

## STAT:3510:B (22S:101) – BIOSTATISTICS, Fall 2015

**Instructor:** Dr. Erning Li

Office hours: MWF 11:00am—12:00noon, or by appointment

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**TA and Grader:** Elizabeth Held (discussion sections and homework grading)

Office hours: TBA

Office: 366 SH

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**Class Meeting:** MWF 2:30–3:20pm in 1505 SC

**Department Information:** Department of Statistics and Actuarial Science, 241 SH, Phone 335-2082

**Departmental Executive Officer:** Professor Joseph Lang, 241 SH, Phone 335-0712, E-mail *joseph-lang@uiowa.edu*

**Course Prerequisite:** MATH:0100 (22M:001) Basic Algebra or equivalent.

**Textbook:** *An Introduction to Biostatistics*, 3rd edition, by Thomas Glover and Kevin Mitchell, 2015, Waveland Press. <http://www.waveland.com/browse.php?t=203>

**Lecture Notes:** My lecture notes will be intensively used during class meetings and will be posted on ICON in advance. It is highly recommended that students bring a copy of the lecture notes to class.

**ICON course website:** Course materials such as syllabus, lecture notes, homework assignments, practice problems, solutions, grades, etc. will be posted on ICON. Make sure your email address on ICON class roster is valid, since I use ICON to email the class important announcements.

**Course Description and Objectives:** Introduction to statistical concepts and methods for the biological sciences including descriptive statistics, elementary probability, sampling distributions, confidence intervals, parametric and nonparametric methods, one-way ANOVA, correlation and linear regression.

Upon completion of the course students are expected to

- have knowledge on basic statistical methods commonly used in the biological sciences;

- be able to understand and interpret elementary statistical analyses reported in the life science literature;
- be able to appreciate and evaluate basic statistical methods in their scientific field.

**Homework:** Homework will be assigned regularly and posted on ICON. Students will have about one week to work on each assignment. An assignment will be due at the beginning of the class on its due date. Unless prior or prompt arrangements are made for reasons judged to be acceptable by Dr. Li, homework turned in after it is due will receive 0 (zero) credit. No soft (electronic) copies of homework will be accepted. Homework should be neat and stapled, with name and assignment number at the top of the first page.

Students are encouraged to read the materials before attempting the homework; first do the work on your own, and then discuss with others to work through challenging problems. Everyone must write up his/her own answers in the assignments.

**Exams:**

- Midterm Exam 1 tentative date Friday, October 2, 2015;  
50 minutes in class, coverage Chapters 1–3.
- Midterm Exam 2 tentative date Friday, November 6, 2015;  
50 minutes in class, coverage Chapters 4–6.
- Final Exam TBA—see university schedule;  
with emphasis on Chapters 7, 8, & 10.

Calculators may be used for exams. You can bring *one* standard size (8.5" × 11") sheet of paper with anything you want written on both sides to the first midterm exam, *two* such help sheets to the second midterm exam, and *three* such help sheets to the final exam. Other than these, they are all closed-book exams.

Students who miss an exam without documented university-approved excuses will receive 0 (zero) score on that exam. A makeup exam (different but equivalent to the original) for a missed exam will be permitted only when the circumstances of missing the exam satisfy university policies. If you have university-accepted reasons to miss an exam, notification and documentation (written evidence) should be provided to Dr. Li as soon as possible (e.g., no later than one week after a midterm exam).

**Grading:** A numerical overall score on a scale of 0 to 100 will be determined according to the following breakdown:

Homework	16%
Midterm exam 1	27%
Midterm exam 2	27%
Final Exam	30%

Conversion of these scores into letter grades will be made according to the following scale:

[90, 100]	<i>A</i>
[88, 90)	<i>A–</i>
[86, 88)	<i>B+</i>
[80, 86)	<i>B</i>
[77, 80)	<i>B–</i>
[73, 77)	<i>C+</i>
[63, 73)	<i>C</i>
[60, 63)	<i>C–</i>
[57, 60)	<i>D+</i>
[52, 57)	<i>D</i>
[50, 52)	<i>D–</i>
< 50	<i>F</i>

At the discretion of Dr. Li, depending on overall class performance and attendance, these ranges may be adjusted (but only downward - criteria will only become easier, not harder). *A+* will be rarely given.

**Attendance and Classroom Environment:** Attendance is very vital to your success in this class. Regular attendance is expected and roll will be taken on random dates. Students who are absent from class without acceptable excuse should not seek help regarding missed lectures during office hours.

In calss, please refrain from talking on cell phones or texting, using laptops/tablets etc. (not for note-taking purpose), and prolonged conversation with a fellow student. Wireless-capable devices such as laptops, tablets, smartphones, iWatches, etc. must be put away during exams.

### UI and CLAS policies and procedures

**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 with the course instructor

privately in the instructor's office to make particular arrangements.  
See <http://sds.studentlife.uiowa.edu/> 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 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.

Do not plan your end of the semester travel plans until the final exam schedule is made public.

**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.