Course: STAT 547 – Survival Analysis

Semester: Spring 2015

Prerequisites: STAT 512

Instructor: Dr. Robert Mnatsakanov, 126 Stansbury Hall
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Schedule: Tuesday and Thursday 11:30 a.m. – 12:45 p.m.

Location: Room 139 Stansbury Hall

Office Hours: Wednesday 3:00 – 5:00 p.m.

Course Objectives: The objectives of this course are to present different concepts from Survival analysis. We outline the basic constructions for estimation of population mortality rate and survival probability. The models with censored and truncated observations will be studied. The asymptotic properties of Kaplan-Meier estimate will be discussed. In the models with censored observations the related point processes will be introduced and their applications in one- and two-sample problems will be demonstrated.

Expected Learning Outcomes:

1. Students will be able to estimate the population hazard rate, cumulative hazard rate as well as the mean residual life time.

2. Students will gain the ability to properly summarize the information from different incomplete models.

3. Students will be able to able to test hypotheses about the survival function in the models with covariates.

4. Students will be able to solve many practical problems using R-programming codes.

Required Textbook:


Other References: Statistical Methods with Application to Demography and Life Insurance, Estate Khmaladze (2013).
Grading: 2 Exams (@ 30% each) 60%
2 Quizzes 10%
Final Exam 30%

Grade Assignment: 100 – 90 A
89 – 80 B
79 – 70 C
69 – 60 D
59 – 0 F

Grading Policy: No make-up exams except by prior arrangement with instructor

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Any student who, because of disability, may require special arrangements in order to meet course requirements should contact the instructor as soon as possible to make necessary accommodations.