Elementary Statistics WBUonline Spring 2018 School of Mathematics and Sciences



Wayland Mission Statement: Wayland Baptist University exists to educate students in an academically challenging, learning-focused, and distinctively Christian environment for professional success, and service to God and humankind.

The School of Mathematics and Sciences emphasizes a rigorous, ethical approach to the study of mathematics and science. We believe that success in these disciplines requires a broad base of content knowledge and the development of the critical thinking skills necessary for the ongoing acquisition, processing and communication of current subject matter. The activities of the School, both academic and professional, intentionally reflect the Lordship of Jesus Christ and His centrality to all of Creation.

Course Title and Number: MATH 1306-VC01; Elementary Statistics

Term: Spring 2018

Name of Instructor: Dr. William Hahn

Office Phone Number and WBU Email Address: 806-291-1127; hahnw@wbu.edu

Office Hours, Building, and Location: MTWRF 9:00-10:00; MTR 2:00-3:30; and other times by appointment;

Moody Science Building Room 120

Class Meeting Time and Location: Online

Catalog Description: This course develops skills in statistical measures, binomial and normal distributions, t-distribution, regression, correlation, hypothesis testing, and statistical software use.

Prerequisites: MATH 1304 (College Algebra)

Required Materials:

MyStatLab Student Access Kit, ISBN: 0321694643

All students need to have a scientific calculator for use on the exams. I recommend the TI-30X IIS

You will need a broadband internet connection to watch the videos online.

Lecture Notes and Videos are available on the course page in Blackboard (https://wbu.blackboard.com)

Optional Materials:

Mario F. Triola, Elementary Statistics, 12th Edition, Pearson, ISBN: 9780321836960, 2013

The physical copy of the textbook is optional because the Student Access Kit above will grant you access to an online copy of the textbook.

Course Outcome Competencies:

- 1. The student will be able to distinguish between different types of data, different types of sampling, and different types of studies.
- 2. The student will be able to give accurate and appropriate graphical and numerical summaries of univariate and bivariate data.
- 3. The student will be able to calculate and interpret probabilities using tables, the binomial distribution, and the normal distribution.
- 4. The student will be familiar with the assumptions associated with statistical inference, and will know how to check those assumptions.
- 5. The student will be able to conduct and interpret statistical inference on proportions and means, particularly confidence intervals and hypothesis tests.
- 6. The student will be able to describe relationships between variables, to fit and interpret simple linear regression models, and to make and interpret predictions.
- 7. The student will understand the importance of randomization in observational studies and experiments, particularly regarding cause-and-effect interpretations and generalization to a population.
- 8. The student will be able to think critically, identifying common statistical errors in publications.
- 9. The student will become familiar with statistical software.

Attendance Requirements: Students are expected to actively participate in all required instructional activities in the course. Active participation in the course may include, but is not limited to, participating in a weekly discussion board, submitting/completing assignments in Blackboard, or communicating with the instructor. Any student absent 25% or more of the course, i.e., non-participatory during 3 or more weeks of an 11 week term, may receive an F for the course.

Any student who has not actively participated in the course prior to the census date is considered a "no-show" and will be administratively withdrawn from the course without record. To be counted as actively participating, it is not sufficient to log in and view the course. The student must be submitting work as described above.

Statement on Plagiarism and Academic Dishonesty: Wayland Baptist University observes a zero tolerance policy regarding academic dishonesty. Per university policy as described in the academic catalog, all cases of academic dishonesty will be reported and second offenses will result in suspension from the university.

Disability Statement: In compliance with the Americans with Disabilities Act of 1990 (ADA), it is the policy of Wayland Baptist University that no otherwise qualified person with a disability be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the university. The Coordinator of Counseling Services serves as the coordinator of students with a disability and should be contacted concerning accommodation requests at (806) 291-3765. Documentation of a disability must accompany any request for accommodations.

Course Requirements and Grading Criterion:

There are 4 components to the final grade in this course. There is no extra credit available in this course.

- 1. **Lecture Videos and Notes:** You will be required to watch the videos for this course (available on the course page in Blackboard) and completely fill in the lecture notes for each section. This will be verified at each of the proctored exams. See Important Details #1 on the last page of this syllabus for more information.
- 2. **Homework:** You will have homework exercises that must be completed for each section that we cover in the course. The deadline for completing the homework will be the end of the day (Central Time) on Monday, each week (except for holidays). You will complete those online through the MyLab Interface. See the Introduction Lecture Video on Blackboard and Important Details #2 on the last page of this syllabus for more information.
- 3. Quizzes: Each week of the course you will be required to complete an online quiz through the MyLab Interface covering the sections from that week. The deadline for completing this quiz will be the end of the day (Central Time) on Tuesday, each week (except for holidays). You can take the quiz up to two times and your higher score will be counted. Each time you take the quiz, the questions will be randomly generated, but of the same type.
- 4. Exams: During the course, there will be two major exams: a Midterm (scheduled for the week of April 3-7) and a Final (scheduled for the week of May 14-19). Both of these tests are to be taken in person at one of Wayland's campuses or a testing center. They will be paper and pencil tests which will be sent to your instructor for grading. They must be proctored by an approved representative of the University. See Important Details #3 on the last page of this syllabus for more information.

Homework	20%
Quizzes	20%
Midterm	20%
Final Exam	30%
Midterm Lecture Notes	5%
Final Lecture Notes	5%

A: 90 – 100 B: 80 – 89 C: 70 – 79 D: 60 – 69 F: Below 60

Students shall have protection through orderly procedures against prejudices or capricious academic evaluation. A student who believes that he or she has not been held to realistic academic standards, just evaluation procedures, or appropriate grading, may appeal the final grade given in the course by using the student grade appeal process described in the Academic Catalog. Appeals may not be made for advanced placement examinations or course bypass examinations. Appeals are limited to the final course grade, which may be upheld, raised, or lowered at any stage of the appeal process. Any recommendation to lower a course grade must be submitted through the Executive Vice President/Provost to the Faculty Assembly Grade Appeals Committee for review and approval. The Faculty Assembly Grade Appeals Committee may instruct that the course grade be upheld, raised, or lowered to a more proper evaluation.

Tentative Schedule (All times are for the Central Time Zone, so plan accordingly)

March 5: Homework Sets 1, 2, & 3 (Chapters 1 & 2)

March 6: Quiz 1

March 19: Homework Sets 4, 5, 6, & 7 (Chapters 3 & 4)

March 20: Quiz 2 and Quiz 3

March 26: Homework Sets 8 & 9 (Chapter 5)

March 27: Quiz 4

April 3: Homework Sets 10 & 11 (Chapter 6)

April 4: Quiz 5

Midterm, Proctored Paper and Pencil Exam, Covers Chapters 1 through 6 Must be completed between Tuesday, April 3 and Saturday, April 7

Note that you are responsible for Section 7-2 and the Midterm at the same time

April 9: Homework Set 12 (Section 7-2)

April 10: Quiz 6

April 16: Homework Set 13 (Section 7-3)

April 17: Quiz 7

April 23: Homework Set 14 (Section 8-2)

April 24: Quiz 8

April 30: Homework Sets 15 & 16 (Sections 8-3 & 8-4)

May 1: Quiz 9

May 7: Homework Sets 17, 18, & 19 (Chapter 10)

May 8: Quiz 10

May 14: Homework Sets 20 & 21 (Chapter 1)

May 15: Quiz 11

Comprehensive Final Exam, Proctored Paper and Pencil Exam Must be completed between Monday, May 14 and Saturday, May 19

This online course covers the same material in 10 weeks that would be covered in 16 weeks in a semester. Therefore, you should plan to spend a minimum of 8-10 hours per week watching the videos and filling in the notes, doing the homework, and taking the quizzes.

Academic Honesty: University students are required to conduct themselves according to the highest standards of academic honesty. Any student guilty of cheating or other forms of academic dishonesty may be assigned a grade of F for the entire course. University policy requires that all incidents of cheating or academic dishonest be reported to the Dean of the School of Math and Science and to the WBU administration.

Course Communication Policy: Wayland email is the official method of communication between instructors and students taking courses through Wayland Baptist University. Students are required to establish and activate their Wayland email account. Instructors reserve the right to deny email from other sources.

Important Dates: First day of the term February 26

Census Date March 13
Spring Break (No Class) March 12-16
Easter Holiday (No Class) March 30 – April 2

Last day to withdraw with "W" April 27 Last day to withdraw with a "WP/WF" May 4 Last day of the term May 19

Important Details

Here are a few VERY important details that you should make note of as you prepare to get the course underway:

1. Lecture Notes

As part of this course, you will watch the series of lecture videos and fill in the lecture notes.

In order to verify that you have filled in the lecture notes, you may either take the completed notes to the Midterm and Final exams to show to the test proctor or you may upload scanned versions of the files to an assignment in Blackboard that will be available the week of the test.

2. Online Homework and Quizzes

The course is split between watching videos and participating in the Discussion Boards in Blackboard and completing homework and quizzes at MyLab. You should check the Discussion Board in Blackboard on a regular basis for new postings.

Each homework problem can be attempted an unlimited number of times (e.g., until you get it correct) and you will be given immediate feedback on your responses. For full credit, the homework sets must be completed by the due date, but they can be worked on until midnight of the Friday after the due date, with a late submission penalty of 10% per day (applied only to questions scored after the due date). You may work ahead as your schedule dictates, but remember that you must participate weekly as per the attendance policy. The due dates on the quizzes are firm – no late submissions will be accepted.

You need to set up your student account at MyLab (through the course Blackboard site) before you begin any work in the course. A MyLab Student Access Code is in the MyStatLab Student Access Pack that you can purchase from Wayland's bookstore. A code can also be purchased with a credit card directly on the MyLab website. If you need to use financial aid to buy the access code, your local campus should be able to contact the Wayland bookstore and arrange for financial aid to pay for the code. A free trial is available if you are experiencing financial aid problems.

3. Proctor

Both the Midterm and the Final are paper and pencil tests and must be administered by a Wayland-approved proctor.

If you are planning on taking the tests at a Wayland campus you do not need to submit a proctor request form. However, you should contact the campus the week before your test to arrange a date and time for you to take the test, to find out where the test will be administered, and to give them the course number (MATH1306) and instructor name (Dr. Hahn).

For the Plainview campus, contact the <u>WBUonline</u> offices at 800-291-3740 or <u>wcsupport@wbu.edu</u>. For external campuses, see the listing at https://www.wbu.edu/campuses/ for contact information.

If you cannot take the tests on a Wayland campus, you must have your proctor approved by Wayland before they can administer the tests. The proctor must be approved every term (but only once per term) even if they have proctored tests for Wayland in past terms. More information is available from https://www.wbu.edu/wbu-online/current-students/proctored-exams.htm

Do not forget to contact the proctor before the test to arrange a date and time and location (and to let them know the course number and instructor name).