

COLLIN COLLEGE

COURSE SYLLABUS

Course Information

COURSE NUMBER: Math 1342
COURSE TITLE: Elementary Statistical Methods

CREDIT HOURS: 3 **LECTURE HOURS:** 3 **LAB HOURS:** 1

ASSESSMENTS: Prior to enrolling in this course, the student must demonstrate eligibility to enroll in the following: MATH 1314, MATH 1324, MATH 1342, or higher.

PREREQUISITE: TSI placement
COREQUISITE: None

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. Lab required and is part of the 3 hour class.

STUDENT LEARNING OUTCOMES:

Upon completion of this course the students should be able to do the following:

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.
4. Explain the role of probability in statistics. (Empirical/Quantitative Skills)
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. (Critical Thinking, Communication Skills)
8. Perform hypothesis testing using statistical methods. (Critical Thinking, Communication Skills)

COURSE REQUIREMENTS: Attending lectures and completing required lab exercises using a graphing calculator or a computer, completing assignments, and taking exams.

Withdrawal Policy: See the current *Collin Registration Guide* for last day to withdraw.

Collin College Academic Policies: See the current *Collin Student Handbook*.

Americans with Disabilities Act Statement: Collin 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 contact the ACCESS office, PRC- F144 or 972.881.5950 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current *Collin Student Handbook* for additional information.

Instructor Information

Instructor's Information:

Instructor's Name: Ivy Langford

Office Number: LH125 PRC (located in Suite LH117)

Office Hours: Monday & Wednesday 9:20 – 9:50 AM (Online Class ONLY)
12:00 – 12:50 PM
Tuesday & Thursday 11:20 – 12:50 PM
Friday 9:30 – 9:50 AM
Others by appointment

Contact Information:

Phone: (972)377-1535

Email: yjlangford@collin.edu

Website: <http://faculty.collin.edu/vjlangford>

In case of emergency, contact the Instruction Office (PRC LH158) at (972) 377-1554 or contact your instructor by email as listed above.

Class Information:

Section Number: P04

Meeting Times: MW 1:00 – 2:15 PM

Meeting Location: LH116 (Preston Ridge Campus)

Course Resources: Statistics – Informed Decisions Using Data, Sullivan, Michael III, 5th Edition, Pearson Education, 2017. ISBN13: 9780134136783

The eBook is available in MyStatLab program. MyStatLab access is required.

There will be required assignments and students will find the tutorials, videos, etc. to be an excellent study resource for this course.

College Repeat Policy: Texas residents attempting a course more than twice at Collin College are subject to regular tuition plus an additional \$50 per semester credit hour. Undergraduate courses attempted at Collin with a graded status of A, B, C, D, F, I, W (withdrawals after census), and AU (Audit) will be evaluated for repeat limits.

Withdrawal Policy: Under section 51.907 of the Texas Education Code, students may not withdraw from more than six (6) courses, including any course a transfer student has withdrawn from at another Texas institute of higher education.

For exemptions, visit <http://www.collin.edu/gettingstarted/register/withdrawal.html>.

Supplies: Graphing Calculator (TI 83 or TI 84 recommended).

The following calculators are **NOT ALLOWED** for this class: TI89 OR TI92

Other required supplies are notebook paper, a binder for graded papers, #2 pencils and eraser, and a straight edge. **It is expected that all supplies, including the graphing calculator, will be brought to class each day.**

Colored pens/pencils to aid in class notes are optional, but encouraged.

Attendance Policy:

Students are expected to attend all class sessions regularly and punctually. When an absence from class is unavoidable, it is the student's responsibility to make arrangements for makeup work and to determine whether announcements relevant to the course were missed during the absence.

Two (2) absences or less during the regular semester will receive an addition of two points to the final semester grade. More than two but no more than **three (3)** absences will receive an addition of one point to the final semester grade. **Two (2)** tardies will be counted as one absence. Students arriving late and/or leaving early will be considered tardy. A tardy or early departure of **thirty (30)** minutes or more will be considered an absence. An absence is anytime you are not present.

A class roll will be distributed on class period when a test is not administered. It is the student's responsibility to ensure that the roll is signed before leaving class.

Failure to sign-in will be considered an absence.
YOU CANNOT SIGN-IN FOR SOMEONE ELSE.

Method of Evaluation:

- 55% Tests – **Four (4) tests** will be given over the chapters covered in class. You must show your work to receive maximum test points in PENCIL. **There is no makeup for a missed test.** If unavoidable circumstances cause you to miss a test, you can replace that TEST GRADE with the FINAL EXAM GRADE. Subsequent missed tests will be recorded as zeros. Cheating on an exam will result in a zero.
- 10% Labs – There are **four (4) paper labs**. Labs are opportunities for students to apply the concepts taught in class. They fulfill the course's learning outcomes while assessing the core objectives skills of critical thinking, communication and empirical/quantitative analysis. The lab assignments must be completed outside of class. All labs can be found from my website. Paper labs should be completed by following the *Assignment Guidelines* and will be collected at the beginning of the class on the assigned due dates. **No late labs will be accepted.**
- 15% Homework – Students are expected to complete the homework ONLINE (MyStatLab) before the next session. Online homework is due the assigned dates (**11:59 PM**). **Homework exercises can be done over until they are correct before the assigned due dates. All homework can be worked on after the due dates. A deduction of 7 percent per day applies to questions scored after due date.** Homework questions will be answered at the beginning of each class session.
- 20% Final exam - A comprehensive departmental final exam is REQUIRED for all students at the end of the course (NO EXCEPTIONS). If a student takes all tests, the lowest test grade will be replaced by the final exam grade, provided the final exam has a higher grade. This replacement will not take place if a student is found guilty of cheating on an exam.

Bonus/Extra Credit – You have several chances to earn bonus/extra credit added to each module test. All extra credits are due **the assigned dates**. Please refer to the *Class Schedule* for due dates.

- 1) **Module Test Review** – In order to receive 5 points for each module test, you must complete all online module test review problems with a grade of 100 by **11:59 PM** on the day before taking the module test.
- 2) **Math Lab Tutoring** – You will be able to receive 2 extra points if you utilize Math Lab (any CCCCD campus) more than five hours total before each module test. Please submit a record of Math Lab Tutoring hours or “*Math Lab Tutoring Log*” available on my instructor website under “Forms.”

You must master the required content to pass. Your grade will be based on attendance, homework, labs, and tests. The grading scale for this course will be:

<u>Percentage</u>	<u>Grade</u>
90 – 100%	A
80 – 89%	B
70 – 79%	C
60 – 69%	D
0 – 59%	F

Grading Policy: All graded papers **MUST** follow the *Assignment Guidelines*. All graded papers are returned to students and the student is expected to keep those graded papers in a folder or binder; do not ask the instructor for grades.

Course Withdrawal Policy: The goal is for you to successfully complete this course and to be prepared to successfully complete subsequent course(s). Prior to withdrawing from this class, please meet with me to discuss your progress and to learn about the support services provided at Collin to help you succeed. **See the current *Collin Registration Guide* for the last day to withdraw. If you simply stop attending and do not withdraw from this course, you will receive an F.**

Course Drop Limit Provisions: Students who enroll for the first time during the fall 2007 semester, or any subsequent semester, are subject to the course drop limit of six course drops. This includes any course a transfer student has dropped at another institution. Collin College will not begin to count dropped courses until the fall 2009 semester. For more information, please contact Academic Advising or the Admissions and Records Office on any campus.

CELL PHONE POLICY: All electronic devices (including cell phones, laptop computers, iPods, MP3, etc.) must be turned OFF and stored out of sight during class. Students who are using any electronic devices for text message, IM, email, and etc. during the class time will be asked to leave the class without returning for the remaining day, considered absent for that class meeting. Work completed on a major exam will be graded with unanswered problems counted as wrong. Students will also be reported to the Dean of Students Office (DOS) at the second offence. If an emergency arises which necessitates the use of a cell phone, the student needs prior approval. **See the current *Collin Student Handbook*.**

Notes: (1) The instructor reserves the right to make changes to this syllabus during the semester. Changes will be provided in writing during class hours.

- (2) With the exception of a calculator, all electronic devices are to be switched off during class, unless an exception is obtained from the instructor in advance.
- (3) Please see: <http://www.collin.edu/collegesurvival/> for a listing of available college support resources.

Student Responsibilities:

1. Attend class and be aware of announcements made in class.
2. **Inform instructor of late arrival at the conclusion of that class and be sure it is noted.**
3. Understand the syllabus, especially attendance, grading, test, and cell phone policies.
4. Take care of personal needs before or after class.
5. Arrange for appropriate child care when needed—children are not allowed in class.
6. Show all your work on class work and tests. Partial credit may be given for correct work shown.

ADDITIONAL INFORMATION

A. College rules do not permit you to eat, drink, or use tobacco in the classroom.

B. Hints for success in this class:

1. Be on time for class.
2. Read the sections BEFORE we discuss them in class. Have your questions ready!
3. Do all your assignments as soon as you can after class.
4. Plan to spend **6 – 9 hours per week outside of class** studying, completing homework, and preparing for tests. This is **2 – 3 hours** outside of class for **every hour in class**.
5. If you don't understand a topic, get help ASAP.

C. Getting Help:

1. The **Math Lab (F148)**, phone # 972-377-1639): free tutoring and computer access
2. **ACCESS Office (F118)**, phone # 972-377-1785): free group and online tutoring available
3. **Instructor (LH125)**, phone # 972-377-1535): I am also available to meet with you during my office hours or other times by appointment.
4. **Graphing Calculator assistance:**
 - Formula Package (MyStatLab → Document Sharing → Final Exam)
 - Useful websites: http://www.prenhall.com/divisions/esm/app/calc_v2/
<http://mathbits.com/MathBits/TISection/Openpage.htm>

Collin College Academic Policies: Please refer to the current *Collin Student Handbook*.

Religious Holy Days: In accordance with section 51.911 of the Texas Education Code, the college will allow a student who is absent from class for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within a reasonable time. A copy of the state rules and procedures regarding holy days and the form for notification of absence from each class under this provision are available from the Admissions and Records Office. Please refer to the current *Collin Student Handbook*.

Academic Ethics: Every member of the Collin College community is expected to maintain the highest standards of academic integrity. Collin College may initiate disciplinary proceedings against a student accused of scholastic dishonesty. Scholastic dishonesty includes, but is not limited to, statements, acts, or omissions related to applications for enrollment or the award of a degree, and/or the submission of one's own work material that is not one's own. Scholastic dishonesty may involve, but is not limited to, one or more of the following acts: cheating, plagiarism, collusion, use of annotated texts or teacher's editions, use of information about exams posted on the Internet or electronic

medium, and/or falsifying academic records. While specific examples are listed below, this is not an exhaustive list and scholastic dishonesty may encompass other conduct, including any conduct through electronic or computerized means:

Plagiarism is the use of an author's words or ideas as if they were one's own without giving credit to the source, including, but not limited to, failure to acknowledge a direct quotation.

Cheating is the willful giving or receiving of information in an unauthorized manner during an examination; collaborating with another student during an examination without authority; using, buying, selling, soliciting, stealing, or otherwise obtaining course assignments and/or examination questions in advance, copying computer or Internet files, using someone else's work for assignments as if it were one's own; or any other dishonest means of attempting to fulfill the requirements of a course.

If a determination of cheating is made by the Dean of Students Office:

1. A grade of zero will be assigned for the first offense.

2. A course grade of "F" will be assigned for the second offense.

Collusion is intentionally or unintentionally aiding or attempting to aid another in an act of scholastic dishonesty, including but not limited to, failing to secure academic work; providing a paper or project to another student; providing an inappropriate level of assistance; communicating answers to a classmate about an examination or any other course assignment; removing tests or answer sheets from a test site, and allowing a classmate to copy answers.

In cases where an incident report has been filed for alleged violation of scholastic dishonesty, faculty are requested to delay posting a grade, for the academic work in question, until the Dean of Student's Office renders an administrative decision of the case. Students found responsible for scholastic dishonesty offenses will receive an authorized disciplinary penalty from the Dean of Students Office. The student may also receive an academic penalty in the course where the scholastic dishonesty took place. The professor will determine the appropriate academic penalty.

See the current *Collin Student Handbook* for additional information.

MATH 1342
Tentative Class Schedule

Week	Date	Sections	HW/Labs Due	Notes
1	1/15	MLK Holiday (ALL CAMPUSES CLOSED)		
1	1/17	Introduction Chapter 1 Definitions		Bring your Calculator to <u>each</u> class meeting
2	1/22	2.1 Organizing Qualitative Data	HW Chap. 1 (1/23)	
2	1/24	2.2 Organizing Quantitative Data 2.4 Graphical Misrepresentation of Data	HW 2.1, 2.2 (1/28)	<u>Printed Syllabus</u> due
3	1/29	3.1 Measures of Central Tendency 3.2 Measures of Dispersion	HW 2.4 (1/30)	Census Date (1/29)
3	1/31	3.3 Measures of Central Tendency and Dispersion from Grouped Data	HW 3.1, 3.2 (2/4)	
4	2/5	3.4 Measures of Position and Outliers	HW 3.3 (2/6)	
4	2/7	3.5 The Five-Number Summary and Boxplots	HW 3.4, 3.5 (2/10)	
5	2/12	Test 1 (Chap. 1, Chap. 2, & Chap. 3) 4.1 Scatter Diagrams and Correlation		Test 1 Extra Credit due
5	2/14	4.2 Least-Squares Regression	Lab 1 (2/14) HW 4.1 (2/18)	
6	2/19	5.1 Probability Rules	HW 4.2 (2/20)	
6	2/21	5.2 The Addition Rule and Complements 5.3 Independence and the Multiplication Rule	HW 5.1, 5.2 (2/25)	
7	2/26	5.4 Conditional Probability and the General Multiplication Rule	HW 5.3 (2/27)	
7	2/28	5.5 Counting Techniques 6.1 Discrete Random Variables	HW 5.4, 5.5 (3/4)	
8	3/5		HW 6.1, 6.2 (3/5)	
8	3/7	6.2 The binomial Probability Distribution TEST 2 (Chap. 4, Chap. 5 & Chap. 6)		Test 2 Extra Credit due Last Day to Withdraw (3/9)
	3/12	Spring Break (NO CLASSES)		
	3/14	Spring Break (NO CLASSES)		
9	3/19	7.1 Properties of the Normal Distribution	Lab 2 (3/19)	
9	3/21	7.2 Applications of the Normal Distribution	HW 7.1 (3/25)	
10	3/26	7.3 Assessing Normality	HW 7.2 (3/27)	
10	3/28	8.1 Distribution of the Sample Mean	HW 7.3 (4/1)	
11	4/2	9.1 Estimating a Population Proportion 9.2 Estimating a Population Mean	HW 8.1 (4/3)	
11	4/4	10.1 The Language of Hypothesis Testing	HW 9.1, 9.2 (4/7)	

MATH 1342
Tentative Class Schedule

12	4/9	TEST 3 (Chap. 7, Sec. 8.1, & Chap. 9)		Test 3 Extra Credit due
12	4/11	10.2 Hypothesis Tests for a Population Proportion	Lab 3 (4/11) HW 10.1 (4/15)	
13	4/16	10.3 Hypothesis Tests for a Population Mean 11.1 Inference about Two Population Proportions	HW 10.2 (4/17)	
13	4/18	11.2 Inference about Two Means: Dependent Samples	HW 10.3, 11.1 (4/22)	
14	4/23	11.2 Inference about Two Means: Dependent Samples 11.3 Inference about Two Means: Independent	HW 11.2 (4/24)	
14	4/25	Samples 4.2 Least-Squares Regression (Review)	HW 11.3 (4/28)	
15	4/30	TEST 4 (Chap. 10 & Chap. 11)		Test 4 Extra Credit due
15	5/2	Review for Final Exam	Lab 4 (5/2) ALL HW DUE	
16	5/7	No Class		
16	5/9	Comprehensive Final Exam for Math 1342.P04 (1:00PM - 3:00PM)		In-class Final

Lab #	Sections
Lab 1	Chap 3
Lab 2	Chap 5
Lab 3	Chap 7
Lab 4	Chap 11

Assignment Guidelines

The following standards apply to all class work and other turned-in assignments. The instructor reserves the right to not accept or deduct points from assignments that do not follow these guidelines.

- ✓ Write in pencil on all assignments.
- ✓ Assignments without student's first and last name, course number, section number, and assignment title will not be graded.
- ✓ Problems should be worked **down** (not across) the page in the order they were assigned. **(ONE column per page)**
- ✓ Multiple pages should be stapled.
- ✓ Illegible and/or incomprehensible work (as determined by the instructor) will not be graded.
- ✓ Assignments with frayed "spiral" edges will not be accepted.
- ✓ Label the assignment or classwork problems/sections.
- ✓ Always give exact answers unless asked for approximations. (i.e. fractions are preferred over rounded-off decimals)
- ✓ **If there is absolutely no work for the problem, copy the problem and state the solution(s).**
- ✓ If the problem asks to graph, please show graph.
- ✓ Simplify your answers.
- ✓ Answers should be boxed or circled for clarity.
- ✓ **Show ALL your work** and that work must support the answer.
- ✓ Assignments are due when called for; late work will NOT be accepted!!!