

MATH/STAT 318: ELEMENTARY PROBABILITY
 PENN STATE UNIVERSITY
 ABINGTON COLLEGE
 Fall 2025

Course: MATH/STAT 318, Section 002 – Elementary Probability (3 credits)

Prerequisites: MATH 141

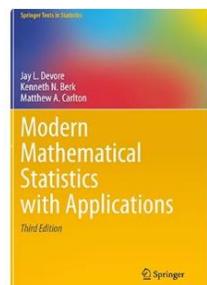
Class Time and Room: MWF, 2:30 – 3:20 p.m., Rydal room 101. This is an in-person class. There is no Zoom option.

Instructor: Mrs. Owens

Office: 212 Rydal

E-mail address: scl106@psu.edu

Email any day/time; I try my best to reply as soon as possible.



Office Hours (in-person) for Students in Room 212 Rydal: Walk in during these times (no appointment necessary) to ask questions, discuss issues, etc. Please remember to bring your class notes with you.

Monday and Wednesday and Friday 12:15 p.m. – 2:15 p.m.

Office Hours via Zoom on Tuesday and Thursday: It is ideal for Zoom office hours to be scheduled at least a day in advance by sending an email to scl106@psu.edu. If you are not familiar with Zoom, please stop by my office with your device and I can help you set it up.

To download Zoom and to get the latest updates: <https://zoom.psu.edu>

To access Zoom: <https://psu.zoom.us>

How to sign into your PSU Zoom account for security reasons: <https://sites.psu.edu/abit/attending-class-via-zoom/>

My Fall 2025 teaching schedule:

Time	Mon	Tues (not on campus)	Wed	Thurs (not on campus)	Fri
8:00 – 9:15	MATH 140		MATH 140		MATH 140
9:15 – 10:00					
10:10 – 11:00					PSU – 1
11:15 – 12:05	STAT 318		STAT 318		STAT 318
12:15 – 2:15	Office Hours		Office Hours		Office Hours
2:30 – 3:20	STAT 318		STAT 318		STAT 318
3:05 – 4:20		Zoom Course		Zoom Course	
Web Course STAT 462					

Required Textbook: *Modern Mathematical Statistics with Applications*, by Jay L. Devore, Kenneth N. Berk, Matthew A. Carlton; third Edition. An electronic version of the textbook is available for free through Penn State University Libraries. Please note that this textbook is required for the course and students are expected to read the textbook.

https://psu.summon.serialssolutions.com/#!/search?bookMark=eNqFiksKwjAURR_Ygb8uQHCQDURf-oxJhyKKE0c6L0GDrdSkNCu36ALcHQp59wpZM47C7AQuBKla0qzYkjIZdSyC3XI8iT02S-Qo8hD-GjiIUqJCmaAJ793faOnU2s7cvE5mZadokJQuLA3k2s2a7r2hRi412YQxb7wea_mcHyeLjuT7wLQ5UepvWPyhDpjSpFSX_yB4jSNRE

To locate other library resources: <https://guides.libraries.psu.edu/ebooks>

Required Calculator: Non-graphing scientific calculator – the TI-30X IIS is recommended. There is no sharing of calculators and students are only allowed to use one calculator during an assessment. Your library may have calculators you can borrow.

Course Description: Combinatorial analysis, axioms of probability, conditional probability and independence, discrete and continuous random variables, expectation, limit theorems, additional topics.

Course Objectives & Learning Outcomes: This is a first course in calculus-based probability designed for quantitative students. The goal of this course is to provide an introduction to the theory of probability. This course will prepare students for further study in mathematical statistics or more advanced probability stochastic modeling. A student successfully completing this course should be able to manipulate basic probabilities and work with random variables including their associated densities, distributions, and expectations through the appropriate application of elementary combinatorics and differential/integral calculus. In addition, the student should be able to convert verbal descriptions of elementary probabilistic problems into a mathematical formulation and to properly interpret any subsequent mathematical result.

Class Cancellation Policy: Students will be contacted by e-mail (through Canvas) if for any reason class must be cancelled.

Sources of Course Information: Canvas will be used to post course information, announcements, assignments, this syllabus, and grades. Use of your PSU e-mail account is required. You must use your PSU e-mail account when sending an email. Please do not use Canvas e-mail.

Classroom Policy: Behaviors that disrupt other students' learning are not acceptable and will be addressed by the instructor. All students enrolled in this class are expected to treat each other and the instructor with professional respect and courtesy.

Attendance/Participation: Participation is worth 11% of the final course grade. Successful participation is defined as consistently adhering to university requirements, as presented in this syllabus. It also includes engaging in activities during class that solicit your feedback on the material in the lecture. Completed class activities will not be graded for correctness but need to show some understanding of the material. Electronic devices will not be used during class activities. Notes taken during class can be used as a guide to completing these class activities. This means it is very important and necessary for you to take notes during class.

If you are unable to attend class, it is professional to send an email informing the instructor of your absence. Ask a classmate (not the instructor) for the missed lecture notes. We will refer to this classmate as your class 'buddy'. Please find a class 'buddy' by the second week of classes. Students without a 'buddy' will lose participation points. Students are allotted three absences during the semester. If special circumstances arise, please contact your instructor. A sign-in sheet will be used to track attendance. Students are responsible for making sure they sign in for each class. Students are expected to be on time for class.

Quizzes: Students will be assigned problems to complete from the textbook. You should attempt the problem on your own to see if you can obtain the correct answer. If your answer is incorrect, you should try to figure out where you went wrong. If you still cannot figure it out, use google or AI to help you learn. This develops critical thinking. The entire purpose of the assigned problems is to see if you understand and have learned the material prior to taking an assessment. To show understanding, there will be brief announced quizzes throughout the semester. The 3 lowest quiz grades will be dropped. There are no make-up quizzes. If you are absent the day of a quiz, that quiz score will be one of the three quiz scores that are dropped. Quizzes will comprise 12% of the final course grade.

Examinations and Make-Up Policy: There will be 4 exams and a cumulative final exam. Exams need to be taken on the days they are scheduled. If you miss an exam due to an illness or other serious reason, you need to notify the instructor via email scl106@psu.edu on the day of the exam noting the reason for the absence. You will have two days to take a make-up exam. To clarify, missing an exam on a Monday results in a make-up exam being taken on Wednesday. If an email is not received on the day of the exam, a make-up exam will not be given. Make-up exams will be taken in my office when I am available (see schedule above). Students are allotted one make-up exam during the semester since the probability of missing more than one exam is highly unlikely. If special circumstances arise, please contact your instructor. The coverage of each test will be indicated in lecture, and the final exam is cumulative.

Course grading: participation 11%; quizzes 12%; 4 tests 54% (13.5% each); final exam 23%

Grading scale: 93-100 A, 90-92 A-, 87-89 B+, 83-86 B, 80-82 B-, 75-79 C+, 70-74 C, 60-69 D, below 60 F

There is no 'extra credit' available in this course and assessments will not be 'curved'. If you feel that there is a mistake on graded work, please discuss with the instructor within one week of receiving the graded work.

Policy on Academic Integrity

This course adheres to University Senate: "Academic integrity is the pursuit of scholarly activity in an open, honest, and responsible manner. Academic integrity is a basic guiding principle for all academic activity at The Pennsylvania State University, and all members of the University community are expected to act in accordance with this principle. Consistent with this expectation, the University's Code of Conduct states that all students should act with personal integrity, respect other students' dignity, rights, and property, and help create and maintain an environment in which all can succeed through the fruits of their efforts. Academic integrity includes a commitment by all members of the University community not to engage in or tolerate acts of falsification, misrepresentation, or deception. As academic integrity violation is an "intentional, unintentional, or attempted violation of course or assessment policies to gain an academic advantage or to advantage or disadvantage another student academically." Unless your instructor tells you otherwise, you must complete all coursework entirely on your own, using only sources that have been permitted by your instructor, and you may not assist other students with papers, quizzes, exams, or other assessments. If your instructor allows you to use ideas, images, or word phrases created by another person (e.g., from Course Hero or Chegg) or by generative technology, such as Chat GPT, you must identify their source. You may not submit false or fabricated information, use the same academic work for credit in multiple courses, or share instructional content. Students with questions about academic integrity should ask their instructor before submitting work.

Students facing allegations of academic misconduct may not drop/withdraw from the affected course unless they are cleared of wrongdoing (see G-9: Academic Integrity <https://aappm.psu.edu/policy/g-9-academic-integrity>). Attempted drops will be prevented or reversed, and students will be expected to complete course work and meet course deadlines. Students found responsible for academic integrity violations face severe academic outcomes and put themselves at jeopardy for other outcomes which may include ineligibility for Dean's List, pass/fail elections, and grade forgiveness. Students may also face consequences from their home/major program and/or The Schreyer Honors College.

Students with Disabilities

Students with disabilities are welcome at Penn State, and every campus has an office for student disability resources (SDR). For further information, please visit the Student Disability Resources website at <http://equity.psu.edu/sdr>. To receive accommodations, you must contact disability services office at Penn State Abington, complete the Introductory Questionnaire, provide documentation (available at <http://equity.psu.edu/sdr/guidelines>), and then participate in an intake interview. If your documentation supports your request, the campus disability services office will provide you with an accommodation letter. Please share this letter with your instructors as early as possible and discuss the accommodation with them. You will need to request a new accommodation letter for every semester. If you don't understand the process, contact the SDR Coordinator on campus for assistance. At the Penn State Abington campus, you can contact Chavonne Campbell, MSW, Disability Coordinator, at Sutherland 102, by phone at 215.881.7962, or by email at cc5786@psu.edu.

Helpful links:

1. Abington SDR website: <https://abington.psu.edu/disability>

2. University Park SDR website: <https://equity.psu.edu/sdr>

3. Introductory Questionnaire: <https://equity.psu.edu/sdrintro>

To start the process of requesting academic accommodations for a documented disability.

4. Documentation guidelines: <https://equity.psu.edu/sdrdocumentation>

Explanation of what documentation you need to submit.

5. Secure Upload Tool: <https://equity.psu.edu/sdrupload>

Please do not send personal medical files through email, please upload them with this secure upload tool.

Free Tutoring for courses other than STAT 318:

The Chaiken Center for Student Success (CCSS)

The Chaiken Center for Student Success, located in 315 Sutherland, offers free tutoring, writing consultations, and success coaching to all students. Classes usually supported by the CCSS: BIOL 110, CHEM 110, CHEM 112, CHEM 130, ECON 102, MATH 4 – 141, PHYS 211, PSYCH 200, STAT 200, and courses with writing assignments.

Other Tutoring Options:

Peer virtual tutoring for math, physics and chemistry has occurred in the past. An announcement in Canvas will go out if this type of tutoring is still being offered this semester.

Academic Excellence Center - <https://inclusion.engr.psu.edu/student-programs/student-success-programs/academic-excellence-center.aspx>

Counseling & Psychological Services

Many students at Penn State face personal challenges or have psychological needs that may interfere with their academic progress, social development, or emotional wellbeing. If you encounter personal problems of any kind on or off campus, please reach out for help. The university offers a variety of confidential services to help you through difficult times, including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation. On campus counseling and psychological services are available on the second floor of the Lares Building. Please contact our Licensed Professional Counselor: Huijiao Xu, hkx5064@psu.edu 215-881-7488 or stop by the Wellness Center in 103 Lares any time. In addition to these on-campus resources, there are the following:

Penn State Crisis Line (24 hours/7 days/week): 877-229-6400

Crisis Text Line (24 hours/7 days/week): Text LIONS to 741741

Reporting Educational Equity Concerns through the Report Bias site

Penn State takes great pride to foster a diverse and inclusive environment for students, faculty, and staff. Acts of intolerance, discrimination, or harassment due to age, ancestry, color, disability, gender, gender identity, national origin, race, religious belief, sexual orientation, or veteran status are not tolerated and can be reported through Educational Equity via the Report Bias webpage (<http://equity.psu.edu/reportbias/>).

Sexual Harassment Policy

The university's code of conduct states that all students should act with personal integrity, respect other students' dignity, rights, and property, and help create and maintain an environment in which all can succeed through the fruits of their efforts. Violations of this principle can result in a range of sanctions, from a warning to expulsion. Note that Title IX makes it clear that violence and harassment based on sex and gender is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. Sexual harassment of faculty, staff or students is prohibited and will not be tolerated. It is the policy of the University to maintain an academic and work environment free of sexual harassment. Sexual harassment violates the dignity of individuals and impedes the realization of the University's educational mission.

The University is committed to preventing and eliminating sexual harassment of faculty, staff, and students through education and by encouraging faculty, staff, and students to report any concerns or complaints about sexual harassment. Prompt corrective measures will be taken to stop sexual harassment whenever and wherever it occurs. See Policy AD-85 – Discrimination, Harassment, Sexual Harassment and Related Inappropriate Conduct.

Please contact our sexual harassment liaison: Michele Scott, RN, BSN, Campus Nurse, 103 Lares, 215-881-7350, mus959@psu.edu

You may also seek out the campus counseling and psychological services with Huijiao Xu, Licensed Professional Counselor, hkx5064@psu.edu, 215-881-7488; or stop by the Wellness Center in 103 Lares any time. You can call PSU's Sexual Assault & Relationship Violence Hotline (800-550-7575) or the Victim Services Center of Montgomery County's 24-hour crisis hotline (888-521-0983).

If this is a Title IX issue, please contact Penn State Abington's Title IX Resource Person for more Information: Gina D'Amato-Kaufman, Director of Student Affairs, gxd22@psu.edu, and Mary Ellen Glick, Campus Case manager, mpg5645@psu.edu.

If this is a Title IX issue, please contact Penn State Abington's Title IX Resource Person for more Information: Gina D'Amato-Kaufman, Director of Student Affairs, 106 Sutherland Bldg., gxd22@psu.edu, (215) 881-7391; Mary Ellen Glick, Case Manager, 102b Lares Bldg. mpg5645@psu.edu 215-881-7353.

Course Content: Topics included in the course are listed with the class schedule on the last page of this syllabus.

Class Schedule: A tentative class schedule is given on the last page of this syllabus. It is subject to change at the discretion of the instructor depending on the progress of the class.

Schedule

M	8/25	Syllabus; Chapter 1: Overview and Descriptive Statistics
W	8/27	Chapter 1 (cont.)
F	8/29	Chapter 1 (cont.)
M	9/1	No Class – Labor Day
W	9/3	Chapter 1 (cont.)
F	9/5	Chapter 1 (cont.)
M	9/8	Chapter 1 (cont.)
W	9/10	Calculus review; Chapter 2: Probability
F	9/12	Chapter 2 (cont.)
M	9/15	Chapter 2 (cont.)
W	9/17	Test #1 Chapter 1
F	9/19	Chapter 2 (cont.)
M	9/22	Chapter 2 (cont.)
W	9/24	Chapter 2 (cont.)
F	9/26	Chapter 2 (cont.)
M	9/29	Chapter 2 (cont.)
W	10/1	Test #2 Chapter 2
F	10/3	Chapter 3: Discrete Random Variables and Probability Distributions
M	10/6	Chapter 3 (cont.)
W	10/8	Chapter 3 (cont.)
F	10/10	Chapter 3 (cont.)
M	10/13	Chapter 3 (cont.)
W	10/15	Chapter 3 (cont.)
F	10/17	Chapter 3 (cont.)
M	10/20	Chapter 3 (cont.)
W	10/22	Chapter 3 (cont.)
F	10/24	Chapter 3 (cont.)
M	10/27	Chapter 3 (cont.)
W	10/29	Chapter 4: Continuous RV's and Probability Distributions
F	10/31	Chapter 4 (cont.)
M	11/3	Test #3 Chapter 3
W	11/5	Chapter 4 (cont.)
F	11/7	Chapter 4 (cont.)
M	11/10	Chapter 4 (cont.)
W	11/12	Chapter 4 (cont.)
F	11/14	Chapter 4 (cont.)
M	11/17	Chapter 4 (cont.)
W	11/19	Chapter 4 (cont.)
F	11/21	Chapter 4 (cont.)
11/24 – 11/28 No Class – Fall Break		
M	12/1	Chapter 5: Joint Probability Distributions
W	12/3	Test #4 Chapter 4
F	12/5	Chapter 5 (cont.)
M	12/8	Chapter 6: Statistics and Sampling Distributions
W	12/10	Chapter 6 (cont.)
F	12/12	Chapter 6 (cont.)
W	Final Exam as scheduled by LionPATH (should be Wednesday, 12/17 12:00 – 1:50 p.m.)	

Final Comments: You have goals and dreams. I am here to help you and prepare you for a successful future. You have been given an exceptional opportunity of attending college. Take advantage of this opportunity. Life is challenging and things happen that you cannot control. Learning how to rise above and to not give up and to keep moving forward will only help you to succeed in life. This is why there are assignment due dates, only three allotted absences, and why we only use basic calculators. This also explains my grading policy. As soon as you do not understand something or are struggling or having an issue with something, reach out to me or someone else on campus. We can help or find someone who can help, but only if you let us know. In any career work environment, you will need to attend meetings, pay attention, take notes and contribute your thoughts and ideas.