

Statistics 341

Fall 2008

Instructor: Dr. Froelich
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website: <http://www.public.iastate.edu/~amyf/stat341/homepage.html>
Office Hours: 11:00 - 11:50 am MWF, 9:00 - 9:50 am T and by appointment
(in Parks Library outside of Bookends Cafe)
Lecture: MWF 9:00am to 9:50am, MoleBio 1420
Required Text: *Mathematical Statistics with Applications*, 7th Ed., Wackerly, Mendenhall,
& Scheaffer, Duxbury, 2008
Course Description: Probability; distribution functions and their properties; classical
discrete and continuous distributions; moment generating functions,
multivariate probability distributions and their properties, simulation
of random variables and use of the R statistical package.

Course Policies:

- **Disability:** Iowa State University complies with the Americans with Disabilities Act and Sect 504 of the Rehabilitation Act. If you have a disability and anticipate needing accommodations in this course, please contact me within the first two weeks of the semester. Retroactive requests for accommodations will not be honored. Before meeting with me, you will need to obtain a SAAR form with recommendations for accommodations from the Disability Resources Office, located in Room 1076 on the main floor of the Student Services Building. Their telephone number is 515-294-6624.
- **Academic Dishonesty:** This class will follow Iowa State University policy on academic dishonesty found in the Iowa State University Catalog. A score of zero will be given for the entire assignment in which the academic dishonesty occurred. If a pattern of academic dishonesty has been found to occur, a grade of F for the entire course may be given
- **Exams:** The first three exams will be given during regular class time in **Carver 205**. If you have a conflict for a particular exam, you must let me know before the time of the exam. Failure to do so will result in a 0 for the exam.
- **Final Exam:** The final exam in Statistics 341 is cumulative with special emphasis on the material covered since Exam #3. The final exam is **tentatively** scheduled for Monday, December 15 from 7:30-9:30am. **Do not make plans for semester break until you know your final exam schedule.**
- **Homework:** Individual practice is an important part of learning. For this reason homework problems will be assigned throughout the semester. Homework assignments will be due at the end of lecture on the due date. 20% of the total points possible for the assignment will be deducted for any assignment turned in up to one class day late. Homework assignments turned in more than one class day late will not be accepted. Solutions to the homework problems will be posted on the course website.
- **Computing:** Many class activities and homework assignments will incorporate work on the computer using the statistical analysis package R. R is used in Stat 341 to help you gain conceptual understanding of the course material. Be sure to allow enough time to complete assignments. It is your responsibility to allow for computer failures and/or difficulty finding a computer with the R software. Please see the course webpage for instructions on downloading R to your own computer and for using R in Stat 341.
- **Grading:** Letter grades including plus/minus will be given based on performance on exams and homework. The specific grading scale is not determined until after all grades have been calculated. The percentage distribution is as follows:

Lowest Percentage Score of Exams 1, 2, 3	10%
Other Two Exams	20% each
Final Exam	30%
Homework	20%

Tentative Dates	Material	Text
M August 25	Characterizing Data	Section 1.2, 1.3, 1.4
W August 27	Characterizing Data	Section 1.2, 1.3, 1.4
F August 29	Probability	Section 2.1, 2.2, 2.3
W September 3	Set Notation; Probability	Section 2.4, 2.5
F September 5	Set Notation; Probability; Counting	Section 2.4, 2.5, 2.6
M September 8	Counting	Section 2.6
W September 10	Conditional Probability	Section 2.7
F September 12	Probability Laws	Section 2.8
M September 15	Probability	Section 2.9
W September 17	Bayes' Rule	Section 2.10
F September 19	Discrete Random Variables	Section 3.1, 3.2
M September 22	Discrete Random Variables; Expected Values	Section 3.1, 3.2, 3.3
W September 24	Expected Values	Section 3.3
F September 26	EXAM #1	Chapters 1 and 2
M September 29	Binomial Dist.	Section 3.4
W October 1	Binomial Dist.	Section 3.4
F October 3	Geometric Dist.	Section 3.5
M October 6	Hypergeometric Dist.	Section 3.7
W October 8	Poisson Dist.	Section 3.8
F October 10	Moment Generating Functions	Section 3.9
M October 13	Continuous Random Variables	Section 4.1, 4.2
W October 15	Continuous Random Variables	Section 4.1, 4.2
F October 17	EXAM #2	Chapter 3
M October 20	Expected Values	Section 4.3
W October 22	Expected Values	Section 4.3
F October 24	Uniform Dist.	Section 4.4
M October 27	Normal Dist.	Section 4.5
W October 29	Normal Dist.	Section 4.5
F October 31	Gamma Dist.	Section 4.6
M November 3	Gamma Dist.	Section 4.6
W November 5	Beta Dist.	Section 4.7
F November 7	Moment Generating Functions	Section 4.9
M November 10	Multivariate Dist. Discrete	Section 5.1, 5.2, 5.3, 5.4
W November 12	Multivariate Dist. Discrete	Section 5.1, 5.2, 5.3, 5.4
F November 14	EXAM #3	Chapter 4
M November 17	Multivariate Dist. Discrete	Section 5.1, 5.2, 5.3, 5.4
W November 19	Multivariate Dist. Continuous	Section 5.1, 5.2, 5.3, 5.4
F November 21	Multivariate Dist. Continuous	Section 5.1, 5.2, 5.3, 5.4
M December 1	Multivariate Dist. Continuous	Section 5.1, 5.2, 5.3, 5.4
W December 3	Expected Values	Section 5.5, 5.6
F December 5	Expected Values; Covariances	Section 5.5, 5.6, 5.7
M December 8	Covariances; Expected Values	Section 5.7, 5.8
W December 10	Expected Values	Section 5.8
F December 12	REVIEW for FINAL EXAM	
M December 15 7:30-9:30am	FINAL EXAM (Tentative)	Chapters 1-5