Policies relating to this course are governed by the College of Liberal Arts and Sciences.

**Instructor**: Subhashish Chakravarty

**Office**: 368 SH; Phone: 5-1915 (office)

**Email**: subhashish-chakravarty-1@uiowa.edu (subject line must begin with: biostat)

**Office Hours**: M,W 1:30-3:00, Th 2:30-3:20 or by appointment.

**TA**: Xiao Yang

**Office**: 266 SH; Phone: 5-2078 (office)

**Email**: xiao-yang@uiowa.edu (subject line must begin with: biostat)

**Office Hours**: TBD

**DEO**: Luke Tierney, 241 Schaeffer Hall

**Description, Objectives and Goals of the Course:**

This is an introductory course on statistical reasoning in biology, health sciences, and related fields. The course is entirely Bayesian. Topics covered include basic concepts of probability, statistical inference, and decision theory (if time permits).

Applications covered in this course include diagnostic testing; inference on rates, relative risks, and odds ratios; inference on means; basic experimental design; linear, logistic, and proportional-hazards regression; survival analysis; and statistical adjustment of means, odds ratios, and hazard ratios.

The course provides an introduction to the statistical computer packages WinBUGS and SAS. Upon completion of the course students are expected to be able to execute basic statistical analyses using SAS and WinBUGS and to be able to interpret statistical reports in the biomedical literature that employ methods covered in this course.

**Text**: Biostatistics: A Bayesian Introduction, by George G. Woodworth

**Grading System:**

The course grade not “curved” to achieve a specified grade distribution. However, the College of Liberal and the Educational Policy Committee recommend a very judicious use of
the A+ grade, asking that it be used only in extraordinary situations. In this course, an A+ grade requires at least a 99% overall average. Other grades are assigned this way:

92-98 A 90-91 A- / 88-89 B+ 82-87 B, 80-81 B- / 78-79 C+, 72-77 C, 70-71 C- / 50-69 D 0-49 F

**Assignments:** 20% of course grade

Questions assigned on WFM will be due the following Friday, unless noted otherwise. Some assignments require the use of a computer; instruction will be provided on all software used in the course.

**Quizzes:** 20% of course grade

Weekly quizzes on Friday at the end of the class period. One question to be done in approximately 10 min. The question would require a simple application of the material covered in the homework assignment.

**Exams:**

**Midterm:** 25% of course grade. In class midterm on March 6th 2009.

**Final Exam:** 30% of course grade.

**Course Policies:**

A **calculator** will be extremely useful. Most quiz questions would require its use.

**Attendance** will taken during discussion sessions by the TA: 5% of course grade.

Assignments must be turned in at the lecture on the due date. Late submission will be excused for any of the reasons listed under “Missed Exam Policy” below.

**Extra Help:** Several graduate students have volunteered to independently tutor students in various 22S: courses at mutually-arranged times and fees. Please check the web site www.stat.uiowa.edu/courses/tutoring.html for tutoring details.

---

**College of Liberal Arts and Sciences: Policies and Procedures**

**Administrative Home of the Course**

The administrative home of this course is the College of Liberal Arts and Sciences, which governs academic matters relating to the course such as the add/drop deadlines, the second-grade-only option, issues concerning academic fraud or academic probation, and how credits are applied for various graduation requirements. Different colleges might have different policies. If you have questions about these or other CLAS policies, visit your academic advisor or 120 Schaeffer Hall and speak with the staff. The CLAS Academic Handbook also contains important CLAS academic policies:
**Academic Fraud**

Plagiarism and any other activities that result in a student presenting work that is not his or her own are academic fraud. Academic fraud is reported to the departmental DEO and then to the Associate Dean for Academic Programs and Services in the College of Liberal Arts and Sciences who deals with academic fraud according to these guidelines: www.clas.uiowa.edu/students/academic_handbook/ix.shtml

**Making a Suggestion or a Complaint**

Students have the right to make suggestions or complaints and should first visit with the instructor, then with the departmental DEO. All complaints must be made within six months of the incident.

www.clas.uiowa.edu/students/academic_handbook/ix.shtml#5

**Accommodations for Disabilities**

A student seeking academic accommodations first must register with Student Disability Services and then meet with an SDS counselor who determines eligibility for services. A student approved for accommodations should meet privately with the course instructor to arrange particular accommodations.

www.uiowa.edu/~sds/

**Understanding Sexual Harassment**

Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. Visit www.sexualharassment.uiowa.edu/ for definitions, assistance, and the full policy.

**Reacting Safely to Severe Weather**

The University of Iowa Operations Manual section 16.14 outlines appropriate responses to a tornado (i) or to a similar crisis. If a tornado or other severe weather is indicated by the UI outdoor warning system, members of the class should seek shelter in rooms and corridors in the innermost part of a building at the lowest level, staying clear of windows, corridors with windows, or large free-standing expanses such as auditoriums and cafeterias. The class will resume, if possible, after the UI outdoor warning system announces that the severe weather threat has ended.

**Student Classroom Behavior**

The ability to learn is lessened when students engage in inappropriate classroom behavior, distracting others; such behaviors are a violation of the Code of Student Life.
When disruptive activity occurs, a University instructor has the authority to determine classroom seating patterns and to request that a student exit the classroom, laboratory, or other area used for instruction immediately for the remainder of the period. One-day suspensions are reported to appropriate departmental, collegiate, and Student Services personnel (Office of the Vice President for Student Services and Dean of Students).

Unacceptable behaviors include but are not limited to, web surfing unrelated to the class, cell phone use, reading material unrelated to the class, conversations unrelated to the class, conspicuous inattention, and leaving early except for sudden illness without notifying the instructor.

**University Examination Policies**

**Missed Exam Policy**
University policy requires that students be permitted to make up examinations missed because of illness, mandatory religious obligations, certain University activities, or unavoidable circumstances. Excused absence forms are required and are available on the Registrar web site.

[www.registrar.uiowa.edu/forms/absence.pdf](http://www.registrar.uiowa.edu/forms/absence.pdf)

**Final Examinations**
An undergraduate student who has two final examinations scheduled for the same period or more than three examinations scheduled for the same day may file a request for a change of schedule before the published deadline at the Registrar’s Service Center, 17 Calvin Hall, 8-4 M-F, (384-4300).

**Class Schedule**
Slides and other supplementary materials will be posted on the ICON website under “contents.” Links to spreadsheet applets and data files for the computer assignments will be posted there as well.

<table>
<thead>
<tr>
<th>WEEK</th>
<th>CHAPTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2 and 3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>7 + Midterm</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>9</td>
<td>Spring Break</td>
</tr>
<tr>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>16</td>
<td>11</td>
</tr>
</tbody>
</table>