

# Fundamentals of Biostatistics - STA 5172

## Spring 2013

**Prerequisite:** A previous course in statistics or instructor permission.

**Classes:** Tuesday/Thursday 9:30 AM – 10:45 PM, **HCB 0207**

**Instructor:** Dr. Debdeep Pati

- Email: debdeep@stat.fsu.edu (*When you send me an e-mail, use subject-line "[STA5172]"* )
- Office: OSB 209A
- Office Hours: Tuesday/ Thursday: 2:00 – 3:00 pm (*If you are unable to meet at these times, then schedule an appointment with the instructor for an alternative time.*)
- Mailbox location: 214 OSB (accessible during 8:00am-5:00pm on working days only)

**Teaching Assistant:** Steve Chung

- Email: schung@stat.fsu.edu
- Office: OSB 104F
- Office Hours: Monday/ Wednesday: 10:50 a.m. to 11:50am

**Course Webpage:**

- **Class website:** <http://stat.fsu.edu/~dpati/5172>. The class web site will have important information about the course.
- **Blackboard class website:** To access the blackboard site go to <http://campus.fsu.edu/> and login using your FSUID and password. Grades will be posted on that site and you can access it. Also announcements may be posted there. I will encourage you to frequently check that web site.

**Textbooks (Recommended):** The notes provided in the class will be sufficient. The material will be based on

- *Fundamentals of Biostatistics, 6th Ed, Bernard Rosner.* (BR)
- *Epidemiology Study Design and Data Analysis, 2nd Ed, Mark Woodward.* (MW)

**Course objective:** This course introduces students to the statistical methods used in studying the prevention of disease in human populations.

**Syllabus:** Tentatively, we will cover following topics.

Topic	Chapter
Introduction, descriptive Statistics	Ch 2(BR)
Probability, discrete and continuous distributions	Ch 3,4,5 (BR)
Estimation and hypothesis testing	Ch 6,7,8 (BR)
Nonparametric methods, regression and correlation	Ch 9,11 (BR)
Sampling and sample size determination	Ch 8(MW)
Meta Analysis	Ch 12 (MW)
Study design, case control and cohort studies	Ch 5,6 (MW)
Bayesian methods	notes

**Software:** We will primarily use *R* for data analysis. Refer to <http://cran.r-project.org/doc/manuals/R-intro.pdf> for an introduction.

**Grading policies:** Homeworks (25%), Attendance(5%), 2 mid-terms (40%) and a final project (30%). The highest of the two midterms will be assigned 25 % and the other 15%. There is no curving in this class. The following scheme will be used to convert the percentage points to letter grades.

$\geq 93\%$	A	90-93%	A-	87-90%	B+
84-87%	B	80-84%	B-	77-80%	C+
73-77%	C	70-73%	C-	67-70%	D+
63-67%	D	60-63%	D-	< 60%	Fail

Table 1: Percentage to grade conversion

**Attendance:** You will get the 5% points for attendance and class participation if you do not miss more than four classes. Please note that if you miss more, except in very special cases, you will get 0% on attendance. You are strongly encouraged to attend all classes.

**Homeworks:**

- Homework assignments and their due dates will be communicated in class. The solutions must be handed to me during class on the due date. Late assignments will not be accepted for any reasons, medical or otherwise. One assignment, with the lowest grade, will be dropped. Please write clear and detailed answers to the homework problems. Homework solutions will be posted at the time the homework is due. Any questions concerning homework grades should be addressed to the grader during his/her office hours.
- To receive credit for the homework you must show **all** work neatly, write in blue or black pen or pencil (never in red), clearly **label** each problem, **circle** your final answers, **STAPLE** your entire assignment together in the correct order with your **FULL NAME PRINTED** (as appeared in the blackboard) on the first page. Any homework violating any of these rules will receive a grade of **ZERO** for the entire assignment.
- Each homework carries equal weight.
- You are allowed to work with other students on the homework problems, however, verbatim copying of homework is absolutely forbidden and constitutes a violation of the Honor Code. Therefore, each student must ultimately produce his or her own homework to be turned in and graded.

**Exam dates:**

- Midterm 1: Feb 21 (Thurs). (Tentative)
- Midterm 2: March 28 (Thurs). (Tentative)
- Project presentation dates: To be announced.

**Add/drop dates:** See [http://registrar.fsu.edu/dir\\_class/fall/acad\\_cal.htm](http://registrar.fsu.edu/dir_class/fall/acad_cal.htm)

**Homework/exam regrade:** You have one week to request a regrade of a homework or exam from the date on which the graded homework/exam is available to the students of the class. Submit a written request detailing the nature of the grading error to the grader or instructor along with the relevant homework or exam.

**Exam policies:** The exams will be closed book and closed notes, but the use of a pocket calculator will be permitted. No student is exempt from any exams. If you have a medical or some other situation that prevents you from appearing at the exam, you have to talk to me in advance and obtain permission.

*“The Academic Honour System of The Florida State University is based on the premise that each student has the responsibility to uphold the highest standards of academic integrity in the students work, refuse to tolerate violations of academic integrity in the academic community, and foster a high sense of integrity and social responsibility on the part of University community.”* Please note that violations of this Academic Honor System will not be tolerated in this class. Specifically, incidents of plagiarism of any type or referring to any unauthorized material during examinations will be rigorously pursued by this instructor. Before submitting any work for this class, please read the Academic Honor System in its entirety (as found in the FSU General Bulletin and in the FSU Student Handbook) and ask the instructor to clarify any of its expectations that you do not understand.

**Disability policy:** Students with disabilities needing academic accommodation should:

1. register with and provide documentation to the Student Disability Resource Center; and

2. bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class.

This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center 874 Traditions Way

108 Student Services Building

Florida State University

Tallahassee, FL 32306-4167

(850) 644-9566 (voice)

(850) 644-8504 (TDD)

sdrc@admin.fsu.edu

<http://www.disabilitycenter.fsu.edu/>

**Free Tutoring from FSU:** On-campus tutoring and writing assistance is available for many courses at Florida State University. For more information, visit the Academic Center for Excellence (ACE) Tutoring Services comprehensive list of on-campus tutoring options - see <http://ace.fsu.edu/tutoring> or contact [tutor@fsu.edu](mailto:tutor@fsu.edu). High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.

**Syllabus Change Policy:** Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.