Biostat 875

ADVANCED TOPICS IN SURVIVAL ANALYSIS

Winter 2010 (3 Credits)

Instructor:
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Class web: ctools
Office hours: 4:00 - 5:00 pm Mon & Wed (or by appointment)

Lectures:
Mon & Wed 5:00 - 6:30 pm in room 4332 SPH II.

Textbooks:

Required:

Recommended:

Prerequisites:
Stats 610 & 611
Course format:
About 40% of the lectures will follow the required textbook closely, which will cover: counting process and martingale theory, nonparametric estimation and hypothesis testing, proportional hazards models, and corresponding large sample results using martingales. Another 40～50% will cover topics selected from accelerated failure time models, additive hazards models, multivariate failure times, recurrent events, interval censoring, missing data problems, and survival analysis with high-dimensional covariates. Examples of data analysis will be illustrated. As an alternative tool to prove asymptotic results for survival models, the modern empirical process theory will be introduced briefly. The remaining time will be devoted to the discussions on topics selected by students.

Homework:
About 4～5 assignments. Handout on Wednesdays; due following Wednesday.

Exams:
There will be a midterm exam.

Project:
A paper about 10 pages based on literature review, plus a 25～30-minute talk toward the end of the term. A list of potential topics and papers will be supplied. A topic related to your own (potential) dissertation research would be the best.

Grading:
Attendance: 10%; Homework: 30%; Midterm: 30%; Project: 30%

Academic Integrity:
The faculty of the School of Public Health believes that the conduct of a student registered or taking courses in the School should be consistent with that of a professional person. Courtesy, honesty and respect should be shown by students toward faculty members, guest lecturers, administrative support staff and fellow students. Similarly, students should expect faculty to treat them fairly, showing respect for their ideas and opinions and striving to help them achieve maximum benefits from their experience in the School.

Student academic misconduct refers to behavior that may include plagiarism, cheating, fabrication, falsification of records or official documents, intentional misuse of equipment or materials (including library materials), and aiding and abetting the perpetration of such acts. The preparation of reports, papers, and examinations, assigned on an individual basis, must represent each student’s own effort. Reference sources should be indicated clearly. The use of assistance from other students or aids of any kind during a written examination, except when the use of aids such as electronic devices, books or notes has been approved by an instructor, is a violation of the standard of academic conduct.