

**H.U. INSTITUTE OF HEALTH SCIENCES
COURSE SYLLABUS**

PROGRAM NAME		BIOSTATISTICS	
CODE	BIS 620	TITLE	LOGISTIC REGRESSION
LECTURER (S)		ASSOC. PROF. OSMAN SARAÇBAŞI, PhD INSTRUCTOR ERDEM KARABULUT, PhD INSTRUCTOR PINAR ÖZDEMİR GEYİK, PhD	
TYPE	<input type="checkbox"/> COMPULSORY <input type="checkbox"/> SELECTIVE	LANGUAGE	<input checked="" type="checkbox"/> TURKISH <input type="checkbox"/> ENGLISH
LEVEL		<input checked="" type="checkbox"/> MASTER OF SCI. <input type="checkbox"/> DOCTORATE <input type="checkbox"/> PREREQ. PREP.	

THEORETICAL (HRS/WK)	3	PRACTICAL (HRS/WK)	0	H.U. CREDIT	3	ECTS CREDIT	7
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WHAT IS THE IMPORTANCE OF THIS COURSE IN THE PROGRAM'S LEARNING OBJECTIVES																									
PRE-REQUISITE(S)	BIS535																								
COURSE OBJECTIVES	General knowledge of logistic regression methods and being experienced on application of these methods																								
LEARNING OUTCOMES AND ACQUIRED COMPETENCES	Students will be capable of recognizing and applying logistic regression methods and they will acquire sufficient knowledge about model building strategies and managing their models																								
COURSE CONTENT	Introduction to binary logistic regression models, multivariate logistic regression models, model building strategies and methods, and measures of goodness of fit.																								
COURSE SCHEDULE	<table border="1"> <tr> <td>Week 1</td> <td>Introduction to logistic regression, Maximum Likelihood and coefficient estimation</td> </tr> <tr> <td>Week 2</td> <td>Significance tests for coefficients and model, confidence interval of coefficients</td> </tr> <tr> <td>Week 3</td> <td>Multivariate logistic regression: Types of variables, relative comparisons</td> </tr> <tr> <td>Week 4</td> <td>Practice</td> </tr> <tr> <td>Week 5</td> <td>Mid-term exam</td> </tr> <tr> <td>Week 6</td> <td>Interpretation of results, confounding, effect change</td> </tr> <tr> <td>Week 7</td> <td>Model building</td> </tr> <tr> <td>Week 8</td> <td>Assessing the fit of the models</td> </tr> <tr> <td>Week 9</td> <td>Application of logistic regression with different sampling models</td> </tr> <tr> <td>Week 10</td> <td>Practice</td> </tr> <tr> <td>Week 11</td> <td>Mid-term exam</td> </tr> <tr> <td>Week 12</td> <td>Definitions and use of influential observation statistics in logistic regression</td> </tr> </table>	Week 1	Introduction to logistic regression, Maximum Likelihood and coefficient estimation	Week 2	Significance tests for coefficients and model, confidence interval of coefficients	Week 3	Multivariate logistic regression: Types of variables, relative comparisons	Week 4	Practice	Week 5	Mid-term exam	Week 6	Interpretation of results, confounding, effect change	Week 7	Model building	Week 8	Assessing the fit of the models	Week 9	Application of logistic regression with different sampling models	Week 10	Practice	Week 11	Mid-term exam	Week 12	Definitions and use of influential observation statistics in logistic regression
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	Week 13	Group discussions
	Week 14	Group discussions
	Week 15	Group discussions
SUGGESTED COURSE MATERIAL	Hosmer, D., W., Lemeshow, S., Applied Logistic Regression, John Willey & Sons., 2000	
TEACHING METHODS	Research planning presentations, mid-term exams and discussions following the theoretical lectures.	
ASSESSMENT METHODS	Evaluation of building, applying and managing a model at the end of the semester	