

Framingham State University

MATH 117: Introduction to Statistics

Summer 2019 Syllabus

Time: 10:40-12:40 Monday-Friday	Instructor: Wanchunzi Yu
Office: TBA	Office Hours: TBA (Or by appointment)
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Catalog Course Description

An introduction to the discipline of statistics, emphasizing both statistical thinking and its application to analyzing data. Topics include sampling, design of experiments, organizing and exploring data, probability distributions such as the normal distribution, sampling distributions, hypothesis testing and confidence intervals, correlation and regression. Students are expected to express results of statistical procedures in ordinary non-technical language. Real world applications of statistical topics are emphasized throughout the course. Note: Students may not receive credit for both this course and MATH 107 Business Statistics or MATH 157 Probability and Statistics or MATH 208 Biostatistics.

Prerequisite

Satisfactory score on the mathematics placement examination.

Text

The Basic Practice of Statistics (with Sapling Learning), 8th Edition, by David Moore, William Notz, and Michael Fligner. Students must purchase access to Sapling Learning, but a hard copy of the text is **optional**.

Student Learning Outcomes

Upon successful completion of this course, students will be conversant with

- basic statistical terminology
- various graphical representations of data
- common measures of centrality and spread
- the use of standard normal tables
- properties of the correlation coefficient
- simple linear regression
- fundamentals of data production via sampling and experimentation
- sampling distributions, large number laws, and the central limit theorem
- confidence intervals and hypothesis tests for population means
- confidence intervals and hypothesis tests for population proportions

Topic Calendar

No.	Sections Covered (Tentative)	Day
1	Chapter 1. Picturing Distributions with Graphs	1
2	Chapter 2. Describing Distributions with Numbers	2
3	Chapter 4. Scatterplots and Correlation	1
4	Chapter 5. Regression & Midterm Exam 1 Review	2
5	Chapter 3. The Normal Distribution	2
6	Chapter 15. Sampling Distributions & Midterm Exam 2 Review	2
7	Chapter 16. Confidence Intervals: The Basics	2
8	Chapter 17. Test of Significance: The Basics	2
9	Chapter 20. Inference about a Population Mean	2
10	Chapter 21. Two-sample problems & Final Exam Review	2

Homework

Homework problems are online and we will use the online resource Sapling Learning for weekly homework assignments and supplemental materials. Make sure to select the correct course. Please refer to Sapling Learning Instruction on Blackboard for more details. **NO LATE HOMEWORK WILL BE ACCEPTED.**

Blackboard

Grades and additional course content will be uploaded to [Blackboard](#). Make sure to check it regularly for updates.

Quizzes (Attendance)

Quizzes will be given in class. Often you will be able to work in groups, but each individual student must submit his or her own work. **There will not be any make-up quizzes available.**

Important Notes about Submitted Work

On all of your written assignments you must show all work for the problems to receive full credit, even if the final answer is correct. Do not submit just the final answer not supported by any work. Your handwriting must be legible, your name and class time must be clearly written at the top of the front page. Proper notation is mandated.

Midterm Exams

You will take 2 mid-term exams during the semester. Exams are given in class and time will be limited to class time. Each will involve a mix of mechanical skills and conceptual reasoning. The best possible preparation for them is regular attendance and completion of assigned homework & quizzes. You may have 1 page 8x11 of hand written notes (1 side only) on each exam, including

a final exam; specific problems solved may be included. Make-up exams are only given in case of documented emergencies.

Final Exam

The final exam will take place at the last class meeting on August 9, 2019.

Grading Criteria

Your final course grade will be determined by Homework:

25%

Quizzes (Attendance): 10%

Midterms: 20% each

Final Exam: 25%

Grading Scale:

The instructor will use the grading system as applied by Framingham State University: Overall Average Grade Letter Grade

95 – 100 A	74 - 76 C
90 - 94 A-	70 - 72 C-
87 - 89 B+	67 - 69 D+
83 - 86 B	63 - 66 D
80 - 82 B-	60 - 62 D-
77 - 79 C+	00 - 59 F

Class Hours and Course Expectations

For our accreditation, it is essential that all Framingham State University credit courses follow the Federal Definition of credit hour: for every one hour of classroom or direct faculty instruction, a minimum of two hours of out-of-class student work is required. Since the summer China courses meet for two contact hours daily (10 contact hours of classroom time weekly), the expectation is that students spend 20 hours per week doing out-of-class work. For the five week 4-credit course, this reflects 50 hours of classroom time and 100 hours of out-of-class time since the credit hour is defined as 50 minutes.

Academic Honesty Policy

Integrity is essential to academic life. Consequently, students who enroll at Framingham State University agree to maintain high standards of academic honesty and scholarly practice. They shall be responsible for familiarizing themselves with the published policies and procedures regarding academic honesty.

Students are encouraged to discuss the course material with one another and form study groups to prepare for the quizzes and exams. However, collaboration on individual assignments (homework, quizzes, and exams) is not allowed and will be handled in accordance with FSU's [academic honesty policy](#).

Academic honesty requires but is not limited to the following practices: appropriately citing all published and unpublished sources, whether quoted, paraphrased, or otherwise expressed, in all of the student's oral and written, technical, and artistic work; observing the policies regarding the use of technical facilities.

Infractions of the Policy on Academic Honesty include, but are not limited to:

1. Plagiarism: claiming as one's own work the published or unpublished literal or paraphrased work of another. It should be recognized that plagiarism is not only academically dishonest but also illegal.
2. Cheating on exams, tests, quizzes, assignments, and papers, including the giving or acceptance of these materials and other sources of information without the permission of the instructor(s).
3. Unauthorized collaboration with other individuals in the preparation of course assignments.
4. Submitting without authorization the same assignment for credit in more than one course.
5. Use of dishonest procedures in computer, laboratory, studio, or field work. Further clarification on academic honesty will be provided, when appropriate, in individual courses.
6. Misuse of the University's technical facilities (computer machinery, laboratories, media equipment, etc.), either maliciously or for personal gain. Examples include but are not necessarily limited to:
 - a) Accessing the private files of another person or agency without express permission.
 - b) The unauthorized use of technical facilities for purposes not connected with academic pursuits. When evidence indicates that a student has improperly used a technical facility, an appropriate supervisor (faculty or staff member) may take appropriate action reflecting the seriousness of the infraction, ranging from a verbal warning to, but not beyond, denial of use of the facility. If coursework may have been plagiarized, the supervisor will also inform all concerned faculty members, who may take action as described in the procedures for handling cases of alleged infractions of academic honesty.
7. Falsification of forms used to document the academic record and to conduct the academic business of the University

For more information about Academic Regulations at Framingham State, please see pages 28 - 46 of the [Framingham State University Undergraduate Catalog 2018-2019](#).

FSU Notice of Non-Discrimination and Diversity

Framingham State University is committed to a policy of non-discrimination, equal opportunity, diversity, and affirmative action. The University is dedicated to providing educational, working, and living environments that value the diverse backgrounds of all people. Furthermore, the Massachusetts Civil Rights Act ("MCRA," M.G.L. c. 12, §§ 11H, 11I, 11J) protects the rights of all residents of and visitors to Massachusetts to be free from bias-motivated threats, intimidation, and coercion that interfere with their civil rights. The MCRA protects the right to attend school, live peacefully, and enjoy other basic rights.

U.S. Copyright Law

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the instructor or owner of the material. You may only download or print materials at the direction of your instructor who knows which materials are copyrighted and which are not.

* This syllabus may be amended during the semester.