Elementary Statistical Methods
Syllabus
North Lake College

Instructor Information
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Office Location: K303-B
Office Hours: Posted on eCampus
Division Office and Phone: P330, 972-273-3500

Course Information
Course Title: Elementary Statistics
Course Number: Math 1342
Section Number: 77431 INET
Semester/Year: Fall 2019
Credit Hours: 3
Class Meeting Time/Location: Online, Any Time
Certification Date: August 31
Last Day to Withdraw: October 3

Course Prerequisites
College level ready in Mathematics at the non-algebra or algebra levels.

Course Description
Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended.

Student Learning Outcomes
Upon successful completion of this course, students will:
1. Explain the use of data collection and statistics as tools to reach reasonable conclusions.
2. Recognize, examine and interpret the basic principles of describing and presenting data.
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics. **(Empirical and Quantitative)**
4. Explain the role of probability in statistics.
5. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.
6. Describe and compute confidence intervals.
7. Solve linear regression and correlation problems. **(Communication)**
8. Perform hypothesis testing using statistical methods **(Critical Thinking)**

**Texas Core Objectives**
The College defines essential knowledge and skills that students need to develop during their college experience. These general education competencies parallel the Texas Core Objectives for Student Learning. In this course, the activities you engage in will give you the opportunity to practice two or more of the following core competencies:

1. **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. **Communication Skills** - to include effective development, interpretation, and expression of ideas through written, oral, and visual communication
3. **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
4. **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal
5. **Personal Responsibility** - to include the ability to connect choices, actions, and consequences to ethical decision-making
6. **Social Responsibility** - to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities

**Required Course Materials:**

**Textbook:** A Brief Version Elementary Statistics, 8th Edition, by Bluman
**Online Software:** ConnectMath, McGraw-Hill
**Calculator:** Graphing Calculator TI 83 or TI 84 (used almost daily)
Web Access to ConnectMath: McGraw-Hill's ConnectMath is a complete online homework system for mathematics and statistics with a powerful student assessment diagnostic tool. You can purchase it from the NLC bookstore. This software includes the textbook. Therefore if you are ok using an ebook there is no need to buy the textbook.

Note: A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Technical Support
Connect support website: ConnectMath Support
Technical support for eCampus: 972-669-6402
Technical support for Connect: 1-949-390-2095

Graded Work
The tables below provide a summary of the graded work in this course and an explanation of how your final course grade will be calculated.

<table>
<thead>
<tr>
<th>Written Exams</th>
<th>60%</th>
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<tbody>
<tr>
<td>Homework</td>
<td>20%</td>
</tr>
<tr>
<td>Daily Work</td>
<td>20% (Includes quizzes and class activities)</td>
</tr>
</tbody>
</table>

Your course grade will be determined by the following:
- A = 90 – 100%
- B = 80 – 89%
- C = 70 – 79%
- D = 60 – 69%
- F = 0 – 59%

Grade Alternatives
I – Incomplete
Details
- Only given in EXTREME CIRCUMSTANCES
- Requires instructor permission and consent by the Dean of the department.

Tests
- There are 4 Unit Tests.
- The Unit Tests are the main part of your course grade.
- The unit tests can be taken on any computer by use of the Respondus Lockdown Browser and webcam option (if webcam is not available, student can take the test in the Testing Center.
- There are reviews posted in eCampus for each exam. Exams are multiple choice and MUST BE COMPLETED IN eCampus BY USING RESPOENDUS Respondus is a free download and instructions are posted in eCampus as to how to use it.
Calculators
You will be allowed to use calculators on all tests. Graphing calculators (such as the TI-83 or TI-84 Plus) or a basic calculator.

Quizzes
Quizzes will be assigned in ConnectMath. The quizzes will be labeled SLO Quizzes in ConnectMath.

Homework
Homework is the most important learning tool in a course.
- It reinforces classroom instruction.
- It provides an immediate and personal measure of your competence in the course.
- Your instructor does not accept late homework assignments.

The instructor’s role of facilitating learning is greatly enhanced for the student who has completed the homework. The classroom environment is more favorable for learning when the student has studied the material in the text/software site, has tried to work the problems, and uses the classroom to get supplementary information and assistance that is not available in the text/software site.

Attendance
Attendance is an important part of your success. Attendance will be marked each week by recording the time spent in the instructional classroom. Additional time off line, doing assigned homework and taking exams is also expected.

Daily Work
The purpose of daily work is to reinforce topics covered and give opportunities for guided practice of concepts. Daily work assignments will not be accepted late. There may be some very short activities assigned through eCampus.

STEM Center – Free Tutoring:
The STEM Center, located in L137 and L139 provides assistance and resources free to students enrolled in mathematics and developmental mathematics classes at North Lake College. This is a great place to bring a study group, study quietly, get help with math classes, and use the center’s various resources.

Services offered:
- Tutorial services in all math courses taught at North Lake College
- Computers for use by students enrolled in courses that have an Internet component such as homework systems (i.e., MyLabsPlus, ConnectMath)
- Graphing calculators for use in the center
• Textbooks for use in the center
• A quiet area to study (Just ask one of the tutors)
• Opportunity for students to make up class absences
• Whiteboards space for study groups
• Content workshops covering how to use graphing calculators, course topics, review sessions, and study skills

Contact the STEM Center Manager (Math)

Hours of Operation
Monday – Thursday: 9 a.m. – 6 p.m.
Friday & Saturday: 9 a.m. – 2 p.m.
Manager: Camrunn Beck, Room L135, camrunn.beck@dcccd.edu

Academic Testing Center
Room L240, Phone number 972-860-3932
Mon-Thurs, 8:30 a.m. to 8:00 p.m.
Fri – Sat, 8:30 a.m. to 3:30 p.m.

Testing Center Procedures
If your instructor requires you to complete an exam in the Testing Center, be sure to have the following information when you request your test.

• Instructor's name
• Subject and course number (Math 1325)
• Exam number (1st, 2nd, 3rd, etc.)
• Exam deadline (Get this information from your instructor. The testing staff cannot “look up” this information on computers.)

You should also bring the following supplies.

• Pencil & Eraser
• A Test Request Form initialed by your instructor must be completed before entering the Testing center.
• Only battery operated 4-function calculator is allowed (if permitted by instructor).
• Money for coin-return lockers (quarter). Please do not share lockers.

Important: Government- or school-issued photo identification is required & enforced.

Financial Aid Certification of Attendance
To be certified as attending, a student must complete all of first 6 days of assignments earning at least a score of 70%.
What is Service Learning?
Service Learning (SL) is a program in which you will learn and develop through thoughtfully organized service experiences by participating in meeting real community needs. The program combines academic instruction along with active community service that utilizes both critical and reflective thinking skills that assist you in examining your civic responsibilities in the world in which you live.

We have several service opportunities for our math students.

- Host Review Sessions on Campus for our DMAT Students (May not be an option. Check with coordinator.)
- Math Tutor at any of our Local Schools
- Create your own program. It must involve mathematics!

Details about these positions and others can be found in the eCampus Service Learning Community.

For questions or concerns, contact the Service Learning Coordinator, Katherine Villarreal, at kvillarreal@dcccd.edu.

Students who enroll in Service Learning, may replace a low test grade with the average of all the tests grades.

PENALTY for Academic Dishonesty

Please see Cheating, Plagiarism and Collusion under Institutional Policies
Academic dishonesty may result in the following sanctions, including, but not limited to:
1. A grade of zero or a lowered grade on the assignment or course.
2. A reprimand.
3. Suspension from the college.

Cheating is a serious crime in higher education and can have a grave effect on your academic reputation and your career after graduation. By not taking the time to learn material or create your own work, you are depriving yourself of valuable knowledge and putting yourself at risk of facing severe punishment. Enrolling in college means you’re investing your time, money, and effort toward a more successful future – don’t let all that go to waste by making the mistake of being academically dishonest!

Some examples of what is considered to be cheating:

- Copying from another student's homework, classwork, or exam
- Allowing another student to copy your homework, classwork, or exam
- Using prohibited sources on a take home exam
- Conversing with another student while taking exam
- Not reporting other students who you know are cheating (eCollege Finder)

**Drop Policy**

If you are unable to complete this course, you much officially withdraw before or on **October 3, 2019**. Withdrawing is a formal procedure which you must initiate; your instructor cannot do it for you. See link within Institutional Policies p. 7

**STOP BEFORE YOU DROP - Do NOT drop until you speak with your instructor.**

**Counseling Services (A311)**

Counseling services for personal issues are provided to all students currently enrolled at North Lake College. These services are provided by licensed professionals who are bound by confidentiality (within ethical parameters) at no charge. With the assistance of a counselor, students are able to identify, understand, resolve issues and develop appropriate skills. To make an appointment call 972-273-3333 or visit A311.

**Institutional Policies**

Institutional Policies relating to this course can be accessed using the link below. These policies include information about tutoring, Disabilities Services, class drop and repeat options, Title IX, and more.

[North Lake Institutional Policies](http://www.northlakecollege.edu/syllabipolicies)

**Course Schedule**

<table>
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<tr>
<th>Week</th>
<th>Readings</th>
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<tbody>
<tr>
<td>Week 1</td>
<td><strong>Ch. 1: Statistics</strong></td>
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<td>• Descriptive and Inferential Statistics</td>
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<td>• Variables and Type of Data</td>
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<td>• Data Collections and Sampling Techniques</td>
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<td></td>
<td>• Observational and Experimental Studies</td>
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<td></td>
<td>• <strong>SLO 1 (Section 1.1)</strong></td>
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<tr>
<td>8/26 - 9/1</td>
<td><strong>Ch. 2: Frequency Distributions and Graphs</strong></td>
</tr>
<tr>
<td></td>
<td>• Organizing Data</td>
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<td></td>
<td>• Histograms, Frequency Polygons, and Ogives</td>
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<tr>
<td>Week</td>
<td>Readings</td>
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<tr>
<td>Week 2</td>
<td>9/2 - 9/8</td>
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</table>
|          | - Other Types of Graphs  
|          | - Paired Data and Scatter Plots  
|          | - **SLO 2** (Section 2.2) |
|          | **Ch. 3: Data Description**  
|          | - Measure of Central Tendency  
|          | - Measure of Variation  
|          | - Measure of Position  
|          | - Exploratory Data Analysis  
|          | **Unit 1 Test** |
| Week 3   | 9/9 - 9/15 |
|          | **Ch. 4: Probability and Counting Rules**  
|          | - Sample Space and Probability  
|          | - Addition and Multiplication Rules for Probability  
|          | - Conditional Probability  
|          | - Counting Rules  
|          | - Probability and Counting Rules  
|          | - **SLO 3** (Section 4.1)  
|          | - **SLO 4** (Section 4.5)  
|          | **Unit 2 Test** |
| Week 4   | 9/16 - 9/22 |
|          | **Ch. 5: Discrete Probability Distributions**  
|          | - Probability Distributions  
|          | - Mean, Variance, Standard Deviation, and Expectations.  
|          | - The Binomial Distribution  
|          | - **SLO 5** (Section 5.3)  
|          | **Unit 2 Test** |
| Week 5   | 9/23 - 9/29 |
|          | **Ch. 6: The Normal Distribution**  
|          | - Properties of Normal distribution  
|          | - The Standard Normal distribution  
|          | - Applications of Normal distribution  
|          | - The Central Limit Theorem  
|          | - The Normal Approximation to the Binomial Distribution.  
|          | - **SLO 6** (Section 6.3)  
|          | **Unit 3 Test** |
| Week 6   | 9/30 - 10/6 |
|          | **Ch. 7: Confidence Interval and Sample Size**  
|          | - Confidence Intervals for the Mean  
|          | - Confidence Intervals and sample size for Proportions  
|          | - Confidence Interval when n < 30 and σ is unknown  
|          | - Confidence Intervals for Variances and Standard Deviations  
|          | - **SLO 7** (Section 7.1)  
<p>|          | <strong>Unit 3 Test</strong> |</p>
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<th>Week</th>
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<tr>
<td>Week 7</td>
<td><strong>Ch. 8: Hypothesis Testing</strong></td>
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<tr>
<td>10/7 - 10/13</td>
<td>• Steps in Hypothesis Testing</td>
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<td>• z Test for a Mean</td>
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<td>• t Test for a Mean</td>
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<td>• z Test for a Proportion</td>
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<td></td>
<td>• Confidence Interval and Hypothesis Testing</td>
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<td>• <strong>SLO 8 (Section 8.3)</strong></td>
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<td></td>
<td><strong>October 3 - Last Day to Withdraw with grade of W</strong></td>
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<tr>
<td>Week 8</td>
<td><strong>Ch. 10: Correlation and Regression</strong></td>
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<tr>
<td>10/14 –10/16</td>
<td>• Correlation and Correlation Coefficient as it applies to linear regression.</td>
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<td>• Linear regression only. Line of Best Fit and its Equation by using technology.</td>
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<td>• <strong>SLO 9 (Section 10.2)</strong></td>
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<td><strong>Unit 4 Test</strong></td>
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This course syllabus is intended as a set of guidelines for Statistics. Both North Lake College and your instructor reserve the right to make modifications in content, schedule, and requirements as necessary to promote the best education possible within prevailing conditions affecting this course.