15
Last Day to Pay Tuition and Fees	May 15*
<i>* Unpaid registrations will be deleted from the computer registration system at 4:30 p.m.</i>	
Late Registration	May 18 - 22
Last Day to Pay Tuition and Fees for Late Registration	May 22*
<i>* Unpaid registrations will be deleted from the computer registration system at 4:30 p.m.</i>	
New Student Welcome	May 22, 9:00 a.m.
Memorial Day College Holiday	25-May
Classes Begin	26-May
Schedule Adjustments	May 26 - 27
Last Day to Apply for Summer Graduation	22-May
Last Day to Drop for a Partial Refund	8-Week Session: May 29 10-Week Session: June 1
Independence Day College Holiday	3-Jul
Last Day to Withdraw	8-Week Session: July 7
10-Week Session: July 10	
Last Day of Class/Examinations	8-Week Session: July 21**
<i>** July 21 will be scheduled as a Friday make-up day for both sessions.</i>	
Summer Graduation	7-Aug
Total Class Days	8-Week Session: 40 10-Week Session: 50

(*Up to 3 days made be made up due to inclement weather closings.)

Activity Day Schedule

This schedule will be used for most approved and announced student activities.

Normal Class Time	Activity Day Schedule
8:00 am	8:00-8:40 am
8:30 am	8:20-9:00 am
9:00 am	8:45-9:25 am
9:30 am	9:05-9:45 am
10:00 am	9:30-10:10 am
10:30 am	9:50-10:30 am
11:00 am	10:15-10:55 am
11:30 am	10:35-11:00 am*

11:00 am-1:00 pm Free for activities!

12:00 noon	1:00-1:40 pm
12:30 pm	1:20-2:00 pm
1:00 pm	1:45-2:25 pm
1:30 pm	2:05-2:45 pm
2:00 pm	2:30-3:10 pm
2:30 pm	2:50-3:30pm
3:00 pm	3:15-3:55 pm
3:30 pm	3:35-4:15pm
4:00 pm	4:00 pm

* 25 minute period

Code of Student Conduct: Academic Dishonesty, **You** may not deceive any official of the college by cheating on any assignment, exam, or paper. This includes plagiarism, which is the intentional theft or unacknowledged use of another's words or ideas. Plagiarism includes (but is not limited to) paraphrasing or summarizing another's words **or works** without proper acknowledgement, using direct quotes of material without proper acknowledgement, or purchasing or using a paper **or presentation** written **or produced** by another. The faculty at A-B Tech **may** also consider presenting as original work a paper written for one class to satisfy a requirement in another class to be academic dishonesty.

Code of Classroom Conduct: Asheville-Buncombe Technical Community College is an institution for adult learning. It is a partnership between instructors with the desire to teach and students with the desire to learn. In order to create an appropriate environment for teaching and learning to flourish, there must be respect for the instructor and fellow students. Listed below are guidelines for classroom behavior which the College has established to ensure that the learning environment is not compromised.

1. Attendance: You are expected to be in class the entire class time. Do not enter late or leave early. Rare exceptions may be excused, particularly under emergency circumstances, but you should be prepared to explain your tardiness to the instructor after class. Likewise, the need to leave early should be explained to the instructor before class.
2. Absences: Inform the instructor in advance, if you know you are going to miss a class. Also, take responsibility for getting missed assignments from other students. Do not expect that you will be allowed to make up work, such as unannounced quizzes or tests, after an absence. Instructors are not responsible for re-teaching the material you missed because of absence.
3. Conversation: Do not carry on side conversations in class.
4. Other Activities: You may not work on other activities while in class. This includes homework for other courses or other personal activities.
5. Internet: In classes where Internet access is provided, you may use the Internet for valid, academic purposes only. You may not use it for open access to other non-academic sites which are unrelated to the course.

6. Sleep: Do not sleep in class.
7. Attitude: You are expected to maintain a civil attitude in class. You may not use inappropriate or offensive commentary or body language to show your attitude regarding the course, the instructor, assignments, or fellow students.
8. Profanity and Offensive Language: You may not use profanity or offensive language in class.
9. Cell phones and beepers: You may not receive or send telephone calls or pages during class. You are responsible for turning off cell phones and beepers upon entering class.
10. Guests: You may not bring unregistered friends or children to class.
11. Food, Drink, Tobacco Products: You may not have food or drink in class. You may not use tobacco products in the buildings of A-B Tech.
12. Personal Business: You may need to transact personal business with the instructor, asking him or her to sign forms. Plan to do this before instruction begins or after class.

Typically, violations of the Code of Classroom Conduct will be dealt with as minor infractions. However, repetition of minor infractions or other more serious violations of the Code of Student Conduct may lead to removal from the classroom while the matter is resolved and referral to the Vice President for Student Services for disciplinary action.

Other Information: Additional help in math and related courses is available in Developmental Studies, Laurel Building, Room 107. The hours are from 9am-6:30pm M-Th, and 9am-1:00pm on Friday.

Calculator: A graphing calculator is required for this course. The TI-83 or TI-86 will be the calculator used by the instructor. I will not permit the TI-89 or the TI-92 to be used on tests. Your calculators may be cleared before examinations.

Statement of Right to Make Changes: I reserve the right to make changes in the syllabus. Any changes will be announced in class.

**MAT 151
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Course Outline**

I. Chapter One: Introduction to Statistics

- a. Section 1.1: Overview
- b. Section 1.2: Types of Data
- c. Section 1.3: Critical Thinking
- d. Section 1.4 Design of Experiments

II. Chapter Two: Summarizing and Graphing Data

- a. Section 2.1: Overview
- b. Section 2.2: Frequency Distribution
- c. Section 2.3: Histograms
- d. Section 2.4: Statistical Graphics

III. Chapter Three: Statistics for Describing, Exploring, & Comparing Data

- a. Section 3.1: Overview
- b. Section 3.2: Measures of Center
- c. Section 3.3: Measures of Variation
- d. Section 3.4: Measures of Relative Standing
- e. Section 3.5: Exploratory Data Analysis (EDA)
- f. Review Chapters One, Two & Three
- g. Test on Chapters One, Two & Three

Test 1

IV. Chapter Four: Probability

- a. Section 4.1: Overview
- b. Section 4.2: Fundamentals
- c. Section 4.3: Addition Rule
- d. Section 4.4: Multiplication Rule, Basics
- e. Section 4.5: Multiplication Rule, Complements/Conditional
- f. Section 3.6: Probabilities Through Simulation
- g. Section 3.7: Counting

V. Chapter Five: Discrete Probability Distributions

- a. Section 5.1: Overview
- b. Section 5.2: Random Variables
- c. Section 5.3: Binomial Probability Distribution
- d. Section 5.4: Mean, Variance, 7 Standard Deviation
- e. Review Chapters Four and Five
- f. Test on Chapters Four and Five

Test 2

Midterm

VI. Chapter Six: Normal Probability Distribution

- a. Section 6.1: Overview
- b. Section 6.2: The Standard Normal Distribution
- c. Section 6.3: Applications of Normal Distribution
- d. Section 6.4: Sampling Distributions and Estimators
- e. Section 6.5: The Central Limit Theorem
- f. Section 6.6: Normal as Approximation to Binomial
- g. Section 6.7: Assessing Normality

VII. Chapter Seven: Estimates and Sample Sizes

- a. Section 7.1: Overview
- b. Section 7.2: Estimating a Population Proportion
- c. Section 7.3: Estimating a Population Mean: known SD
- d. Section 7.4: Estimating a Population Mean: unknown SD
- e. Section 7.5: Estimating a Population Variance
- f. Review Chapters Six and Seven
- g. Test on Chapters Six and Seven

Test 3

VIII. Chapter Eight: Hypothesis Testing

- a. Section 8.1: Overview
- b. Section 8.2: Basics of Hypothesis Testing
- c. Section 8.3: Testing a Claim About a Proportion
- d. Section 8.4: Testing a Claim About a Mean: known SD
- e. Section 8.5: Testing a Claim About a Mean: unknown SD
- f. Section 8.6: Testing a Claim About Variance or SD

Test 4

IX. Chapter Ten: Correlation and Regression

- a. Section 10.1: Overview
- b. Section 10.2: Correlation
- c. Section 10.3: Regression
- d. Review Chapters Eight and Ten
- e. Test on Chapters Eight and Ten

X. Chapter Eleven: Multinomial Experiments and Contingency Tables

- a. Section 11.1: Overview
- b. Section 11.3: Contingency Tables, Independence/Homogeneity

XI. Chapter Fourteen: Statistical Process Control

- a. Section 14.1: Overview
- b. Section 14.2: Control Charts for Variation and Mean
- c. Review Chapters Eleven and Fourteen
- d. Test on Chapters Eleven and Fourteen

Test 5

XII. Chapter Fifteen: Projects

- a. Section 15.1: Projects
- b. Section 15.2: Procedures
- c. Project Presentations
- d. Review for Final

Final

** This schedule is tentative and is subject to change

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Your Acknowledgement:

I have been provided access to the course syllabus, understand what is expected of me, and agree with the provision set forth in the syllabus.

Your name

Your student I.D. Number

Your signature

Date