COURSE SYLLABUS
Statistics/ Math 2342
SP 2017
Math & Science Division
P 330, 972-273-3500
Monday—Thursday 8:00 am—8:00 pm (5pm during holidays)
Friday 8:00 am—5:00 pm

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.

Instructor Information:

Instructor’s Name: Rahman Ghamasaee
Email Address: rghama@dcccd.edu
Office Phone Number: 972-273-3190
Office Location: C-351
Office Hours: TBA

Course Information

Course title: Elementary Statistical Methods
Course number: Math 2342
Section number: 71440, 91412,
Credit hours: Three (3)
Class meeting time: online
ConnecMath Course ID: will be provided on the first day of class
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.

Course prerequisites: This is an entry-level course and is open to any student meeting TSI standards of college readiness (student must have appropriate assessment test score or have successfully completed DMAT 0310).
Required Textbooks and Materials

The Textbook for this course is: *A Brief Version Elementary Statistics*, 7th Edition, by Bluman
(Formulas and tables will be provided by each test. The Data CD is optional). You may use one of the followings

1) **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 ([www.efollett.com](http://www.efollett.com)). This software includes the textbook. Therefore if you are ok using an ebook there is no need to buy the textbook.

   **CONNECT PLUS**: ConnectMath Access Code (standalone) ISBN 9781259401237 (includes eBook)

   OR

2) **Bluman Brief 7e (Loose-leaf version) w/ Connect Math ISBN-9781259441080** (includes eBook)

3) Graphing calculator especially TI 84 plus is strongly recommended.

Optional Material

1) Student’s Solution Manual

**Course Objectives**

The objective of the mathematics component of the core curriculum is to develop a quantitatively literate college graduate. Every college graduate should be able to apply basic mathematical tools in the solution of real-world problems. See appendix B for more details

**Specific Course 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)

Means of Assessment of Course Learning Outcomes
Course Learning Outcomes will be assessed by a variety of means.
1. Online and proctored written exams will be given to assess each Learning Outcome.
2. Homework will be assigned and assessed using the software component.
3. Student’s collaboration will be used to assess some outcomes.
4. Students may complete projects and learning activities that will address specific course learning outcomes.

Course Outline
Please see Appendix B attached to this syllabus for a complete and detailed course outline

Assessment & Evaluation Procedures of Course Learning Outcomes

The learning outcomes will be assessed through Connectmath assignments (Homework and tests) and two written (proctored) tests. The final grade will be based on the following:

- ConnectMath HW 20%
  (if you make 70% or more on each individual ConnectMath HW, you will receive full credit for this part)
- Six ConnectMath Tests 30%
- Proctored Exam I Ch1-Ch5 25%
- Proctored Exam II Ch6-Ch8 25%
- SLO: up to 9 points extra credit will be added to the total al proctored exams
- Total 100%

Grading Scale

Your course grade will be determined by the final grade average based on the following:
A = 90 – 100  B = 80 – 89  C = 70 – 79  D = 65 – 69  F = 0 – 64
**Discipline/ Course/ Department/Policies**

**HOMEWORK:** Homework is the most important learning tool in a course. It is almost impossible to learn this subject without doing the exercises. The HW due dates are provided in several places.

**TESTING:**

The two proctored tests must be taken at a DCCCD college or in a supervised testing situation at a testing site previously agreed upon. **Students must notify the instructor as to which college is best for his/her testing.** Students who live out of the Dallas, Texas area may arrange for a proctor using the proctor nomination form available at the Dallas TeleCollege website (http://online.dcccd.edu/test-proctoring). No proctored tests will be sent to a location in Dallas County other than a DCCCD campus testing center unless accommodations have been made through Disability Services. Proctored exams must be sent to the appropriate testing centers at least a week before the exam is to be given. Some DCCCD testing centers only pick up the cross campus tests from their mail rooms on Tuesdays!! This means a test that arrives between Wednesday and Monday will remain in the mail room for almost a week before it is available to students. Therefore excluding NLC central campus, the tests will not be readily available at other campuses on short notice. You are responsible for knowing the operational times and regulations of your testing center.

The instructor reserves the right to make test schedule changes. If you are unable to take a test at the scheduled time, please make prior arrangements with the instructor. To take a test in the Testing Center usually you will need to supply a photo ID, your student ID number, your instructor’s name, and the course number and section. There are no makeup tests. Calculators may be used on all tests.

**Division Policy on Bathroom Breaks during Testing.**

Try not to take any break during a test. If you need special accommodations, talk to your instructor or the Disability Services Office. Accommodations can be made. You can contact the Disability Services Office in person (A430) or by phone at 972-273-3165. For more information, visit http://www.northlakecollege.edu/services-and-resources/advice-and-assistance/Pages/disability-services.aspx

Do not take any testing materials with you when you leave the Testing Center. Tests, scratch paper, charts, etc. **To do so constitutes Academic Dishonesty**
Retest

Your lowest proctored (written) test score will be replaced by the average of those tests. If you missed a test, contact me immediately. You need to have a valid excuse to get an extension otherwise a zero will be used to calculate the average. Each online test can be repeated twice within its due date.

Calculators may be used on all tests.

NLC TEST CENTER INFORMATION:
See appendix C

NLC MATH LAB HOURS: Located in C-211 {students should verify it by themselves. Times are different during holidays and summer}
Mon - Thurs. 8:00 a.m. - 9:00 p.m. Saturday 9:00 a.m. - 1:00 p.m.
Friday 9:00 a.m. - 2:00 p.m. Closed Sunday

INSTITUTIONAL POLICIES

ACADEMIC DISHONESTY
The Student Code of Conduct prohibits academic dishonesty and prescribes penalties for violations. According to this code, which is printed in the college catalog, "academic dishonesty", includes (but is not limited to) cheating, fabrication, facilitating academic dishonesty, plagiarism, and collusion".

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.

MATH DEPARTMENT POLICY:
1. A grade of zero will be given on the assignment for the first occurrence of dishonesty. Retests or makeups are not allowed on the assignment.
2. A grade of F will be given for the course after a second occurrence of dishonesty.
3. Other disciplinary action can be taken as determined by the college.

NOTIFICATION OF ABSENCE DUE TO RELIGIOUS HOLY DAY(S)
Students who will be absent from class for the observance of a religious holiday must notify the instructor in advance. Please refer to the Student Obligations section of the college catalog for more explanation. You are required to complete any assignments or take any examinations missed as a result of the absence within the time frame specified by your instructor.

Office of Institutional Equity
The Office of Institutional Equity, in coordination with DCCCD colleges, has the primary responsibility for reviewing, updating and implementing compliance policies and procedures. The Institutional Equity and Compliance Officer and the Office of Institutional Equity will ensure compliance with College District policies, federal and state laws related to sexual assault, Title IX, Title II (Americans with Disabilities Act) and the Military Veterans Full Employment Act to support diversity and inclusion.

Students with Disabilities:
If you are a student with a disability and/or special needs, or if you think you may have a disability, please contact the college Disability Services Office (DSO). Please note that all communication with DSO is confidential. If you are eligible for accommodations, please provide or request that the DSO send your accommodation letter to me as soon as possible (students are encouraged to contact DSO at the beginning of the semester). For more information regarding the College Disability Services Office, please visit the Student Services website: dcccd.edu/DSO or contact DCCCD Office of Institutional Equity at (214) 378-1633.

North Lake College Disability Services Office: A414, 972-273-3165

A Note on Harassment, Discrimination and Sexual Misconduct
We are committed to assure all community members learn and work in a welcoming and inclusive environment. Title VII, Title IX and DCCCD policy prohibit harassment, discrimination and sexual misconduct. If you encounter harassment, sexual misconduct (sexual harassment, sexual assault, stalking, relationship violence, stalking), retaliation or discrimination based on race, color, religion, age, national origin, disability, sex, sexual orientation, gender identity, and/or gender expression, please contact your College Title IX Coordinator or the Office of Institutional Equity. We treat this information with the greatest degree of confidentiality possible while also ensuring student welfare and college safety.

We are concerned about the well-being and development of our students, and are available to discuss any concerns. There are both confidential and non-confidential resources and reporting options available to you. If students wish to keep the information confidential, please contact the college Counseling or Student Health Services. As required by DCCCD policy, incidents of discrimination and/or sexual misconduct shared with faculty will be reported to the College Title IX Coordinator or District Title IX Coordinator. The Title IX Coordinator will contact the student and determine if further investigation is needed. For more information about policies, resources or reporting options, please contact your college Title IX Coordinator or visit www.dcccd.edu/titleIX.

North Lake College Title IX Coordinator: Rosemary Meredith(acting), TitleIX-NLC@dcccd.edu, 972-860-3992
District Title IX Coordinator: Office of Institutional Equity, LaShawn Grant, TitleIX-District@dcccd.edu, 214-378-1633

DROP POLICY
If you are unable to complete this course, you must officially withdraw by Apr. 27, 2017

Withdrawing is a formal procedure which you must initiate; your instructor cannot do it for you.

All Dallas County Community Colleges charge a higher tuition rate to students registering the third time for a course. This rule applies to the majority of credit and Continuing Education / Workforce Training courses. Developmental Studies and some other courses are not charged a higher tuition rate. Third attempts include courses taken at any DCCCD college since the fall 2002 semester. For further information, go online to: http://www.DCCCD.edu/thirdcourseattempt.

FINANCIAL AID STATEMENT
Financial Aid Certification of Attendance:

You must attend and participate in your on-campus or online course(s) in order to receive federal financial aid. Your instructor is required by law to validate your attendance in your on-campus or online course in order for you to receive financial aid. You must participate in an academic related activity pertaining to the course such as but not limited to the following examples:

- initiating contact with your instructor to ask a question about the academic subject studied in the course;
- submitting an academic assignment;
- taking an exam;
- completing an interactive tutorial;
• participating in computer-assisted instruction;
• attending a study group that is assigned by the instructor;
• or participating in an online discussion about academic matters relating to the course.

In an online class, simply logging in is not sufficient by itself to demonstrate academic attendance. You must demonstrate that you are participating in your online class and are engaged in an academically related activity such as in the examples described above.

Students who are receiving any form of financial aid should check with the Financial Aid Office prior to withdrawing from classes. Withdrawals may affect your eligibility to receive further aid and could cause you to be in a position of repayment for the current semester. Students who fail to attend or participate are also subject to this policy.

To apply for financial aid in the DCCCD, students must complete FAFSA (Free Application for Federal Student Aid) on the web at http://www.fafsa.ed.gov.

COUNSELING SERVICES
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 A 430.

STOP BEFORE YOU DROP
For students who enrolled in college level courses for the first time in the fall of 2007, Texas Education Code 51.907 limits the number of courses a student may drop. You may drop no more than 6 courses during your entire undergraduate career unless the drop qualifies as an exception. Your campus counseling/advising center will give you more information on the allowable exceptions. Remember that once you have accumulated 6 non-exempt drops, you cannot drop any other courses with a “W”. Therefore, please exercise caution when dropping courses in any Texas public institution of higher learning, including all seven of the Dallas County Community Colleges. For more information, you may access: https://www1.dcccd.edu/coursedrops

WRITING CENTER (A309)
The Writing Center supports and supplements classroom instruction by providing focused, individualized writing tutoring in response to the specific needs of the student. The tutors are skilled writing specialists who can help students clarify writing tasks, understand instructors’ requirements, develop and organize papers, explore revision options, detect grammar and punctuation errors, and properly use and document sources. Rather than merely editing or “fixing” your papers, the Writing Center staff focuses on helping you develop and improve your writing skills. Be sure to schedule an appointment in advance so that a tutor will be available to work with you. Walk-ins are welcome, but you may have to wait or come back at a later time. You can also access the North Lake College Online Writing Lab through eCampus. Once you log
into eCampus, click on the Community Tab at the top. Type in “Owl” in the search field to locate. Follow the instructions on the site to enroll in and receive services from the OWL.

The Writing Center is housed in the Academic Skills Center, A-332. Hours are: Monday through Thursday 8:00 a.m. to 8:00 p.m., and Friday 8:00 a.m. to 2:00 p.m. Saturday hours are 9:00 a.m. to 1:00 p.m. during fall and spring semesters. Hours will vary during other sessions. Appointments may be scheduled by visiting the Writing Center, calling 972-273-3089, or emailing nlcwritingcenter@dccc.edu.

Appendix A

Student Learning Outcomes, and their Assessment

1. Students will be able to define statistics
2. Students will be able to construct statistical graphs such as histograms, frequency polygons, ogives and determine their properties.
3. Students will be able to calculate the probability for three different discrete cases
4. Students will be able to calculate the probability for a normally distributed random variable.
5. Students will be able to find the minimum sample size for a given confidence level for a population parameter.
6. Students will be able to perform the five steps of the traditional hypothesis testing on a given case
7. Students will be able to perform linear regression analysis on a data set, and understand the properties of the correlation coefficient.

Assessment will be done on ConnectMath by having students to answer a question related to each concept.
## Appendix B

### Course Outline and Content

#### Weekly calendar

- **Start date**: 3/06/17
- **Ch 1 and profile**: 3/13/17
- **Spring break - college buildings and offices closed Mar. 13-17 (M-F)**
- **Census day**: 3/20/17
- **Ch 2 HW**: 3/21/17
- **Ch 3 HW**: 3/28/17
- **Ch 4 HW**: 4/4/17
- **Ch 5 HW**: 4/11/17
- **Holiday**: Apr. 14 (F)
- **Unit 1 proctored test**: 4/15/17
  
  *(Must be taken at your designated test center in your profile. Please do not call it midterm exam)*
  - **Ch 6 HW**: 4/20/17
- **Last day to drop with W**: 4/27/17
- **Ch 7 HW**: 4/27/17
- **Ch 8 HW**: 5/4/17
- **Ch 10 HW**: 5/6/17
- **SLO**: 5/6/17
- **Unit 2 proctored Test**: 5/8/17
  
  *(proctored Test must be taken at your designated test center in your profile. Please do not call it final exam)*

<table>
<thead>
<tr>
<th>Week</th>
<th>Chapter</th>
<th>Subjects</th>
<th>Content</th>
</tr>
</thead>
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| 1    | 1       | Probability and Statistics | ● Descriptive and Inferential Statistics  
● Variables and Type of Data  
● Data Collections and Sampling Techniques  
● Observational and Experimental Studies |
| 2    | 2       | Frequency Distributions and Graphs | ● Organizing Data  
● Histograms, Frequency Polygons, and Ogives  
● Other Types of Graphs  
● Paired Data and Scatter Plots (regression and the line of best fit from ch 10) |
| 3/4  | 3       | Data Description | ● Measure of Central Tendency  
● Measure of Variation  
● Measure of Position  
● Exploratory Data Analysis |
| 4 | 5 | Probability and Counting Rules | • Sample Space and Probability  
• Addition and Multiplication Rules for Probability  
• Conditional Probability  
• Counting Rules  
• Probability and Counting Rules |
|---|---|---|---|
| 6 | 5 | Discrete Probability Distributions | • Probability Distributions  
• Mean, Variance, Standard Deviation, and Expectations.  
• The Binomial Distribution |
| Proctored test 1 |
| 7 | 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. |
| 9 | 7 | Confidence Interval and Sample Size | • Confidence Intervals for the Mean  
• Confidence Intervals and sample size for Proportions  
• Confidence Intervals for Variances and Standard Deviations |
| 1 | 8 | Hypothesis Testing | • Steps in Hypothesis Testing  
• z Test for a Mean  
• t Test for a Mean  
• z Test for a Proportion  
• $\chi^2$ Test for a Variance or Standard Deviation  
• Confidence Interval and Hypothesis Testing |
| 1 | 8 | Correlation and Regression SLO | • Correlation and Correlation Coefficient as it applies to linear regression.  
• Linear regression only. Line of Best Fit and its Equation by using technology.  
• SLO is an assignment for students learning outcome assessment |
| Proctored test 2 |

Continue to the next page
Appendix C
NLC Testing Center Rules

- You may not bring personal items into the Test Center. This includes bags, cell phones and pagers. Coin-reimbursable (quarter) lockers are available for student use. **Please do not share lockers.**

- Please show courteous and cooperative behavior while using the services provided by the Testing Center.

- Do not bring children to the testing center. You must make arrangements for the care of your children prior to your exam date. The police department will be notified of any unattended children.

- Do not take any testing materials with you when you leave the Testing Center. This includes the test, answers, charts, scratch paper. These items will be attached to your test.

**Academic Dishonesty**
The Dallas County Community District has established procedures and guidelines to protect the security and integrity of all exams. All incidents of academic dishonesty are documented and reported to the instructor, the Director of Testing and the Dean of Student Enrollment.

**Questions? Please visit the Testing Center (A425) or call 972-273-3160.**

{you are responsible to verify these times or your location test center time}

**Monday – Thursday:** 8:30 a.m. – 8:00 p.m.
No tests will be issued after 7:00 p.m. Other cut-off times may be in effect for specific exams by the instructor's direction. All exams collected at 8:00 p.m.

**Friday - Saturday:** 8:30 a.m. – 3:30 p.m.
Other cut-off times may be in effect for specific exams by the instructor's direction.
No tests will be issued after 2:30 p.m. All exams collected at 3:30 p.m.

**Sunday: CLOSED**

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 (exp: HIST 1301)
- 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
- Scantron answer sheet (If required)
- A Test Request Form must be completed before entering the Testing center.
- Eraser
- Only battery operated 4 function, non programmable scientific or TI83/TI 84 calculator are 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.
Appendix D
Student Guidelines for Written Assignments

Writing mathematics is a lot like writing a composition paper. There is an introduction (the problem), body (work/steps), and a conclusion (the answer). Your work must flow in a clear, precise and logical order. You must use the proper notation and use the properties, theorems, and rules correctly.

Listed below are the expectations and guidelines for every assignment. Your grade will be based upon how well you follow these guidelines. The goal of these guidelines is to help you become a better thinker and presenter which will be beneficial for any career you choose.

Expectations for all written assignments:
1. If you use a spiral notebook and tear out the pages, you need to trim off the “shards” before turning in the assignment. Loose-leaf paper is preferred.

2. Your name, course number, and chapter and section from the text (if applicable) should be written in the upper right-hand corner of the first page. Each assignment should be stapled in the upper left-hand corner of the page.

3. The problem number or name of the assignment should be written down for each problem assigned. Next include a summary of the problem and directions. Be sure to include all the given information in your summary and a picture of the problem if necessary.

4. If the problem requires you to introduce variables in order to solve it, you must clearly define the variables. Variables must represent numerical quantities, not objects. Be sure to include the units of the variables (for example, feet, pounds, minutes, etc).

5. For word problems you will need to set up the equation(s) that model(s) the problem using the defined variables.

6. Write the steps of the problem down the left-hand side of the paper with each step directly under the previous one. Show every step. Don’t skip a step even if you may think it is easy. The steps should be clear and follow a logical order. If numeric computations are necessary, do them neatly on the right-hand side of the paper.

7. Make sure that every statement you write is a true statement and uses the correct notation.

8. Check your answer to make sure it is reasonable/correct with respect to the problem.

9. State your final answer using a complete sentence and include the correct unit of measure (i.e. inches, feet, minutes, square feet, etc).

10. Skip at least 1 line between each problem.