



# MATH 1342.045 DC – Introductory Statistics F2F

Course Syllabus: Spring 2024

*“Northeast Texas Community College exists to provide personal, dynamic learning experiences empowering students to succeed.”*

**Instructor: Olivia Juarez**

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	7:15-7:45 AM	7:15-7:45 AM	7:15-7:45 AM	7:15-7:45 AM		By Appointment

***This syllabus serves as the documentation for all course policies and requirements, assignments, and instructor/student responsibilities.***

*Information relative to the delivery of the content contained in this syllabus is subject to change. Should that happen, the student will be notified.*

**Course Description:** Collection, analyses, presentation and interpretation of data, and probability. Analyses includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended. Three hours credit.

**Prerequisite(s):** 1) TSI Not Complete – Multiple Measures Placement with Corequisite Model  
*or* 2) TSI Complete Status

## Student Learning Outcomes:

1342.1 Explain the use of data collection and statistics as tools to reach reasonable conclusions.

1342.2 Recognize, examine and interpret the basic principles of describing and presenting data.

1342.3 Compute and interpret empirical and theoretical probabilities using the rule of probabilities and combinatorics.

1342.4 Explain the role of probability in statistics.

1342.5 Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.

1342.6 Describe and compute confidence intervals.

1342.7 Solve linear regression and correlation problems.

1342.8 Perform hypothesis testing using statistical methods.

### **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.

### **Program 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.

### **Evaluation/Grading Policy:**

Daily Assignments 20%

Tests/Exams 60%

Final Exam (no exemptions) 20%

“A” 90-100%

“B” 80-89%

“C” 70-79%

“D” 60-69%

“F” Below 60%

**Required Instructional Materials:** Triola, Elementary Statistics, 13<sup>th</sup> Edition with MyMathLab access code

**Publisher:** Pearson Publishing Co. (www.pearson.com)

**ISBN Number:**978-0-13-474853-5

**Optional Instructional Materials:** none

**Minimum Technology Requirements:** Graphing Calculator, Microsoft Office (including Excel) or Google equivalent

**Required Computer Literacy Skills:** Communicate via email, saving and reloading saved files, navigate myMathLab

### **Course Structure and Overview:**

This is a 16-week face-to-face course where students are required to access graded activities on MyMathLab via the Blackboard Learning Management System. A typical class involves general participation by all students in discussions involving mathematical and statistical principles and the algorithms to apply these principles. Students are required to complete online homework in addition to weekly in-class quizzes, and over the course of the semester, three projects, three exams and a final exam. It is very important students keep up with course materials and assignments since this is a very fast paced, college-level course. Students are expected to watch posted instructional videos, read course textbook, and complete online assignments located in the Learning Management System, Blackboard by due dates.

### **Communications:**

The college's official means of communication is via your campus email address. I will use your campus email and Blackboard 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.

**Institutional/Course Policy:** No late work will be accepted. It is the student's responsibility to check Blackboard for important information/announcements regarding the course. Students should be working on course material via Blackboard every week. Do not wait until the last minute to complete and submit assignments in case of technology issues.

### **Alternate Operations During Campus Closure and/or Alternate Course Delivery Requirements**

In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be necessary for Northeast Texas Community College to move to altered operations. During this time, Northeast Texas Community College may opt to continue delivery of instruction through methods that include, but are not limited to, online through the Blackboard Learning Management System, online conferencing, email messaging, and/or an alternate schedule. It is the responsibility of the student to monitor NTCC's website (<http://www.ntcc.edu/>) for instructions about continuing courses remotely, Blackboard for each class for course-specific communication, and NTCC email for important general information.

Additionally, there may be instances where a course may not be able to be continued in the same delivery format as it originates (face-to-face, fully online, live remote, or hybrid). Should this be the case, every effort will be made to continue instruction in an alternative delivery format. Students will be informed of any changes of this nature through email messaging and/or the Blackboard course site.

### **NTCC Academic Honesty/Ethics Statement:**

NTCC upholds the highest standards of academic integrity. The college expects all students to engage in their academic pursuits in an honest manner that is beyond reproach using their intellect

and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. This course will follow the NTCC Academic Honesty and Academic Ethics policies stated in the Student Handbook. Refer to the student handbook for more information on these subjects.

**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 the Academic Advisor/Coordinator of Special Populations located in Student Services and can be reached at 903-434-8264. For more information and to obtain a copy of the Request for Accommodations, please refer to the special populations page on the NTCC website.

**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.

**Tentative Course Timeline (\*note\* instructor reserves the right to make adjustments to this timeline at any point in the term):**

Course Outline: All due dates for daily assignments are posted in myMathLab, project deadlines will be posted in blackboard and tests are due at the end of the class period. Tests must be taken on the date scheduled by the instructor unless the student makes arrangements with the instructor prior to the test. Failure to show on the test day will result in a failed test.

Week	Topics Covered
0	1.1 Statistical and Critical Thinking, 1.2 Data Type, 1.3 Collecting Sample Data,, Survey Sampling
1	Chapter 1 Test,, 2.1 Frequency Distribution
2	2.2 Histograms, 2.3 Graphs, 2.4 ScatterPlots
3	Chapter 2 Test, 3.1 Measures of Center, 3.2 Measures of Variation, 3.3 Measures of Relative Standing, Box Plots, Cooperative Group Activity
4	Chapter 3 Test, 4.1 Baic Concepts of Probability,, 4.2 Multiplication and Addition Rule

5	4.3 Complements, Conditional Probability and Baye's Theorem, 4.4 Counting, 4.5 Probabilities Through Simulations, Cooperative Group Activity
6	Chapter 4 Test, 5.2 Probability Distributions, 5.3 Binomial Probability Distributions
7	5.4 Parameters for Binomial Distributions, Chapter 5 Test, Begin Semester Project
8	6.2 The Standard Normal Distribution, 6.3 Applications of Normal Distribution, 6.4 Sampling Distributions and Estimator, 6.5 Central Limit Theorem, 6.6 Assessing Normality
9	Spring Break
10	6.7 Normal as Approximation to Binomial, Chapter 6 Test, Semester Projects
11	7.2 Estimating a Population Proportion, 7.3 Estimating a Population Mean, 7.4 Estimating a Population Standard Deviation or Variance, Cooperative Group Activity
12	Chapter 7 Test, 8.2 Basics of Hypothesis Testin, 8.3 Testing a Claim About a Proportion
13	8.4 Testing a Claim About the Mean, Testing a Claim About a Standard Deviation or Variance, Chapter 8 Test
14	Project, 9.2 Two Proportions, 9.3 Two Means (not matched)
15	Chapter 9 Test, 10.2 Correlation, 10.3 Regression
16	10.4 Rank Correlation, 11.2 Goodness of Fit, Project Presentations
17	Finals