Introductory Statistics - Math 1342.88
Course Syllabus: Fall 2019

NORTHEAST TEXAS
COMMUNITY COLLEGE

"Northeast Texas Community College exists to provide responsible, exemplary learning opportunities."

Dr. Leah Reagan
Office: Humanities Building, 128B
Phone: 903.434.8290
Email: lreagan@ntcc.edu

Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	10:30 – 11:00 2:30 - 4:30	10:30 – 11:00 1:30 - 4:30	10:30 – 11:00 2:30 - 4:30	10:30 – 11:00 2:30 - 3:30		Professor checks email often daily

The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Catalog Course Description (include prerequisites): This is a 16 week elementary course in statistics, designed to meet the needs of nursing, business, education and behavioral science students. Included are the following topics and their applications in various fields: frequency distributions, probability, random sampling, central tendency, dispersion, normal distribution, binomial distribution, sampling distributions, confidence intervals, hypothesis testing, Chi square, analysis of variance (ANOVA, and linear regressions analysis. Pre-requisite: Appropriate TSI placement score (or same as course description)

Students are expected to have a sufficient algebra background in addition to the ability to read at college-level. Students will earn three hours college credit for each course.

<u>**Required e-text:**</u> **ISBN** 0-321-69464-3 TRIOLA / DIGITAL TEXT W/MYSTATSLAB (This is what you already purchased when you registered for the class. It's built into your Blackboard account.)

<u>**Optional Textbook:**</u> Triola, Elementary Statistics, 13 E (loose-leaf binder version – pick up in the bookstore) **This is optional but highly recommended. It's the paper copy of the e-text.

Publisher: Pearson

To access your course materials, click on the Course Materials Access link within the Start Here folder on Blackboard.

If you have any questions concerning Inclusive Access, please reach out to the bookstore at ntaylor@ntcc.edu or email help@redshelf.com.

For additional information on Inclusive Access, please access the textbook information provided on the portal (student tab, click on Academics then Textbooks.)

Recommended Reading(s):
None

Student Learning Outcomes:

Upon successful completion of this course, students will

1342.1 Demonstrate an understanding of descriptive statistics.

1342.2 Exhibit an understanding of the basic principles of sampling.

1342.3 Determine values using various probability distributions.

1342.4 Develop an ability to generalize from sample to population.

1342.5 Utilize various hypothesis tests including linear regression and correlation.

Core Curriculum Purpose and Objectives:

Through the core curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world; develop principles of personal and social responsibility for living in a diverse world; and advance intellectual and practical skills that are essential for all learning.

Courses in the foundation area of mathematics focus on quantitative literacy in logic, patterns, and relationships. In addition, these courses involve the understanding of key mathematical concepts and the application of appropriate quantitative tools to everyday experience.

College Student Learning Outcomes:

Critical Thinking Skills

CT.1   Students will demonstrate the ability to 1) analyze complex issues, 2) synthesize information, and 3) evaluate the logic, validity, and relevance of data.

Communication Skills

CS.1   Students will effectively develop, interpret and express ideas through written communication.

Empirical and Quantitative Skills

EQS.1   Students will manipulate numerical data or observable facts by organizing and converting relevant information into mathematical or empirical form

EQS.2 Students will analyze numerical data or observable facts by processing information with correct calculations, explicit notations, and appropriate technology.

EQS.3 Students will draw informed conclusions from numerical data or observable facts that are accurate, complete, and relevant to the investigation.

SCANS Skills:
N/A

Course Outline:
I.   Introduction to Statistics
    A. Statistical and Critical Thinking
    B. Types of Data
    C. Collecting Sample Data

II.   Summarizing and Graphing Data
    A. Frequency Distributions
    B. Histograms
    C. Graph Qualities

III. Statistics for Describing, Exploring, and Comparing Data
    A. Measures of Center
    B. Measures of Variation
    C. Measures of Relative Standing and Boxplots

IV.   Probability
    A. Basics
    B. Addition Rule
    C. Multiplication Rules
    D. Counting

V.   Discrete Probability Distributions
    A. Probability Distributions
    B. Binomial Probability Distributions

VI.   Normal Probability Distributions
    A. Standard Normal Distribution and Applications
    B. Sampling Distributions and Estimators
    C. The Central Limit Theorem
    D. Assessing Normality
    E. Normal as Approximation to Binomial

VII. Estimates and Sample Sizes
    A. Estimating a Population Proportion
    B. Estimating a Population Mean
    C. Estimating a Population Standard Deviation or Variance

VIII.   Hypothesis Testing
        A.   Basics of Hypothesis Testing
        B.   Testing a Claim about a Mean

IX.   Inferences from Two Samples
        A.   Two Means: Independent Samples
        B.   Two Means: Dependent Samples

X.   Correlation and Regression
        A.   Correlation
        B.   Regression

XI.   Chi-Square
        A.   Test of Independence
        B.   Test of Homogeneity

Evaluation/Grading Policy:

Two major 100 point examinations, evenly spaced throughout the semester, will be given and each will be worth 15% of the final grade (total 30% of final grade). If an exam is missed or failed, the highest possible make-up grade is a 70 (with instructor notification prior to the exam missed). The Final Exam MUST BE TAKEN ON CAMPUS IN THE NTCC TESTING CENTER. If you do not live near the NTCC campus, you may take the test at an alternate testing location near you. You will need to send me the email address and name of your proctor (at an alternate testing center) the week prior to the exam.

Online homework utilizing MyMathLab will be worth 35% of the total grade.   All due dates are posted on MyMathLab. Homework is due on the due date.

A quiz over each chapter will be given after the completion of that chapter. The quizzes will be worth 15% of your total grade.

QUIZ rules: If you miss a quiz, you will receive a zero for that quiz. No exceptions, no re-takes. I will drop your lowest quiz grade at the end of the semester (I will drop only 1.) You need to immediately (right now) write down the Quiz due dates and your Exam dates on a calendar so that you can keep up with them. The Quiz due dates are under "Quizzes and Exams" on MyMathLab. I will send out an email the first week of school with your Exam dates on it.

A comprehensive final examination will contribute 20% to the final grade.

** Any online assignment, quiz, or exam not submitted (it will say "past due") will receive a grade of zero at the end of the semester when I average grades.

Tests/Exams:

Exam #1	15%
Exam #2	15%
Online Homework Assignments*	35 %
Quizzes*	15%
Final Exam (on campus)	20 %

TOTAL	100 %

"A" - 90%
"B" - 80%
"C" - 70%
"D" - 60%
"F" - Below 60%

* Online assignments and quizzes are graded exercises posted on MyMathLab for each chapter assigned.
   The last grade earned for each homework assignment will be posted for the final grade.
   There are no make-up assignments.
   Any online assignment, quiz, or exam not submitted will receive a grade of zero.

The Final Exam must be taken in person, on NTCC campus OR in a testing facility near you.
They will be online in the testing center here on campus between the hours of 8 a.m. and 6 p.m. on a date to be announced. You must bring a photo I.D. of yourself, preferably your student I.D. If you live far away, and cannot travel to the NTCC campus, you may take the test at an alternate college/university testing center. You must contact them, get their permission to take the test there, and then send me their contact information. I will set the exam up with them at that time.

A "typical" week in our class will consist of the following activities, which are listed with due dates and details in each module (chapter folders) in Blackboard. Go there now to look at them.

OVERVIEW OF WEEKLY ACTIVITIES:
- Read the e-text for given chapter (in MyStatLab)
- Watch instructional videos provided in the modules (in Blackboard)
- Complete the chapter Homework on MyStatLab
- Complete the chapter Quiz on MyStatLab

Our class is divided into 3 main modules:
- Module #1 consists of Chapters 1, 2, & 3; Exam #1
- Module #2 consists of Chapters 4, 5, & 6; Exam #2
- Module #3 consists of Chapters 7, 8, & 10; Final Exam (consisting of chapters 7, 8, 7 10)

Other Course Requirements:
A graphing calculator is required for this course.

Student Responsibilities/Expectations:
Being an online student requires you to keep up with all assignments, quizzes, and Exams on their DUE DATES. This takes intrinsic motivation and commitment to the course.

NTCC Academic Honesty Statement:
"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

Academic Ethics
The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

ADA Statement:
It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to request accommodations. An appointment can be made with Shannin Garrett, Academic Advisor/Coordinator of Special Populations located in the College Connection. She can be reached at 903-434-8218. For more information and to obtain a copy of the Request for Accommodations, please refer to the NTCC website - Special Populations.

Family Educational Rights And Privacy Act (**Ferpa**):
The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

Other Course Policies:
There will be no cell phone usage in the classroom. Students will be warned if caught using a phone during class. A student will be removed from class if the disruption continues.

The college's official means of communication is via your campus email address. I will use your campus email address, Blackboard, and MyMathLab to communicate with you outside of class. Make sure you keep your campus email cleaned out and below the limit so you can receive important messages. I will also communicate with you through Remind 101. Be sure to sign up for this the first day of class.