Office Hrs: TBA. Students who seek out-of-class help from me are expected to have excellent attendance in the lecture.

Text: Hogg & Tanis 8th ed.

Classroom decorum: Please do not arrive late or leave early, or engage in any “distracting” activities (reading newspapers, communicating with others, web-surfing, etc.)

Attendance policy: Attendance will not be taken, but is strongly encouraged.

Homework: You will work in teams of 4 or 5. HW is due in lecture. Assignments & due dates will be posted on ICON content. Each team makes a single submission. HW should be neat & stapled, with team member names in the top right corner. Late HW: before 5PM on date due = 10% penalty, the weekday after = 25%, 2 weekdays after = 50%, all other = 100%.

Exams & Quizzes: 8-10 twenty-minute quizzes will be given (on Wednesday’s). In addition, a 2-hour midterm exam will be given during the semester on a Thursday evening (date TBA), & a cumulative final exam during Finals Week. Single-purpose calculators (no smart phones, etc.) are to be used on exams & quizzes. ALL materials are to be placed directly into my hands, or those of a proctor.

Make-ups: Make-up exams/quizzes will be given on rare occasions. If something unexpected arises (emergency, illness, religious, etc.) let me know as soon as possible, and we will discuss your situation.

Grades:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOMEWORK</td>
<td>20%</td>
</tr>
<tr>
<td>QUIZZES</td>
<td>25%</td>
</tr>
<tr>
<td>8-10 on Wednesdays</td>
<td></td>
</tr>
<tr>
<td>MIDTERM EXAM</td>
<td>25%</td>
</tr>
<tr>
<td>6:30-8:30 PM, Thursday 17 Oct</td>
<td></td>
</tr>
<tr>
<td>CUMULATIVE FINAL EXAM</td>
<td>30%</td>
</tr>
<tr>
<td>During finals week</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

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

Tutors: For a list of independent tutors go to http://www.stat.uiowa.edu/resources/tutoring

Disabled students: I would like to hear from anyone who has a disability that may require some modification of seating, testing, or other class requirements so that appropriate arrangements may be made. Please see me after class or during office hours.

Policies: Course policies are governed by the College of Liberal Arts and Sciences. For University policies regarding Student Rights and Responsibilities go to http://www.clas.uiowa.edu/students/academic_handbook/

DEO: Prof. Tierney, 241 SH, 335-0712, luke-tierney@uiowa.edu
S = Sample space, Events = subsets of S
Probability = a set function from the events to [0,1]

Axioms: \(0 \leq P(E) \leq 1\), \(P(S) = 1\), **countable additivity**

Complementation rule & Addition rule

Equally likely outcomes, counting principals, \(n\) choose \(k\)

Conditional probability
Independent events \(P(EF) = P(E)P(F)\)
mutually exclusive events

Law of total probability (computation of probabilities by conditioning)
\(P(1^{st} \text{ player wins}), P(\text{E occurs before F}), P(\text{reach state A before state B})\)

**Bayes’ Formula**

random variables (discrete & continuous)

pmf’s & CDF’s
expectation & its properties, \(E(f(X))\), \(E(\text{sum})\)

Variance

joint distributions… we’ll work with \(f(x, y) = \frac{6}{5}(x + 2y)\) \(0 < x < y < 1\)

independent random variables

Covariance, definition & computational formula,

\(\text{Var}(X + Y)\) & \(E(XY)\) when \(X\&Y\) are independent

conditional distributions, expectation, variance
double expectation formula (expectation of a random number of r.v.’s), variance formula

mgf’s & its properties

transformations of random variables

Chebychev’s inequality

**Bernoulli(p)**

binomial\((n, p)\)

**geometric\((p)\)**, \(P( X = k \mid X + Y = n)\)

**Poisson\((\lambda)\)**, change of time scale, \(P( X = k \mid X + Y = n)\)

**hypergeometric** (sampling without replacement)

**uniform\((a, b)\)**

**normal** (linear transformation of a normal & linear combinations of independent normals)

**exponential\((\lambda)\)** (memoryless property, distribution of a minimum of exponentials)

**gamma**

**chi-square, t, F**

**lognormal**

**bivariate normal**

Estimation (S:131 topics)
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 http://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

A student seeking academic accommodations should first register with Student Disability Services and then meet privately with the course instructor to make particular arrangements. See www.uiowa.edu/~sds/ for more information.

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 tenth day 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 Comprehensive Guide on Sexual Harassment 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.