



Syllabus of STAT 511

Basic information about the instructor and TA

- Instructor: Yuan Qu, qu45@purdue.edu
- TA: TBA on Brightspace
- Office Hours: regular online & in-person office hours; otherwise, individual meeting by appointments.

Basic information about the course

- STAT 511 Statistical Methods, 3 credits
- Course web page on Brightspace, <https://purdue.brightspace.com>, includes:
 - Partial lecture notes
 - WebAssign homework assignments
 - Worksheets and more
- Prerequisite: two semesters of college calculus

Course description

Extensive coverage of statistical methods for students with a calculus background. The course contents include data exploration, elementary probability, random variables, sampling distributions, estimation and confidence intervals, hypothesis testing, ANOVA, and simple regression.

We do not require specific computer software for the course. Instead, students are expected to know how to do the analysis and calculation without using existing packages. Excel would be adequate but any other software will also be fine for homework assignments. No computer is available for exams. Calculators are allowed.

Learning outcomes

1. Have a good sense of data and know standard data analysis tools.
2. Understand the relationship between statistical methods and probability models.
3. Be able to conduct standard statistical analysis.
4. Be able to report and interpret statistical analysis outputs.

How to succeed in this course

- Closely follow the course schedule.
- Start the homework assignment early every week. Ask questions right away, whenever you encounter difficult content. Don't wait.

- Spend time and effort reviewing lecture materials and doing assignments, e.g., homework and worksheets.

Required Text

Jay L. Devore, Probability and Statistics for Engineering and the Sciences, 9th edition + Enhanced WebAssign – The textbook is required to access homework assignments on WebAssign. The WebAssign plus an e-book costs about \$90.

Notes and other teaching materials are considered to be “derivative works” of the instructor's presentations and materials, and they are thus subject to the instructor's copyright in such presentations and materials. All notes and course materials cannot be posted, sold, or bartered without the instructor's written permission.

Assignments and points

1. Homework assignments, on WebAssign, every week (a special assignment for the first week for extra credit)
2. Self-assessment worksheet every week. The worksheets will not be graded. Solutions will be provided after your submission. You only need to submit them by the deadline to receive credits.
3. One midterm, closed book, where one A4 page formula sheet is allowed.
4. Final exam, closed book, where one A4 page formula sheet is allowed.

Grading Scale

Your final grade will depend on the following components, with the usual scale

90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, 0-59 = F. +/- may be assigned to help round up grades depending on the class's distribution, always in student's grade's favor.

Homework	25%
Worksheet	10%
Midterm exam	30%
Final exam	35%

Missed or Late Work

- Homework on WebAssign will be assigned every week and is typically due on Friday night (11:59 pm). Late homework will not be accepted. Your lowest homework score will be dropped.
- The worksheet is typically due on Monday night. It serves as a self-assessment and will not be graded. Credits will be granted simply on the submission. Late submission will not be accepted.

Attendance:

Students are expected to attend the classes.

In the event you are quarantined/isolated:

If you must miss class at any point in time during the semester, please reach out to me via email so that we can communicate about how you can maintain your academic progress. If you find yourself too sick to progress in the course, notify your adviser and notify me via email qu45@purdue.edu.

Please be aware of the **Protect Purdue Pledge** [Protect Purdue updates for the Spring 2023 semester](#). Protect yourself, protect others, and protect Purdue!

Academic integrity

Academic integrity is one of the highest values that Purdue University holds. Individuals are encouraged to alert university officials to potential breaches of this value by either emailing integrity@purdue.edu or by calling 765-494-8778.

"As a boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do.

Accountable together - we are Purdue." Academic misconduct, such as cheating, plagiarism, and deceit in any of their diverse forms are unacceptable and will be reported to the Office of Student Rights and Responsibilities. Discussions on homework questions are allowed. But all assignments need to be completed independently. Moreover, knowingly to aid and abet, directly or indirectly, other parties in committing dishonest acts is in itself dishonest. Any violation of course policies as it relates to academic integrity will result minimally in a failing or zero grade for an assignment or even a failing grade for the course.

Nondiscrimination statement

Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her own potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. Purdue's nondiscrimination policy can be found at http://www.purdue.edu/purdue/ea_eou_statement.html.

Students with disabilities

Purdue University strives to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, you are welcome to let me know so that we can discuss options. You are also encouraged to contact the Disability Resource Center at: drc@purdue.edu or by phone: 765-494-1247.

Emergency preparation

In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. Relevant changes to this course will be posted onto the course website or can be obtained by contacting the instructor. You are expected to read your @purdue.edu email on a frequent basis.

Mental Health Statement

- If you find yourself beginning to feel some stress, anxiety and/or feeling slightly overwhelmed, try WellTrack, <https://purdue.welltrack.com/>. Sign in and find information and tools at your fingertips, available to you at any time.
- If you need support and information about options and resources, please see the Office of the Dean of Students, <http://www.purdue.edu/odos>, for drop-in hours (M-F, 8 am - 5 pm).
- If you're struggling and need mental health services: Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of mental health support, services are available. For help and to speak with a clinician, contact Counseling and Psychological Services (CAPS) at (765)494-6995 or by going to CAPS' office on the second floor of the Purdue University Student Health Center (PUSH). For urgent situations after hours, on weekends and holidays, call (765)494-6995 to speak with a clinician. Please see <http://www.purdue.edu/caps> for further information.