

**AMBERTON UNIVERSITY**  
**e-COURSE SYLLABUS**

**BUS3104.E1 Statistical Analysis I**  
**Spring 2021**

**PROFESSOR INFORMATION:**

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**COURSE INFORMATION:**

BUS3104.E1 Statistical Analysis I  
Level: Undergraduate  
Beginning Date of Session: Saturday, March 13<sup>th</sup>, 2021  
Ending Date of Session: Thursday, May 20<sup>th</sup>, 2021  
**Student access available to the Student Portal: Saturday, March 13<sup>th</sup>, 2021.**

*Students enrolled in distance learning courses are not assessed any additional fees for security or identity verification.*

**COURSE PREREQUISITES:**

PREREQUISITE: Six semester hours of mathematics.

**TEXTBOOK(S) AND REQUIRED MATERIALS:**

Title: Introductory Statistics  
Author: Rice University OER Learning Commons  
Publisher: Open Stax  
Year Published: 2013  
Edition: 1st  
ISBN: 13: 9781938168208  
Price: Available at <http://amberton.ecampus.com>

Amberton University has an agreement with eCampus.com to provide a full-service online bookstore to students. The Amberton University Virtual Bookstore is accessible through the University's website, [www.Amberton.edu](http://www.Amberton.edu). There is also a bookstore link in the Student Portal.

The AU Virtual Bookstore provides an easy to use interface, online buyback of books, and same day shipment of most titles with an average delivery time of 2-3 days depending on the student's location. Textbook options include new, used, rental, and electronic media as available.

Since no books are sold on campus, students should plan accordingly and purchase their books in advance of the first day of class, allowing time for shipping. Be certain you are enrolled in the course before purchasing your book(s). All textbook information (Title, Author, ISBN, etc.) is available in the course syllabi so students can shop competitively. Most textbooks can be purchased from many different textbook vendors. Some textbooks may only be available on the University's Virtual Bookstore. Students should be careful to obtain the exact resource(s) required for the course.

**APA Requirement**

APA (American Psychological Association) style is most commonly used to cite sources within the social sciences. This resource, revised according to the 7th edition, offers examples for the general format of APA research papers, in-text citations, endnotes/footnotes, and the reference page. For more information, please consult the Publication Manual of the American Psychological Association, (7th ed.). All coursework at Amberton University will comply with the standards contained in the APA Publication Manual.

**COURSE COMPETENCIES:**

The following represents the course competencies for this class. Competencies are equivalent for all lecture and distance learning courses. Following each competency is the assignment used to gain mastery of this area of study.

The course presents quantitative decision-making techniques applying principles of probability and statistical analysis to managerial decision-making. The course places emphasis on conceptual understanding rather than mathematical proofs.

**UPON COMPLETION OF THE COURSE, THE STUDENT WILL BE COMPETENT IN:**

1. Distinguishing between independent and dependent variables.
2. Defining and applying the idea of a random variable.
3. Differentiating between discrete and continuous random variables.
4. Identifying random sampling techniques and describing the importance of sampling distributions.
5. Defining, describing, and giving examples of descriptive and inferential statistics.
6. Communicating important information contained in a set of data by means of graphs and frequency distributions.
7. Calculating and describing characteristics of the common measures of central tendency: mean, median, and mode.
8. Defining the sum of the squares and square of sum concepts.
9. Calculating the variance and standard deviation for a population and for a sample.
10. Calculating a standard score and determining percentages under the normal curve.
11. Determining the general properties of probability, binomial, and normal distributions.
12. Explaining the rules governing probability concepts.
13. Identifying and differentiating between null hypotheses and alternative hypotheses.
14. Describing what is meant by the level of significance and the region of rejection.
15. Differentiating between one-tailed and two-tailed tests for hypotheses.
16. Describing the general procedures for testing statistical hypotheses including the definition of sampling error, the differentiation of Type I and Type II errors, and the use of the Z and T distributions.
17. Explaining the central limit theorem and the concept of degrees of freedom and discussing their importance in statistical inference.

**COURSE POLICIES:**

All assignments (homework/participation) and exams are due according to Moodle due dates. Late work may not be accepted so view the due dates in Moodle as the last possible moment for submission. No extra credit or make-up work will be given.

All homework assignments and exams will be complete via MyOpenMath which will be accessed through Moodle. Participation is through emails, Moodle messaging, and discussion forums. Chats are NOT mandatory but may be very helpful.

***Student's Responsibilities***

This syllabus contains information, policies and procedures for a specific course. By enrolling, the student agrees to read, understand and abide by the policies, rules, regulations, and ethical standards of Amberton University as contained in the current university catalog and schedule of classes.

***Attendance Policy:***

Regular and punctual class attendance and engagement is expected at Amberton University. In case of an absence, it is the student's responsibility to contact the professor as soon as possible. If a student intends on withdrawing from a course, it is the student's responsibility to follow the university's policy on formally withdrawing from a course. Ceasing to attend classes **does not** constitute an official withdrawal.

Attendance in a lecture course is defined as punctual arrival to, and engagement in, a full lecture session. Attendance in a distance learning course is defined as active participation in the weekly online class sessions. "Active participation" can be defined as: submitting an academic assignment, taking an exam, engaging in an interactive tutorial, participating in an online discussion forum (or chat session), or initiating (or responding to) a

communication with a faculty member about an academic assignment or the subject matter of the course. A student not meeting these requirements may be dropped at the discretion of Amberton University.

### Plagiarism Policy

Plagiarism is using another person's work as your own. Plagiarism is a violation of the University's code of student ethical conduct and is one that is taken seriously. Amberton University operated on an honor system, and honesty and integrity are essential characteristics of all who are associated with the institution. All Amberton University students are expected to abide by the honor system and maintain academic integrity in all of their work. Amberton University and its instructors monitor student work for plagiarism and reserve the right to submit such work to technology-based anti-plagiarism services and applications at any time.

### COURSE OUTLINE AND CALENDAR:

Course outline and calendar subject to change. Moodle assignments include but are not limited to the following: MyOpenMath online (homework), and discussion forum (participation) assignments.

Week	Topic	Assignment	Competencies Covered	Due Date
Week 1	Sampling and Data	Read Sections 1.1 - 1.4 & Complete Moodle Assignment	1, 2, 3	4/14/21
Week 2	Descriptive Statistics	Read Sections 2.1 – 2.4 & Complete Moodle Assignments	5, 6, 7, 8	4/14/21
Week 3	Descriptive Statistics	Read Sections 2.5 – 2.7 & Complete Moodle Assignments	5, 9	4/14/21
Week 4	Probability Topics	Read Sections 3.1 – 3.5 & Complete Moodle Assignments	12	4/14/21
Week 5	Midterm Exam	Covers Week 1 – Week 5 Materials	1, 2, 3, 5, 6, 7, 8, 9, 12	4/14/21
Week 6	Discrete Random Variables	Read Sections 4.1 – 4.4 & Complete Moodle Assignments;	3, 11	5/19/21
Week 7	Continuous Random Variables & The Normal Distribution	Read Sections 5.1, 5.2; 6.1 – 6.3 & Complete Moodle Assignments	3, 10, 11	5/19/21
Week 8	The Central Limit Theorem & Confidence Intervals	Read Sections 7.1 – 7.4; 8.1 – 8.4 & Complete Moodle Assignments	17	5/19/21
Week 9	Hypothesis Testing with One Sample	Read Sections 9.1 – 9.4 & Complete Moodle Assignments	13, 14, 15, 16	5/19/21
Week 10	Final Exam	Covers Week 6 – Week 10 Materials	3, 10, 11, 13, 14, 15, 16, 17	5/19/21

### GRADING CRITERIA:

(Midterm Homework/Participation 25%

Midterm Exam	25%
Final Homework/Participation	25%
Final Exam	25%
Total:	100%

Undergraduate	
90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
Below 60	F

### **GRADE NOTIFICATION AND INSTRUCTOR FEEDBACK:**

A successful distance learning experience requires a flow of communication between instructor and student throughout the session. Instructor comments are considered essential to the learning process. Therefore, each assignment/exam submitted will be reviewed, graded and returned to the student in a timely manner along with the appropriate commentary. Students should carefully review all comments.

Final grades are mailed approximately one week after the last day of the session to the student's address of record. Amberton University staff will not post or release grades over the phone. University instructors will not leave a message with comments or grades in any type of media that is not secure.

For questions regarding grades after the semester has ended, students should use their University email account and contact the instructor at the faculty email address as provided above in *Professor Information* area.

### ***Incomplete Grades***

An "I" (incomplete grade) is given at the discretion of the professor and may be given only when an emergency or illness prevents the student from completing course requirements. Should an "I" be granted, the student has 30 days from the end of the session to complete the conditions of the incomplete. An "I" which is not properly removed within 30 days following the session enrolled will become an "F" grade.

### ***How To Withdraw From a Course***

To be official, the class withdrawal must be in writing and signed by the student requesting the withdrawal; no withdrawal is accepted verbally. Please review the "Schedule of Classes" (online or in-print) for procedures for class changes or withdrawals and the refund policy and schedule.

### **COURSE DELIVERY METHODOLOGY:**

This course is offered as a distance-learning course through the Moodle Learning Platform. Amberton's distance learning courses, called e-Courses, are identical to classroom courses in terms of learning outcomes, competencies, and instructor expectations. A student choosing to take an e-Course must have the following skills and technical capabilities:

1. Access to the Internet
2. General knowledge in:
  - Internet browser settings and configuration
  - e-mail and file attachments
  - Uploading and downloading files
  - Using a word processing package
3. Ability to conduct on-line research

Students who have not mastered these skills should not enroll for this course, but should consider enrolling in MIS2110 Computer Concepts and Internet Technologies for instruction in these areas.

### **HOW TO ACCESS YOUR COURSE:**

### **Through the Amberton University Student Portal**

Students enrolled in distance learning courses using the Moodle Learning Platform may access the course through the Amberton University Student Portal. The site may be accessed through the University's main page (<http://www.Amberton.edu>) or at <http://apps.Amberton.edu>. After selecting the "Student Portal" link, you will be prompted for a Username and Password.

Use your assigned **username and password** (AUID) as described below to enter the AU Student Portal:

**Username** = your capitalized firstname **initial**+lastname+last 3 digits of your SSN.

\* Use your name exactly as it is listed on the University's records, including any suffixes or hyphenations, such as Jr, Sr, or II, as a part of your username.

For example: James Jones, Jr. SSN: 123-45-6789  
Username: JJonesJr789

**Password** = your Amberton University ID# (AUID) **including the dashes**

For example: 04-999-999

Once your login has been validated, you may select from a variety of menu options, including your individual E-Course, email account, Remote Research, General Tools, all Syllabi, Research Tutorials and Electronic Instructor Folders (FTP).

If you are accessing the Student Portal from a public or shared computer, close the browser completely when finished, or click on the Logout button. For security purposes, no other person should have access to your Username or Password. If you feel your information has been compromised or if you experience technical difficulties, contact the e-course system administrator at: [e-sysop@amberton.edu](mailto:e-sysop@amberton.edu)

If you have lost or do not know your Amberton ID#, please contact the Student Services Office 972/279-6511 or [advisor@Amberton.edu](mailto:advisor@Amberton.edu) for a replacement AUID card. You must know your Amberton ID# to gain access to the course and to send email to your professor.

### **Through the Amberton University Moodle Website**

Students enrolled in distance learning courses using the Moodle Learning Platform may also access the course by going to: <http://moodle.Amberton.edu>

For those utilizing Moodle for the first time, the **username and password** for the Moodle Learning Platform will be emailed to the student's University email account prior to the start of the course. For those returning to Moodle who do not remember their username and password, click on the link "*Forgotten your username or password*" available on the Moodle log in page (<http://moodle.Amberton.edu>). Otherwise use the same username and password as previous session.

### **Moodle Tutorial:**

Upon successful log in and access to the Moodle learning platform, there is a *Student Moodle Tutorials* course available, to learn about the basics of Moodle. Simply click on the link for the *Student Moodle Tutorials* and read through the various learning topics: Navigating; Communicating; Assignments & Exams; Grades; and Student Resources.

### **COURSE COMMUNICATIONS:**

Students will communicate with faculty through the Moodle Learning Platform or the Amberton University email system.

Each student enrolled is assigned an Amberton email account, which gives the student access to the Amberton email system ([my.Amberton.edu](mailto:my.Amberton.edu)). This email account is provided by Google Apps for Education. Students are encouraged to check their email regularly for University news, notices, and to communicate with instructors.

The student's assigned email address would be Username@my.Amberton.edu

Example: LJones-Smith789@my.Amberton.edu

The student Username is determined by:

firstname initial+lastname+last 3 digits of student ssn.

For example: Linda Jones-Smith SSN: 123-45-6789

Email Address = LJones-Smith789@my.Amberton.edu

Students will be prompted for a Username and Password when accessing their email account. Use the Username portion of the email address as the username (Example: LJones-Smith789) and your Amberton ID# (including the dashes) as the password.

If you already have a Google gmail account, you might be prompted to add this account to your current account. Click 'Yes' and you will be logged into your my.Amberton.edu email account. It will be a separate email account from your personal gmail account.

If you need assistance with your email account, please visit <https://support.google.com/mail>

**Students are responsible for reviewing the "Communication Guidelines" provided on the individual E-Course for specific instructor requirements.**

Upon completion of a session, all communication and course specific information is removed from the Moodle system. If a student needs to maintain a record of communications or assignments, the student is strongly encouraged to print out or download these items to a disk for their own records.

#### **FORMAT AND SUBMISSION OF ASSIGNMENTS:**

Assignments are to be submitted to the appropriate assignment Drop Box in the Moodle system. Specific directions and guidelines for submission of assignments are located on-line in the "Communication Guidelines" of the e-course. Due to compatibility issues, Office 2007 files cannot be read by earlier versions of Microsoft Office. Before submitting an exercise file, confirm the file is in the proper format for grading by the instructor.

#### **INSTRUCTOR/COURSE EVALUATION:**

Each session, all Amberton students are provided with the opportunity to evaluate their courses and instructors. The evaluation process is an important one and provides students with an anonymous and confidential way to give meaningful feedback to the University. Summary information and comments are provided to faculty after the close of the session. All information provided is anonymous.

The Instructor/Course Evaluation will be open for completion during week 9 of the session. An evaluation assignment will be placed in week 9 of the Moodle course, along with the instructions on how to complete the evaluation. Prior to week 9, the University will send out an email containing instructions and dates for the evaluation period.

#### **ACADEMIC HONESTY/PLAGIARISM:**

Plagiarism is the presentation of someone else's information as though it were your own. If you use another person's words, ideas or information, or if you use material from a source – whether a book, magazine, newspaper, business publication, broadcast, speech, or electronic media – you must acknowledge the source. Failure to do so violates Amberton University's ethics policy.

#### **RESEARCH RESOURCES:**

The student is encouraged to use the Amberton Electronic Library as a research resource for this course. The Electronic Library provides access to full-text and abstract articles as well as links to a variety of remote

research tools. Students can search Amberton Library Resource Center holdings through the on-line public access circulation system. The physical library contains a specialized collection of research materials specifically chosen to support the degrees and courses offered at Amberton. Interlibrary loan and document delivery services are available. The TexShare Card offers borrowing privileges in libraries all across the state of Texas. Students with research questions or questions about Library services are encouraged to visit the Library or email their questions to [library@Amberton.edu](mailto:library@Amberton.edu).

#### **RESEARCH TUTORIALS:**

Online research resources are available through "Research Tools Database", accessible through the Student Portal. (For additional assistance, students may access the "Research Tutorials" link located in the General Tools area on the Student Portal.) Access the Portal by clicking "Student Portal" from the University's website. You must know your Amberton ID to access the Portal.

#### ***Library Live Chat Feature***

The website allows for a live chat feature with librarians on the library pages. This service allows students to connect with librarians on questions regarding resource assistance, searching data bases and access to library services. [www.amberton.edu/current-students/library/index.html](http://www.amberton.edu/current-students/library/index.html)