



AYDIN ADNAN MENDERES UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
BIostatISTICS
BIostatISTICS (MEDICAL)
BIostatISTICS (MEDICAL) MASTER
COURSE INFORMATION FORM

Course Title	Survival Analysis								
Course Code	BİS526		Course Level		Second Cycle (Master's Degree)				
ECTS Credit	4	Workload	99 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	Introduce the main statistical concepts, methods and models used in the analysis of survival data.								
Course Content	Theory and applications of life table, Kaplan Meier and Cox regression analysis.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Case Study, Project Based Study, Individual Study								
Name of Lecturer(s)	Prof. Mevlüt TÜRE								

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Özdamar, K. (2001). SPSS İle Biyoistatistik, Kaan Kitapevi. Baskı. Eskişehir.
2	Kleinbaum, D. G. (1998). Survival analysis, a self-learning text. Biometrical Journal: Journal of Mathematical Methods in Biosciences, 40(1), 107-108.
3	Tableman, M., & Kim, J. S. (2003). Survival analysis using S: analysis of time-to-event data. Chapman and Hall/CRC.
4	Le, C. T., & Le. (1997). Applied survival analysis. New York: Wiley.

Week	Weekly Detailed Course Contents	
1	Theoretical	Basic definitions and concepts in survival analysis
2	Theoretical	Parametric models: exponential
3	Theoretical	Weibull and other parametric models
4	Theoretical	Life tables method
5	Theoretical	Kaplan-Meier estimator
6	Theoretical	Comparison of Kaplan-Meier survival curves
7	Theoretical	Cox regression model
8	Intermediate Exam	Midterm exam
9	Theoretical	Assumptions in Cox regression model
10	Theoretical	Parameter estimation in Cox regression model
11	Theoretical	Testing the significance of coefficients in Cox regression model
12	Theoretical	Interpretation of coefficients in Cox regression model
13	Theoretical	Application of Cox regression method with simulated data
14	Theoretical	Multivariate survival models
15	Theoretical	Literature review and discussion
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Reading	5	0	3	15
Individual Work	14	0	2	28
Midterm Examination	1	10	1	11



Final Examination	1	15	2	17
	Total Workload (Hours)			99
	[Total Workload (Hours) / 25*] = ECTS			4
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	To be able to explain the key features of survival data and different types of censoring and truncation
2	To be able to define hazard and other basic concepts of survival analysis
3	To be able to use non-parametric methods such as the Kaplan-Meier estimator and the log-rank test to analyze survival data
4	To be able to use the Cox proportional hazards model to examine the effect of covariates to survival
5	To be able to implement hypothesis tests for survival data
6	To be able to apply the statistical package SPSS to analyze survival data, and interpret SPSS output

Programme Outcomes (*Biostatistics (Medical) Master*)

1	To be able to understand the interdisciplinary interaction related with biostatistics.
2	to be able to use Theoretical and practical knowledge at the level of expertise.
3	To be able to interpret the information by integrating information from different disciplines and create new information
4	To be able to analyze the problems encountered by using research methods
5	to be able to conduct a study as an independent specialist
6	To be able to formulate solutions for complex unpredictable problems encountered by developing new approaches and taking responsibility.
7	To be able to resolve problems in environments that require leadership.
8	To be able to evaluate and direct knowledge and skills with a critical approach at the level of expertise.
9	To be able to give statistical advise at the beginning stages of preparing health related projects
10	To be able to get the knowledge and the ability of using statistical packages

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5	L6
P1	3	3	3	3	3	2
P2	4	4	4	4	5	5
P3	2	4	3	3	4	3
P4	3	3	3	3	4	3
P5	4	3	4	4	4	5
P6	3	3	4	4	4	5
P7	3	2	3	3	4	4
P8	3	2	3	3	4	4
P9	3	2	4	4	5	5
P10	3	1	5	5	3	5

