

STP 420: Introduction to Applied Statistics-Spring 2024

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Topic Calendar

No.	Week	Sections Covered (Tentative)	Comments
1	Jan. 8 – Jan. 12	Introductions, 1.1: Categorical and quantitative variables 1.2: Graphical displays of distribution	
2	Jan. 15 – Jan. 19	1.3: Numerical summary of distribution including center and spread	Monday, January 15 is MLK Day
3	Jan. 22 – Jan. 26	1.4: Density curve and normal distribution	
4	Jan. 29– Feb. 2	4.2: Probability model including sample space and events 4.5: General probability rules	
5	Feb. 5– Feb. 9	4.3: Discrete and continuous random variables 4.4: Find expected value and variance of a random variable	
6	Feb. 12– Feb. 16	5.1: Sampling distribution of sample mean 5.2: Sampling distribution of sample proportion TEST #1 (chapters 1, 4)	
7	Feb. 19 – Feb. 23	6.1: Confidence interval	
8	Feb. 26 – Mar. 1	6.2: Hypothesis test	
9	Mar. 4 – Mar. 8		Spring Break
10	Mar. 11 – Mar. 15	6.4: Type I and Type II errors, power of a test 7.1: Confidence interval and hypothesis test using t distribution	
11	Mar. 18 – Mar. 22	7.2: Confidence interval and hypothesis test for two population means TEST #2 (chapters 5, 6, section 7.1)	
12	Mar. 25 – Mar. 29	12.1: One way ANOVA test	Course withdrawal Deadline (March 31)
13	Apr. 1– Apr. 5	8.1: Confidence interval and hypothesis test for one population proportion 9.1: Two-way table and introduction to Chi-square test	

No.	Week	Sections Covered (Tentative)	Comments
14	Apr. 8– Apr. 12	9.2: Chi-square Goodness of Fit test 2.1: Association between two variables 2.2: Use scatterplot to determine direction and strength of relationship	
15	Apr. 15– Apr. 19	2.3: Correlation (calculation and interpretation) 2.4: Least square regression line and square of correlation 2.5: Outlier, influential observation, and lurking variables	
16	Apr. 22– Apr. 26	10.1: Simple linear regression, inferential procedures for its slope and response variable	Complete Withdraw from all Courses (April 26)
17	Apr. 29 – May. 3	Final exam (Section 7.2, chapters 2, 8, 9, 10, 12)	

**I reserve the right to alter this information at any time.
These changes will be announced in class and on my web page.**

Textbook (optional): *Introduction to the Practice of Statistics, 8th Edition, Moore, McCabe, Craig.*

Prerequisites: MAT 117 or MAT 142 with C or better

Homework: Homework assignments will be given once every 2 weeks.

Late Submission penalty for homework

5 percentage points deducted per day. A score of zero is assigned if homework assignment is not submitted within 5 days of the deadline (if an assignment is due on Sunday, you receive a score of zero if you do not submit by Friday of the following week).

Make up homework assignments are only given in case of documented emergencies. In order to be considered for any make up work, you must reach out to me within 2 weeks of the homework deadline.

In class quizzes: Quizzes will be given on a regular basis during class. Submit each quiz online using Canvas.

Midterm Exams: You will take 2 mid-term exams during the semester. Exams are given in class, 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. Make-up exams are only given in case of documented emergencies. **The instructor is not required to provide make-up exams.**

Final Exam: The final exam for this course is NOT comprehensive.

Studying and Preparation Time: The course requires you to spend time preparing and completing assignments. A three-credit course requires at least 135 hours of student work. Therefore, expect to spend approximately a minimum of 9 hours a week preparing for and actively participating in this course

Grading Criteria:

Points allocation:

15%	Homework
10%	Quizzes
50%	2 Midterms
25%	Final Exam

GRADING SCALE:

A+ 95 to 100%	B+ 85 to 89.9%	C+ 75 to 79.9%	D 60 to 69.9%
A 90 to 94.9%	B 80 to 84.9%	C 70 to 74.9%	E Less than 60%

Calculator: You may use a graphing calculator for tests and the final exam. The calculator can have a statistical package that includes tests of hypotheses, confidence intervals and linear regression and be able to perform matrix operations. Examples of highly recommended models are the TI-*nspire* & TI 83/84 or Casio 9850GB Plus.

Extra credit: If you come to class and do the homework, your grade will take care of itself. No individual requests for extra credit projects will be considered.

Agreement of Terms: By remaining registered in the course through drop/add period, you agree to all terms and policies set forth in the syllabus.

Tutoring help: The Math Tutor Center is located in WCLR-116. You must have a valid ASU "Sun Card" in order to be admitted. For information, visit <http://math.asu.edu/mathtutors>
The Learning Resource Center has several locations on campus and specializes in small group tutoring sessions. For information, visit <http://studentsuccess.asu.edu>.

Final Grades:

A: Outstanding. Superior. Written work is neat, organized, and demonstrates a mastery of the subject matter for the college level. Meets all course expectations promptly. Shows a clear grasp of concepts and demonstrates the ability to synthesize the material in application settings. Participates regularly and enthusiastically in the classroom.

B: Very good. Clearly above average. Written work is complete with only minor flaws and demonstrates proficiency in the subject matter for the college level. Shows an adequate grasp of concepts and demonstrates the ability to relate the material in application settings. Participates regularly and enthusiastically in the classroom.

C: Good. Average. Directions followed. Student met minimal expectations for the course. Written work contains minor flaws too numerous to be overlooked. Student shows a reasonable grasp of the subject matter for the college level, but may have difficulty processing the material from class to an application setting. Participates in the classroom.

D: Below expectations. Below that which one would normally expect from a student at this level of a college career. Written work is marred by major mechanical problems. Exam performance fails to demonstrate a reasonable grasp of material for the college level. Student fails to participate appropriately in class.

E: Unacceptable. Written work consistently falls below college level. Student fails to use appropriate college resources when directed to do so by the instructor. Shows little or no grasp of concepts and is unable to process or relate material in application settings. Student fails to participate appropriately in class. Student is consistently late in meeting course expectations.

Departmental and University Policies and Procedures

Course withdrawal deadline	Sunday, March 31
Complete withdrawal	Friday, April 26

The grade of XE: A grade of XE is reserved for "failure for academic dishonesty." The grade goes on the student's transcript; the student needs to petition to have it removed after 1 year.

The grade of Incomplete: A grade of incomplete will be awarded only in the event that a documented emergency or illness prevents the student who is doing acceptable work from completing a small percentage of the course requirements. The guidelines in the current general ASU catalog regarding a grade of incomplete will be strictly followed. If there is a last-minute personal or medical emergency, the student may receive a grade of Incomplete and make up the final within one calendar year. The student must provide written documentation and be passing the class at the time to receive an Incomplete.

Instructor-Initiated Drop: At the instructor's discretion, any student who has not attended class during the first week of classes may be administratively dropped from the course. However, students should be aware that non-attendance would NOT automatically result in being dropped from the course. Thus, a student should not assume they are no longer registered for a course simply because they did not attend class during the first week. It is the student's responsibility to be aware of their registration status.

STUDENT CONDUCT STATEMENT: Students are required to adhere to the behavior standards listed in Arizona Board of Regents Policy Manual Chapter V – Campus and Student Affairs: Code of Conduct ([http://www.abor.asu.edu/1 the regents/policymanual/chap5/5Section C.pdf](http://www.abor.asu.edu/1_the_regents/policymanual/chap5/5Section_C.pdf)), ACD 125: Computer, Internet, and Electronic Communications (<http://www.asu.edu/aad/manuals/acd/acd125.html>), and the ASU Student Academic Integrity Policy (<http://www.asu.edu/studentaffairs/studentlife/srr/index.htm>).

Students are entitled to receive instruction free from interference by other members of the class. If a student is disruptive, an instructor may ask the student to stop the disruptive behavior and warn the student that such disruptive behavior can result in withdrawal from the course. An instructor may withdraw a student from a course when the student's behavior disrupts the educational process under USI 201-10 <http://www.asu.edu/aad/manuals/usi/usi201-10.html>.

All internet-capable devices must be turned off and be made inaccessible during all exams. Anyone who access such a device during an exam for any reason will receive a score of 0 for that exam and possible further disciplinary measures. Use of cell phones is prohibited during class.

ACADEMIC HONESTY:

Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. Violations of academic integrity include, but are not limited to, cheating, fabrication, tampering, plagiarism or facilitating such activities. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information see: <http://provost.asu.edu/academicintegrity>.

DISABILITY ACCOMMODATIONS: Qualified students with disabilities who will require disability accommodations in this class are encouraged to make their request to me at the beginning of the semester either during office hours or by appointment. **Note:**

Prior to receiving disability accommodations, verification of eligibility from Disability Resource center (DRC) is required. Disability information is confidential.

ESTABLISHING ELIGIBILITY for DISABILITY ACCOMMODATIONS: Students who feel they will need disability accommodations in this class but have not registered with the Disability Resource center (DRC) should contact DRC immediately. Their office is located on the first floor of the Matthews Center Building. DRC staff can also be reached at: (480)-965-1234 (Voice), (480)-965-9000 (TTY). Their hours are 8:00 AM to 5:00 PM Monday through Friday. For additional information visit: www.asu.edu/studentaffairs/ed/drc