

# STANDARD COURSE SYLLABUS

# BAD 2323 Business Statistics

# COURSE TITLE: BAD2323 Business Statistics

**COURSE DESCRIPTION:** Introduction to statistical methods of describing, summarizing, comparing, and interpreting data to include probability distributions, sampling, estimation, confidence intervals, and hypothesis testing. (3 semester hours credit).

**COURSE GOALS:** Students will be able to: A. Describe data sets. B. Calculate measures of central tendency and variability. C. Apply probability calculations. D. Differentiate between continuous and discrete distributions. E. Calculate confidence intervals. F. Perform hypothesis testing.

# STUDENT LEARNING OUTCOMES:

At course completion students will:

- 1. Explain the meaning and importance of statistics in business.
- 2. Explain descriptive and inferential statistics.
- 3. Describe the types of statistical variables.
- 4. Describe the levels of measurement.
- 5. Construct a frequency distribution.
- 6. Construct a histogram, frequency polygon, and relative frequency polygon.
- 7. Perform or describe other basic methods for graphically presenting statistical data.
- 8. Explain the basic measures of central tendency, to include: the population and sample mean, weighted mean, median, and mode for ungrouped data; and the mean, median, and mode of frequency distributions.
- 9. Explain the relative positions of mean, median, and mode.
- 10. Explain and demonstrate the basic measures of dispersion, to include: the range, mean deviation, variance, and standard deviation of ungrouped data; the range and standard deviation of frequency distributions; and quartiles, deciles, and percentiles.
- 11. Explain and demonstrate the interpretation and uses of the standard deviation, relative dispersion, and skewness.
- 12. Explain the importance of probability to statistics
- 13. Explain and demonstrate the basic approaches to probability, to include: classical, empirical, and subjective probability.
- 14. Explain and demonstrate probability addition and multiplication, principles of counting, and contingency tables.
- 15. Explain and demonstrate binomial and poisson probability distributions.
- 16. Explain and demonstrate the standard normal probability distribution and the normal approximation to the binomial.
- 17. Explain and demonstrate the basic sampling methods and the central limit theorem.
- 18. Explain and demonstrate point estimates and confidence intervals for proportions.
- 19. Explain the importance of hypothesis testing.

20. Explain and demonstrate one-sample and two-sample tests of hypothesis using one-tailed and two-tailed test of significance.

(Students should refer to Instructor's Course Outline for specific accuracy level needed for completion.)

# **COURSE REQUIREMENTS:**

- Students must meet the requirements of the NWCC attendance policy.
- Students must have a final average that is passing as defined by the grading scale listed in the Course Outline.
- Students must take the final exam.

# **METHODS OF INSTRUCTION:**

The methods of instruction used for this course may include any or all of the following:

- 1. Lecture/Discussion
- 2. Chapter exercises and problem-solving
- 3. Outside assignments
- 4. Audio/visual materials
- 5. Independent and/or team projects

### **ASSESSMENT METHODS:**

The assessment methods used for this course may include any or all of the following:

- 1. Unit Tests
- 2. Chapter Quizzes
- 3. Outside assignments
- 4. Comprehensive Exam

(The instructor will choose appropriate evaluation tools to measure student mastery of the course objectives. Students should refer to Instructor's Course Outline for type and number of specific evaluation tools.)

### **REQUIRED TEXTBOOKS:**

E-book, Business Statistics, Robert A. Donnelly

### **REQUIRED EQUIPMENT/MATERIALS/SUPPLIES:**

See the individual instructor's Course Outline for the specific equipment/materials/supplies to purchase.

### **GRADING SCALE:**

NWCC does not have a standard grading scale for all classes. See the individual instructor's Course Outline for the specific grading scale used for this class.

### NWCC'S OFFICIAL ATTENDANCE POLICY:

Regular and punctual attendance at all scheduled classes is expected of all students and is regarded as integral to course credit. There are times, however, when students must miss class. Nevertheless, if a student has an excessive number of absences based on the MCCB allowed absences chart before the withdrawal deadline, that student will be withdrawn from the class with a grade of "W." Particular policies and procedures on absences and

makeup work are established for each class and are announced in writing at the beginning of the term. Each student is directly responsible to the individual instructor for absences and for making up work missed. The instructor reserves the right to remove from the classroom any student whose conduct is disruptive to the learning process. For more information about the appeal process, contact the appropriate Dean or the Associate Vice President for Academic Instruction.

*For On Campus Classes:* Students are expected to be prompt in class attendance. A student is counted absent from class if he or she misses more than 10 minutes of a class meeting. Three tardies constitute one absence.

For Online Classes: Students must attempt at least one of that week's graded class assignments or they will be marked absent for that week.

Term Length (weeks)	Class Meetings Per Wk	1	2	3	4	5	6	7
	Maximum number of allowed absences							
1		0	0	0	1	1	1	1
2		0	1	1	1	1	2	2
3		0	1	1	2	2	2	3
4		1	1	2	2	3	3	4
5		1	1	2	3	3	4	5
6		1	2	2	3	4	5	6
7		1	2	3	4	5	6	7
8		1	2	3	4	5	6	7
9		1	2	4	5	6	7	8
10		1	3	4	5	7	8	9
11		1	3	4	6	7	9	10
12		2	3	5	6	8	10	11
13		2	3	5	7	9	10	12
14		2	4	6	7	9	11	13
15		2	4	6	8	10	12	14
16		2	4	6	9	11	13	15
17		2	5	7	9	11	14	16
18		2	5	7	10	12	14	17

Table 1- Maximum Allowed Absences Chart

This table is based on the number weeks on a given term and how often a class meets on a per week basis. For example, in a 15-week term such as a 'normal' Fall or Spring semester, in a class that meets MWF (3-times per week), a student would be allowed to miss class 6 times. On the 7<sup>th</sup> absence he/she must be taken out.

#### PLAGIARISM AND CHEATING/ACADEMIC HONESTY:

Both cheating and plagiarism are prohibited. Plagiarism is the presentation of another person's ideas, words, or work as one's own. Students who wish to appeal the decision of their instructor with regards to an allegation of cheating or plagiarism should notify the Associate Vice President for Academic Instruction or the appropriate Dean in writing within one (1) week of the formal decision by their instructor. The Associate Vice President or appropriate Dean will, within a reasonable amount of time, convene an Ad Hoc Committee to hear the student's appeal and will notify the student in writing of the date, time, and location of the hearing. The Ad Hoc Committee will be chaired by the Associate Vice President or appropriate Dean and may consist of up to two (2) faculty

members and two (2) students. The Committee will review all supporting documentation and hear from the accused student in person. The accused student may submit any documentation and present witnesses in his/her defense at that time. The Committee will render a decision following the hearing and the decision of the Committee is final.

#### ADDITIONAL POLICIES (COURSE OUTLINE):

Individual instructors and specific programs may have policies and requirements in addition to those listed here. Any additional course information that is particular to a given teacher or program will be included in the Course Outline attached to this syllabus.

Note: The instructor reserves the right to make any necessary changes to the information provided in the syllabus and the course outline during the semester.

#### STATEMENT OF AUTHORITY:

The instructor reserves the right to remove from the classroom any student whose conduct is disruptive to the learning process.

#### ADA STATEMENT:

Students with disabilities are encouraged to notify their instructors of their condition at the beginning of the semester. The college and your instructors will make reasonable accommodations for persons with documented disabilities.

#### **AFFIRMATIVE ACTION:**

Northwest Mississippi Community College does not discriminate on the basis of race, color, national origin, sex, disability, religion, gender identity, age, or status as a veteran or disabled veteran in all its programs and activities. Northwest Mississippi Community College prohibits sexual harassment and all forms of sexual violence, regardless of sex, gender identity or sexual orientation. The following have been designated to handle inquiries regarding non-discrimination policies: Americans with Disabilities Act of 1990/Section 504 of the Rehabilitation Act of 1973: Disability Support Services Coordinator, Tate Hall, P.O. Box 5555, 4975 Highway 51 North, Senatobia, MS 38668, telephone number 662-562-3309, e-mail address <u>mkelsay@northwestms.edu</u>; Title II of the Age Discrimination Act: Vice President for Finance and Administration, James P. McCormick Administration Building, P.O. Box 7017, 4975 Highway 51 North, Senatobia Amendments of 1972/Title VII of the Civil Rights Act of 1964: Associate Vice President for Student Services and Enrollment Management, Tate Hall, P.O. Box 7010, 4975 Highway 51 North, Senatobia, MS 38668, telephone number 662-562-3409, e-mail address trush@northwestms.edu.

### SAFETY STATEMENT:

The safety and security of students, faculty, and staff is very important to Northwest Mississippi Community College. A copy of the Annual Security Report, published annually by the Campus Police Department, details Northwest policies and procedures regarding campus safety. A copy of the report, which contains the annual crime statistics report, is available online in the current Northwest Bulletin (<u>www.northwestms.edu/bulletin</u>) or on the Northwest website (<u>http://www.northwestms.edu/index.php/?page\_id=989</u>) and in printed form upon request from the Campus Police Office (662-562-3314).