instructor: prof. RP Russo, SH 205 335-0817, rp-russo@uiowa.edu

office hours: Tues 11AM-12:30 Wed 2:30-3:30 Fri 11:45-12:45

students seeking out-of-class help from me are expected to have excellent attendance in the lectures

textbook: intro to prob & stat for engineers and scientists, S. Ross
coverage = chapters 3–5, parts of 6 & supplementary material posted to the Canvas module entitled “notes”

classroom decorum: if you arrive to class late or must leave early, please do so quietly & do not cross in front of the screen. Please do not engage in distracting activities during the lectures

HW: due in lecture. you will work in teams of 4-5, with each team making a joint submission. HW should be neatly written (or typed) & stapled, with team member full-names (as they appear in your university record) in the top right corner. Late HW will be penalized 20%/day

exams & quizzes: 6-8 twenty-minute quizzes (lowest one dropped) will be given during lectures; a two-hour midterm exam will be given in the evening (day TBA) at about the half-way point, & a cumulative two-hour final exam exam will be given during finals week (as scheduled by the Registrar’s office)

make-ups: If something unexpected (emergency, illness etc.), or expected (religious or team event, etc.) arises, let me know as soon as possible

corrections: errors in scores posted on Canvas (including missing scores) must be brought to my attention within 10 days of their posting

grades: overall % = .15(HW%) + .20(quiz%) + .30(midt%) + .35(final exam%) 

As a rough guide "A" = 90%, "B" = 80%, "C" = 70%, "D" = 60%.

tutors: go to ➔ https://stat.uiowa.edu/resources/tutoring

disabled students: I’d like to hear from anyone who has a disability which may require a modification of seating, testing, or other class requirements so that appropriate arrangements may be made

policies: course policies are governed by CLAS. See http://clas.uiowa.edu/faculty/teaching-policies-resources-syllabus-insert

DEO: Prof. J. Lang, 241 SH, 335-0712, joseph-lang@uiowa.edu
**STAT:3100 topics** (with section numbers from your textbook... “on” means “see online notes”). Topics will be covered more-or-less in the order presented below. I do not provide a day-to-day coverage schedule, as it would prevent me from making good decisions (for the good of the class) to speed up, slow down, or vary the order of the topics.

1. probability axioms, concepts, rules, techniques (3.1-3.5)
2. counting principles (3.5)
3. conditional probability (3.6)
4. independent events, pairwise vs. mutual independence (3.8)
5. law of total probability (LTP) & Bayes’ Theorem (3.7)
6. discrete & continuous rv’s, pmf p(x), pdf f(x), CDF F(x) & survival function S(x) (4.1-4.2)
7. probability & conditional probability computations (4.1-4.2)
8. expectation & variance of r.v’s & basic properties (4.4-4.6)
   expectation = center of mass of probability distribution
   variance = measure of dispersion (spread) of probability
   computational formula for variance:  $\text{Var}(X) = \text{E}(X^2) - [\text{E}(X)]^2$
   $\text{E}(aX + b) = a\text{E}(X) + b$  \hspace{1cm} $\text{Var}(aX + b) = a^2\text{Var}(X)$
9. conditional expectation & conditional variance associated with a single random variable (on)
10. Bernoulli, binomial, geometric, neg binomial & hypergeometric r.v.’s (5.1-5.3), Poisson r.v. & poisson process (5.2, 5.4)
11. moment generating function (4.8)
12. jointly distributed r.v.’s, marginal & conditional pmf & pdf (4.3)
13. expectation & variance of linear combinations of r.v.’s (4.5-4.6)
14. Chebychev’s inequality & the weak law of large numbers (4.9)
15. independent r.v.’s, expected product, variance of a sum (4.3)
16. covariance of X & Y, variance of sums of r.v.’s (4.7)
17. uniform & exponential r.v.'s (5.4, 5.6), the memoryless property of the exponential

18. the gamma & normal random variables (5.7, 5.5)

19. probability generating functions (on)

20. transformations of r.v.'s (covered throughout the book)

21. the lognormal random variable (on)

22. the bivariate normal distribution (on)

23. maximum likelihood estimation & unbiasedness (7.2)

24. the Central Limit Theorem & applications (6.3)

25. chi-square, t & F distributions & their relationships to independent standard normals (5.8)

26. the sample mean & the sample variance (6.4)
Teaching Policies & Resources — Syllabus Insert

Administrative Home
The College of Liberal Arts and Sciences is the administrative home of this course and governs matters such as the add/drop deadlines, the second-grade-only option, and other related issues. Different colleges may have different policies. Questions may be addressed to 120 Schaeffer Hall, or see the CLAS Academic Policies Handbook at https://clas.uiowa.edu/students/handbook.

Electronic Communication
University policy specifies that students are responsible for all official correspondences sent to their University of Iowa e-mail address (@uiowa.edu). Faculty and students should use this account for correspondences (Operations Manual, III.15.2, k.11).

Accommodations for Disabilities
The University of Iowa is committed to providing an educational experience that is accessible to all students. A student may request academic accommodations for a disability (which includes but is not limited to mental health, attention, learning, vision, and physical or health-related conditions). A student seeking academic accommodations should first register with Student Disability Services and then meet with the course instructor privately in the instructor’s office to make particular arrangements. Reasonable accommodations are established through an interactive process between the student, instructor, and SDS. See https://sds.studentlife.uiowa.edu/ for information.

Nondiscrimination in the Classroom
The University of Iowa is committed to making the classroom a respectful and inclusive space for all people irrespective of their gender, sexual, racial, religious or other identities. Toward this goal, students are invited to optionally share their preferred names and pronouns with their instructors and classmates. The University of Iowa prohibits discrimination and harassment against individuals on the basis of race, class, gender, sexual orientation, national origin, and other identity categories set forth in the University’s Human Rights policy. For more information, contact the Office of Equal Opportunity and Diversity, diversity@uiowa.edu, or visit diversity.uiowa.edu.
Academic Honesty
All CLAS students or students taking classes offered by CLAS have, in essence, agreed to the College's Code of Academic Honesty: "I pledge to do my own academic work and to excel to the best of my abilities, upholding the IOWA Challenge. I promise not to lie about my academic work, to cheat, or to steal the words or ideas of others; nor will I help fellow students to violate the Code of Academic Honesty." Any student committing academic misconduct is reported to the College and placed on disciplinary probation or may be suspended or expelled (CLAS Academic Policies Handbook).

CLAS Final Examination Policies
The final examination schedule for each class is announced by the Registrar generally by the fifth week of classes. Final exams are offered only during the official final examination period. No exams of any kind are allowed during the last week of classes. All students should plan on being at the UI through the final examination period. Once the Registrar has announced the date, time, and location of each final exam, the complete schedule will be published on the Registrar's web site and will be shared with instructors and students. It is the student's responsibility to know the date, time, and place of a final exam.

Making a Suggestion or a Complaint
Students with a suggestion or complaint should first visit with the instructor (and the course supervisor), and then with the departmental DEO. Complaints must be made within six months of the incident (CLAS Academic Policies Handbook).

Understanding Sexual Harassment
Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI Office of the Sexual Misconduct Response Coordinator for assistance, definitions, and the full University policy.

Reacting Safely to Severe Weather
In severe weather, class members should seek appropriate shelter immediately, leaving the classroom if necessary. The class will continue if possible when the event is over. For more information on Hawk Alert and the siren warning system, visit the Department of Public Safety website.