LOCATOR INFORMATION:

Course Name and Number: Statistical Methods – ECON 6010;   **Credit Hours**: 3 credit hours;
Contact Hours: 45 hours

INSTRUCTOR: DR. NELSON MODESTE, COLLEGE OF BUSINESS, DEPARTMENT OF
ECONOMICS AND FINANCE, TENNESSEE STATE UNIVERSITY.

OFFICE LOCATION:
- AVON WILLIAMS CAMPUS (AWC): SUITE J - 405

OFFICE HOURS:
- M 10:00 A.M. - 11:30 A.M. AT AWC SUITE J – 405
- TR 10:00 A.M. -   1:00 P.M. AT AWC SUITE J – 405
- R 3:00 P.M. - 5:30 P.M. AT AWC SUITE J -405
  Other hours available by appointment

OFFICE PHONE: 615-963-7387 AT AWC

EMAIL ADDRESS: nmodeste@tnstate.edu

COURSE TEXTBOOK: Statistics for Business and Economics, 11e, 2011 by David R. Anderson, Dennis
J. Sweeney and Thomas A. Williams. The publisher of the book is South-Western, a division of Thomas
Learning.

COURSE DESCRIPTION: Development and application of probability and inferential statistics. Topics
covered include Z-tests, T-tests, multiple regression and correlation, analysis of variance, and time series
analysis. Prerequisites: ECON 2040 and one computer application course or BISI 5000.

PURPOSE OF THE COURSE: The purpose of this course is to develop a basic understanding of the use
of statistics in business and economic decision making.

LEARNING OBJECTIVES: On completion of this course, students should be able to: (1) demonstrate
knowledge of the terms and concepts of basic statistics; (2) apply the concepts of statistical inference and

hypothesis testing to business problems; (3) use regression analysis to study the relationship between two or more variables; (4) apply forecasting techniques to project sales, market share etc.;

COURSE COMPETENCIES AND MEASURABLE OUTCOMES:

In terms of measurable outcomes, students, at the end of the course, should be able to:

- Define statistics and differentiate between descriptive and inferential statistics;
- Differentiate between the terms sample and population;
- Differentiate between descriptive and inferential statistics;
- Describe measures of location and variability;
- Demonstrate an understanding of the Binomial, Poisson, and Normal Probability Distribution;
- Identify and distinguish between the different sampling techniques;
- Demonstrate an understanding of the principles of hypothesis testing;
- Demonstrate a practical understanding of the method of linear regression analysis;
- Demonstrate an understanding of the principles of time series analysis and forecasting.

COURSE CONTENT:

1. **A Review of Some Key Concepts (Chapters 1 – 3):**
   - What is statistics?
   - The population and the sample
   - Descriptive v. inferential statistics
   - Frequency distributions
   - Measures of Location
   - Measures of Variability

2. **A Survey of Probability Concepts and Selected Probability Distributions (Chapters 4 – 6):**
   - A review of important probability relationships
   - Discrete Probability Distributions: the Binomial, the Poisson, and the Hypergeometric distributions
   - The Normal Probability Distribution
   - The Normal Approximation of Binomial Probabilities

3. **Sampling, Sampling Distributions, Interval Estimation, Hypothesis Testing, and Analysis of Variance (Chapters 7 – 10, and 13):**
   - Sampling techniques
   - Sampling Distributions
   - Central Limit Theorem
   - Interval Estimation
   - Hypothesis testing
   - Analysis of Variance

4. **Regression Analysis (Chapters 14 – 16 and additional handouts if necessary)**
   - Simple linear regression analysis
   - Multiple linear regression analysis
   - The method of least squares
   - The correlation coefficient and the multiple coefficient of determination
   - Model assumptions
   - Testing for Significance
   - Problems of multiple regression analysis

5. **Time Series and Forecasting (Chapter 18)**
   - Various Models/Techniques of Forecasting

COURSE REQUIREMENTS:
1: A textbook is required for the course. You are responsible for reading the assigned chapters and being prepared for class. If an assignment is due, it will be collected at the beginning of the class.
2: Access to a computer is essential. The Excel program will be used in several of the assignments in this course.
3: Make-up exams are generally not given unless there is an extraneous set of circumstances.

METHODS OF INSTRUCTION/TEACHING STRATEGIES:
Lecture, discussion, problem solving, computer and written assignments will all be used as methods of instruction in this course.

ASSIGNMENT AND REPORT ON RESEARCH TOPIC:
In this course, there will be three assignments and a report on a research topic. The three assignments, together, will account for 20% of your final grade. The report on the research topic, meanwhile, will account for 15% of your grade.

METHOD OF EVALUATION:
The final grade for this course will be based on the following:

Mid-Term Exam	-	25%
Final Exam (Comprehensive)	-	35%
Presentation	-	5%
Assignments	-	20%
Research Project Report	-	15%
		100%

GRADING SCALE:

- A   90 AND ABOVE
- B   80 TO 89
- C   70 TO 79
- D   60 TO 69
- F   BELOW 60

ACADEMIC INTEGRITY:

Academic honesty and integrity lie at the heart of any educational enterprise. Students are expected to do their own work and neither to give nor to receive assistance during quizzes and examinations.   Deliberate   violations   of   academic   integrity   (plagiarism,   cheating, misrepresentation, and fabrication of information) are not tolerated. Actions outlined in the Tennessee State University Student Handbook under Code of Student Conduct will be followed for incidents of academic misconduct.

REASONABLE ACCOMODATIONS:

Any student requiring accommodation should contact Patricia Scudder, Director of Students with Disabilities—Disabled Student Services Office, at 963-7400, preferably before the fourth class meeting. The College of Business, in conjunction with the Office of Disabled Student Services, makes reasonable accommodations for qualified students with medically documented disabilities. I need to be aware of your status if it will affect your class activities and assignments---before assignments are due.

CODE OF STUDENT CONDUCT:

There will be no eating, drinking, sleeping or disruptive behavior in the classroom. Each student is encouraged to participate in classroom activities, ask questions, and work along with the class as recommendations/problem solutions to illustrations, examples, and cases are examined. Additionally, cell phones must be turned off upon entering the classroom and should remain so until class has ended. Action will be taken against those students who do not adhere to appropriate classroom behavior.

TENTATIVE SCHEDULE	
Week 1	▪ Review of some key concepts (Chapters 1 – 3)
Week 2	▪ Review of some key concepts (Chapters 1 – 3)
Week 3	▪ Review of some key concepts (Chapters 1 – 3) ▪ Probability concepts and Probability Distributions (chapters 4 -6)
Week 4	▪ Probability concepts and Probability Distributions (chapters 4 -6)
Week 5	▪ Probability concepts and Probability Distributions (chapters 4 -6)
Week 6	▪ Regression Analysis (Chapters 14-16)
Week 7	▪ Regression Analysis (Chapters 14-16)
Week 8	▪ **Test #1 (Tentative date)**
Week 9	▪ Regression Analysis (Chapters 14-16)
Week 10	▪ Sampling, Sampling Distributions, Hypothesis testing, Analysis of Variance (Chapters 7 – 10, and 13)
Week 11	▪ Sampling, Sampling Distributions, Hypothesis testing, Analysis of Variance (Chapters 7 – 10, and 13)
Week 12	▪ Sampling, Sampling Distributions, Hypothesis testing, Analysis of Variance (Chapters 7 – 10, and 13)
Week 13	▪ Holiday - Thanksgiving (Nov. 22-23)
Week 14	▪ Forecasting
Week 15	▪ Forecasting
Week 16	▪ Final Exam

Note: The above schedule and topics could be changed , if necessary.