

### COURSE RECORD

Code	DSBE 500	Ek-2
Name	Seminar	
Hour per week	0+2 (Theory + Practice)	
Credit	1	
ECTS	5	
Level/Year	Graduate/1	
Semester	Fall/Spring	
Type	Compulsory	
Prerequisites		
Description	Course consists of a series of seminars given by guest-speakers and students who are conducting academic studies in the field of data science. Main aims are to give students an idea about current research and to strengthen students' abilities to communicate their work through effective communication methods. The course must be taken as "Seminar" in any semester during the program and it must be passed with satisfactory grade.	
Objectives	Introducing presentation techniques. Presenting tools and methods to search for necessary motivations and foundations of research tasks. Developing tools for writing a research paper.	
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Conduct literature review related to their research. L02. Define motivations for their research. L03. Write a research paper. L04. Present their research.	

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	3	2	1	1	0	0	0	0	0	0
L02	0	2	0	0	0	0	0	0	0	0
L03	2	2	2	2	0	0	0	0	0	0
L04	1	0	0	0	0	0	0	0	0	0

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Literature review	L01
Writing a research paper	L01, L02
Presentation techniques	L01, L02, L03, L04
Seminars	L01, L02, L04

### DERS BİLGİLERİ

Kodu	DSBE 500
İsmi	Seminer
Haftalık Saati	0+2 (Teori + Pratik)
Kredi	1

AKTS	5
Seviye/Yıl	Lisansüstü/1
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Zorunlu
Ön Şart	
İçerik	Ders, konuk konuşmacılar ve veri bilimi alanında akademik çalışmalar yürüten öğrenciler tarafından verilen bir dizi seminerden oluşmaktadır. Ders, öğrencilere güncel araştırmalar hakkında bir fikir vermeyi ve aynı zamanda öğrencilerin çalışmalarını etkili iletişim yöntemleriyle iletme becerilerini güçlendirmeyi amaçlamaktadır. Seminer dersi, program süresince herhangi bir yarıyılıda "Seminer" olarak alınmalı ve geçer not ile geçilmelidir.

### COURSE RECORD

Code	<b>DSBE 510</b>
Name	<b>Introduction to Data Science</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1
Semester	Fall/Spring
Type	Compulsory
Prerequisites	
Description	The course introduces the fundamental programming languages of data science. Main aims of the course are to teach, at the basic level, subjects of data collection, data grouping, data management, fast and efficient access to reliable data, and Python and R programming languages. In this way, it is planned to introduce the programming languages for the first time to students who do not have prior programming knowledge, to teach the basics of coding, and to help students gain the ability of applying the course content in the sub-branches of business and economic disciplines.
Objectives	Increasing students' knowledge about data and data types. Introducing working principles of Python and R. Explaining how to use data collection, data grouping and data management techniques. Practicing fast and efficient access to reliable data.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Interpret basic descriptive and inferential statistical analyses. L02. Use Python and R programming languages effectively. L03. Import datasets from the internet. L04. Visualize data.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	5	5	5	3	2	4	0	0	0	0
L02	5	5	3	2	2	3	0	0	0	0
L03	5	5	4	2	2	3	0	0	0	0
L04	4	3	2	2	2	3	0	0	0	0

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Introduction to Python: IDEs, variables, expressions, statements	L01
Strings, lists, dictionaries, tuples, conditional execution, loops and functions	L01, L02
Data Science Packages for Python: Numpy, Pandas, Matplotlib	L02, L03, L04
Introduction to R: data and data types	L03, L04
Descriptive statistics, summarizing data	L03, L04
Data visualisation: charts, figures, histograms, tables	L02
Factor and correlation analyses	L01, L02, L03
Inferential Statistics: regression types (I), regression types (II)	L01, L02, L03

### DERS BİLGİLERİ

Kodu	<b>DSBE 510</b>
İsmi	<b>Veri Bilimine Giriş</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Zorunlu
Ön Şart	
İçerik	<p>Bu ders, veri biliminin temel programlama dillerini tanıtır. Dersin başlıca amaçları veri toplama, veri gruplama, veri yönetimi, güvenilir verilere hızlı ve verimli erişim ve Python ve R programlama dilleri gibi konuların temel düzeyde öğretilmesidir. Bu sayede önceden programlama bilgisine sahip olmayan öğrencilere programlama dillerinin tanıtılması, kodlamanın temellerinin öğretilmesi ve öğrencilere ders içeriğindeki konuların işletme ve ekonomi disiplinlerinin alt dallarında uygulama becerisinin kazandırılması planlanmaktadır.</p>

### COURSE RECORD

Code	<b>DSBE 511</b>
Name	<b>Statistics and Data Analysis</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1
Semester	Fall/Spring
Type	Compulsory
Prerequisites	
Description	The focus of the course is on broad treatment of applications of statistics concentrating on techniques used in fields of business and economics. The course aims to focus on how to define, collect, organize, visualize and analyze data for a business problem by applying formal statistical techniques. Topics include descriptive statistics, parameter estimation, confidence intervals, hypothesis testing, analysis of variance and linear regression. In addition, course content includes computer implementations using available up-to-date statistical software.
Objectives	Understanding the role of statistics in research and business practices. Developing skills in data gathering and analysis. Interpreting statistical results.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Calculate descriptive statistics numerically and graphically. L02. Compute confidence intervals for unknown parameters of distributions. L03. Perform hypothesis testing with two samples. L04. Use linear, multiple regression models in data analysis.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	5	1	3	4	5	4	4	0	1	1
L02	5	0	2	4	3	4	5	0	1	1
L03	4	0	0	2	3	3	5	0	1	3
L04	4	0	0	1	3	3	4	0	2	4

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Descriptive statistics	L01, L04
Sampling distributions	L02
Point estimation of parameters	L01, L02
Statistical intervals and tests of hypotheses for a single sample	L01, L02
Statistical inference for two samples	L02, L03
Simple linear regression and correlation	L01, L03

### DERS BİLGİLERİ

Kodu	<b>DSBE 511</b>
İsmi	<b>İstatistik ve Veri Analizi</b>
Haftalık Saati	3+0 (Teori + Pratik)

Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Zorunlu
Ön Şart	
İçerik	Dersin odağı işletme ve ekonomi alanlarında kullanılan tekniklere odaklanılarak istatistik uygulamalarının geniş çerçevede incelenmesidir. Derste bilimsel istatistiksel teknikleri uygulayarak bir iş problemi için verilerin nasıl tanımlanacağı, toplanacağı, düzenleneceği, görselleştirileceği ve analiz edileceğine odaklanmak amaçlanır. Ders konuları tanımlayıcı istatistikler, parametre tahmini, güven aralıkları, hipotez testi, varyans analizi ve doğrusal regresyonu içerir. Ek olarak, ders içeriğinde mevcut güncel istatistiksel yazılımları kullanan bilgisayar uygulamaları bulunur.

### COURSE RECORD

Code	<b>DSBE 512</b>
Name	<b>Data Visualization and Management</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	DSBE 511
Description	The focus of the course is on broad treatment of applications of statistics concentrating on techniques used in fields of business and economics. The course aims to focus on how to define, collect, organize, visualize and analyze data for a business problem by applying formal statistical techniques. Topics include descriptive statistics, parameter estimation, confidence intervals, hypothesis testing, analysis of variance and linear regression. In addition, course content includes computer implementations using available up-to-date statistical software.
Objectives	Understanding the role of statistics in research and business practices. Developing skills in data gathering and analysis. Interpreting statistical results.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Calculate descriptive statistics numerically and graphically. L02. Compute confidence intervals for unknown parameters of distributions. L03. Perform hypothesis testing with two samples. L04. Use linear, multiple regression models in data analysis.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	5	1	3	4	5	4	4	0	1	1
L02	5	0	2	4	3	4	5	0	1	1
L03	4	0	0	2	3	3	5	0	1	3
L04	4	0	0	1	3	3	4	0	2	4

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Introduction, correlation	L01
Linear regression (simple, multiple)	L02
Statistical inference for two samples	L03
Decision trees	L01,L03
ANOVA, Chi-square goodness of fit	L02, L03
Data visualization	L03, L04

### DERS BİLGİLERİ

Kodu	<b>DSBE 512</b>
İsmi	<b>Verilerin Görselleştirilmesi ve Yönetimi</b>
Haftalık Saati	3+0 (Teori + Pratik)

Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	DSBE 511
İçerik	Dersin odağı işletme ve ekonomi alanlarında kullanılan tekniklere odaklanılarak istatistik uygulamalarının geniş çerçevede incelenmesidir. Derste bilimsel istatistiksel teknikleri uygulayarak bir iş problemi için verilerin nasıl tanımlanacağı, toplanacağı, düzenleneceği, görselleştirileceği ve analiz edileceğine odaklanmak amaçlanır. Ders konuları tanımlayıcı istatistikler, parametre tahmini, güven aralıkları, hipotez testi, varyans analizi ve doğrusal regresyonu içerir. Ek olarak, ders içeriğinde mevcut güncel istatistiksel yazılımları kullanan bilgisayar uygulamaları bulunur.



### COURSE RECORD

Code	<b>DSBE 513</b>
Name	<b>Time Series Analysis</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	Main aim of the course is to teach time series analysis techniques and their applications to analysis and estimation of time series data at graduate level. Autocovariance, autocorrelation, stationary and non-stationary time series, unit root tests, cointegration tests, causality tests and related topics are examined throughout the course. By the end of the course students are expected to have knowledge for identifying the necessity of using time series data in various disciplines. In addition, students are expected to be able to test and assess validities of various models used in analyses with time series data.
Objectives	Introducing time series data, its characteristics and related exploratory data analysis techniques. Introducing types of questions that are analyzed with time series data in various fields of economics, business and social sciences. Developing an understanding of how time series data analysis differs from other data analysis techniques and why it is necessary in specific cases.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Identify questions necessitating time series analysis. L02. Identify main issues present with time series data: stationarity, autocorrelation, structural breaks, length, seasonality. L02. Conduct exploratory data analysis to characterize time series data sets. L03. Differentiate between AR, MA, ARMA, ARIMA, VAR, ARCH, GARCH, GMM models in time series setting. L04. Apply time series estimation techniques in order to analyze specific research questions. L05. Interpret time series estimation results statistically and in relation to discipline-specific significance.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	4	0	0	5	0	2	5	0	5	0
L02	5	0	0	5	3	2	5	0	5	0
L03	5	0	0	5	2	2	5	0	5	2
L04	5	0	0	5	5	2	5	0	5	3
L05	5	2	0	5	0	1	5	0	5	3

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Introduction, basics and definitions related to time series data	L01, L02
Exploratory data analysis with time series data, possible issues: stationarity, autocorrelation, structural breaks, length, seasonality, etc.	L02
AR, MA, ARMA, ARIMA, VAR, ARCH, GARCH, GMM models with time series data	L03

Model selection, estimation and interpretation of results with time series data	L04
Common applications to problems found in business, economics and social sciences	L04, L05

## DERS BİLGİLERİ

Kodu	<b>DSBE 513</b>
İsmi	<b>Zaman Serileri Analizi</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Dersin başlıca amacı zaman serisi analiz yöntemlerinin ve bu yöntemlerin zaman serilerinin analizine ve ilgili tahminlere uygulamalarının lisansüstü düzeyde öğretilmesidir. Ders kapsamında otokovaryans, otokorelasyon, durağan ve durağan olmayan zaman serileri, birim kök testleri, eşbütünleşme testleri, nedensellik testleri ve ilgili konular incelenir. Ders sonunda öğrencilerin çeşitli disiplinlerde zaman serisi verilerinin kullanımının gerekliliği konusunda bilgi edinmiş olmaları beklenir. Ek olarak, öğrencilerin zaman serisi verileri ile yapılan analizlerde kullanılan çeşitli modelleri test edebilmeleri ve geçerliliklerini değerlendirebilmeleri beklenir.

### COURSE RECORD

Code	<b>DSBE 514</b>
Name	<b>Panel Data Econometrics</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	Main aim of the course is to cover panel data analysis techniques and their applications in economics, business and related fields. Static panel data models: pooled OLS, first differences, fixed effects, random effects, LSDV, IV, 2SLS and GMM are examined throughout the course. Models are introduced encompassing solid theoretical foundations and standard examples. By the end of the course students will have completed multiple assignments - including data analysis and interpretations of results.- and have practiced applications of these models with scientific rigor and structure.
Objectives	Introducing panel data, its types, common usage areas and main characteristics. Introducing main static panel data estimation methods with their statistical and econometric foundations. Showing the use of panel data analysis techniques including addressing of specific research questions.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Describe and characterize panel data. L02. Conduct exploratory data analysis with panel data. L03. Apply common static panel data estimation techniques. L04. Analyze panel data estimation results. L05. Identify the necessity and usage areas of panel data.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	5	0	0	5	2	2	5	0	4	0
L02	5	0	0	5	3	2	5	0	4	0
L03	5	0	0	5	5	2	5	0	4	3
L04	5	1	1	5	5	4	5	0	4	3
L05	4	0	0	5	0	2	5	0	4	0

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Introduction, definition, types and characteristics of panel data	L01, L02, L05
Pooled OLS, first differences, fixed effects, random effects, LSDV, IV, 2SLS, GMM	L03, L04, L05
Issues with panel data: heteroskedasticity, autocorrelation, cross-sectional dependence, size etc.	L01, L02, L03
Applications of panel estimation techniques in business, economics and related disciplines	L01, L02, L03, L04, L05

### DERS BİLGİLERİ

Kodu	<b>DSBE 514</b>
İsmi	<b>Panel Veri Ekonometrisi</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Dersin başlıca amacı panel veri analiz tekniklerinin ve bu tekniklerin ekonomi, işletme ve ilgili alanlardaki panel veri analizi ve panel veril ile tahminlere uygulamalarının öğretilmesidir. Derste statik panel veri modelleri (pooled OLS, first differences, fixed effects, random effects, LSDV, IV, 2SLS, GMM) incelenir. Modeller teorik temelleri ile birlikte tanıtılır ve modellerin ilgili alanlardaki yaygın örnek kullanımları sunulur. Ders sonunda öğrenciler bu yöntemler ile bilimsel çerçeve ve titizlik içerisinde data analizi ve sonuçların yorumlanmasını içeren birden fazla çalışma tamamlamış olurlar.

### COURSE RECORD

Code	<b>DSBE 515</b>
Name	<b>Forecasting in Business and Economics</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	The aim of the course is to introduce forecasting, forecasting methods, characteristics and specialties associated with these methods, and to have students develop the ability to use theoretical and practical knowledge about applying forecasting methods in disciplines related to business and economics. By the end of the course students will be able to identify forecasting questions, suitable methods for forecasting questions, conduct forecasting analyses, and interpret and evaluate results of forecasting analyses.
Objectives	Providing statistical, mathematical and econometrics foundations of forecasting. Introducing main forecasting methods used in fields of business, economics and social sciences formally. Developing students' skills of conducting forecasting estimations using related softwares starting from question formation to evaluation of results.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Identify forecasting questions. L02. Define the concept of forecasting in relation to business, economics and related disciplines. L03. List basic methods of forecasting. L04. Conduct forecasting analysis by using appropriate software. L05. Interpret the results of forecasting analyses.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010
L01	5	0	0	5	2	2	5	0	4	0
L02	5	0	0	5	2	2	5	0	4	0
L03	4	0	0	4	0	0	0	0	4	0
L04	5	0	0	5	5	2	5	0	4	3
L05	5	1	1	5	5	4	5	0	4	3

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Introduction, definitions of forecasting in statistics, econometrics, finance and related disciplines, aim of forecasting, use of forecasting in different disciplines	L01, L02
Forecasting models based on classical linear regression	L03, L04
Forecasting based on time series analysis	L03, L04
Evaluations and combinations of forecasts	L05

### DERS BİLGİLERİ

Kodu	<b>DSBE 515</b>
İsmi	<b>İleri Tahminleme: İşletme ve Ekonomi</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Dersin amaçları ileri tahmin, ileri tahmin yöntemleri, bu yöntemlerin özellikleri ve farklılıkları konularının incelenmesi ve ileri tahmin yöntemleri ile ilgili olarak öğrenciler tarafından edinilen kuramsal ve uygulamaya yönelik bilgilerin işletme ve ekonomi disiplinleri ile ilgili olarak kullanma yetisinin geliştirilmesidir. Ders sonunda öğrenciler ileri tahmin ile ilgili soruları tanımlayabilme, sorulara uygun yöntemleri belirleyebilme, ileri tahmin analizi yapabilme ve ileri tahmin analizi sonuçlarını yorumlayabilme ve değerlendirebilme bilgi ve becerilerini edinmiş olurlar.

### COURSE RECORD

Code	<b>DSBE 516</b>
Name	<b>Input-Output Analysis</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	Main aims of the course are to teach technical and basic concepts underlying input-output tables and input-output analysis, to have students able to model the problems that business and economics disciplines target with input-output analysis techniques, to have students able to analyze and interpret the results of input-output analysis techniques by using computer programs and applications, and to enable students make future predictions and predict the possible results of applied policies by using input-output tables and analysis techniques.
Objectives	Providing foundational knowledge on input-output tables, and their use in real life and academic research. Showing different types of commonly used input-output tables and how to read the information content. Showing common applications of input-output table analyses in economics and other fields. Enabling students to use input-output analysis techniques in their own research projects.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Collect information through various input-output tables. L02. Use input-output analysis methods in problems found in economics, business and related fields. L03. Prepare simple input-output tables. L04. Analyze information found in various input-output tables.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	1	4	5	0	1	5	1	0	1	5
L02	5	0	0	5	1	5	5	0	1	5
L03	5	0	0	5	1	4	5	0	1	4
L04	5	4	5	5	1	5	5	0	1	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Introduction, history and types of existing input-output tables	L01, L02
National income accounts, Leontieff model and input-output models	L02, L03, L04
International, regional trade and input-output models	L02, L03, L04
Interindustry links and input-output models	L02, L03, L04
Environmental input-output models	L02, L03, L04

### DERS BİLGİLERİ

Kodu	<b>DSBE 516</b>
İsmi	<b>Girdi-Çıktı Analizi</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Dersin başlıca amaçları girdi-çıktı tabloları ve analizi ile ilgili teknik ve temel kavramların öğretilmesi, öğrencilerin bu model ve teknik yardımıyla işletme ve ekonomi disiplinleri kapsamında karşılaşılabilecek sorunları analiz edebilmelerine yönelik bilgilerin verilmesi, öğrencilere bu sorunların bilgisayar teknikleri ve uygulamaları kullanılarak çözümlenmesi ve sonuçların yorumlanması yetilerinin kazandırılması ve girdi-çıktı tabloları ve analizi kullanılarak geleceğe yönelik ileri tahmin yapabilme ve uygulanan politikaların olası sonuçlarını öngörme yetilerinin kazandırılmasıdır.



### COURSE RECORD

Code	<b>DSBE 517</b>
Name	<b>Decision Making</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	The main aim of the course is to examine basic concepts of decision making and to apply what is learned throughout the course. Topics include rational choice theory, individual decision making processes, consumer theory, risk-based decision making, system 1 and system 2 theories, multi-person decision making processes, and behavioral decision making theories.
Objectives	Defining theories of decision making. Providing knowledge on rationality and deviations from rationality. Showing psychological foundations of decision making.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Demonstrate knowledge about theories of decision making. L02. Discuss strategic decision making and decision under uncertainty. L03. Interpret psychological foundations of decision making. L04. Discuss decision making theories in different disciplines.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	1	2	0	1	0	0	2	0	4	0
L02	1	2	0	2	0	0	0	0	3	0
L03	0	1	0	0	0	0	0	0	5	0
L04	1	2	2	2	3	2	3	2	1	1

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Strategic decision making	L01, L02, L03
Single / multi-person decision making	L02, L03, L04
Rationality and deviations from rationality in human behaviour	L01, L02, L04
System 1 and system 2 theories	L03, L04
Decision trees and other ML algorithms	L02, L04

### DERS BİLGİLERİ

Kodu	<b>DSBE 517</b>
İsmi	<b>Karar Verme</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5

Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Dersin başlıca amaçları karar almanın temel kavramlarının incelenmesi ve ders süresince öğrenilen kavram ve konuların uygulanmasıdır. Ders içeriği rasyonel karar alma teorisi, tek kişilik karar alma süreçleri, tüketici teorisi, risk tabanlı karar alma, sistem 1 ve sistem 2 teorileri, çok kişili karar alma ve davranışsal karar alma teorileri konularını kapsayacak biçimde tasarlanır.

### COURSE RECORD

Code	<b>DSBE 518</b>
Name	<b>Business Analytics and Big Data for Business and Economics</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	DSBE 511
Description	The course is an introduction to concepts of machine learning and big data analytics, and it is designed as a combination of statistical data analysis, data mining, machine learning and artificial intelligence. Students work on projects involving big data sets that are especially related to business in order to solve real-world problems. Completing the course will help students apply the concepts of big data analytics and statistical applications to varied aspects of managerial decision making, and understand how big data technologies and data mining techniques help data driven decisions in business.
Objectives	Providing an understanding of how managers use business analytics. Solving business problems and supporting managerial decision making Interpreting statistical results. Familiarizing students with the processes needed to develop, report and analyze big business data.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Use the most common algorithms, in order to make sense of large amounts of data, which are applicable to most business and management problems. L02. Analyze the problems encountered in practice with appropriate methods. L03. Interpret the results obtained with statistical and data mining techniques correctly in order to make better decisions. L04. Use appropriate statistical and machine learning software.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	5	0	2	4	2	5	5	0	1	1
L02	5	0	2	5	2	4	5	0	3	1
L03	3	0	0	2	1	3	5	0	3	5
L04	3	0	3	0	5	1	1	0	1	1

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Introduction, business analytics and large data, data mining tools and techniques	L01, L03
Data visualization, data cleansing, missing data, outliers	L03, L04
Principles of classification, linear classifiers, decision trees	L01, L02, L03, L04
Regression (linear and logistic)	L01, L02, L03
Artificial neural networks and other techniques	L02, L03, L04
Unsupervised machine learning (clustering)	L01, L02, L03, L04

---

Supervised machine learning (support vector machines, etc.)

---

L01, L02, L03,  
L04

## DERS BİLGİLERİ

Kodu	<b>DSBE 518</b>
İsmi	<b>İşletme ve Ekonomi için İş Analitiği ve Büyük Veri</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	DSBE 511
İçerik	Ders, makine öğrenimi ve büyük veri analitiği kavramlarına giriş niteliğindedir ve istatistiksel veri analizi, veri madenciliği, makine öğrenimi ve yapay zeka konularının bir kombinasyonu olarak tasarlanır. Öğrenciler, gerçek dünyadaki sorunları çözmek için özellikle reel sektör alanından büyük veri kümelerini içeren projeler üzerinde çalışırlar. Dersi tamamlamak öğrencilerin büyük veri analitiği ve istatistiksel uygulamalar kavramlarını yönetimsel karar vermenin çeşitli yönlerine uygulamalarına ve büyük veri teknolojilerinin ve veri madenciliği tekniklerinin iş yerlerinde veriye dayalı kararları nasıl etkinleştirdiğini anlamalarına yardımcı olacaktır.

### COURSE RECORD

Code	<b>DSBE 519</b>
Name	<b>Financial Data Modelling</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	The course is aimed at presenting financial models that are widely used by finance professionals and showing how these models can be implemented by using Excel and R. Subjects such as modern portfolio theory, capital asset pricing model, options trading, interest rate risk, stochastic finance and risk measurement are examined. Thus, the course is designed to encourage students to analyze financial asset dynamics and to model associated risks through applied models by using different softwares. After the course is completed, students are expected to be able to structure their own portfolios, measure risks and develop their own hedging strategies.
Objectives	Introducing portfolio modeling. Providing working knowledge of applications of R libraries and MS Excel into portfolio models. Improving students' understanding of risk and hedging. Introducing construction of hedging strategies with options.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Explain the portfolio optimization with factor models. L02. Measure risks of assets. L03. Determine efficient evaluation criteria for performances of different portfolios. L04. Explain the mechanics of derivative products that underly other financial assets. L05. Structure financial data appropriately by identifying its specifications for analysis. L06. Evaluate the outcomes of financial econometrics tools provided by computer softwares.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	4	1	3	4	4	2	5	0	5	4
L02	4	3	5	3	5	3	5	1	5	5
L03	4	4	4	5	5	3	5	4	5	5
L04	5	5	3	3	3	4	5	2	5	5
L05	5	0	5	5	5	4	4	1	5	3
L06	5	0	5	5	5	4	5	2	5	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Portfolio statistics, portfolio optimization	L01, L02, L05, L06
CAPM and SML, R applications: portfolio models, portfolio performance measurements	L01, L02, L03, L05, L06

Interest rate market, duration and immunization, R applications: interest rate risk	L02, L04, L05, L06
Options market, stock options and trading strategies, binominal model and Black-Scholes-Merton model	L02, L03, L04, L06
Measuring risk, value at risk	L02, L03, L04, L05, L06

## DERS BİLGİLERİ

Kodu	<b>DSBE 519</b>
İsmi	<b>Finansal Veri Modellemesi</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Derste finans uzmanları tarafından yaygın olarak kullanılan finansal modellerin sunulması ve bu modellerin Excel ve R kullanılarak nasıl uygulanabileceğinin gösterilmesi amaçlanır. Derste modern portföy teorisi, sermaye varlık fiyatlandırma modeli, opsiyon alım satımı, faiz riski, stokastik finans ve risk ölçümü ile ilgili konular kapsanır. Ders, lisansüstü düzeydeki öğrencileri finansal varlıkların dinamiklerini analiz etmeye ve uygulamalı modellerle ve bilgisayar programları ile risklerini modellemeye teşvik edecek biçimde tasarlanır. Bu ders başarıyla tamamlandıktan sonra lisansüstü öğrencilerden kendi portföylerini yapılandırabilmeleri, risklerini ölçebilmeleri ve kendi riskten korunma stratejilerini geliştirebilmeleri beklenir.

### COURSE RECORD

Code	<b>DSBE 520</b>
Name	<b>Machine Learning in Business and Economics</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall /Spring
Type	Elective
Prerequisites	
Description	The course introduces the field of machine learning to graduate students of business, economics and similar backgrounds. Students learn about the theoretical foundations of machine learning and ways to apply machine learning principles to solving new problems. The content is designed assuming no prior knowledge in machine learning and it includes two major paradigms in machine learning which are supervised and unsupervised learning. In supervised learning sections, students are introduced to various methods for classification and regression. In unsupervised learning sections, dimensionality reduction and clustering are discussed.
Objectives	Introducing unsupervised and supervised learning algorithms. Illustrating implementations of machine learning techniques into problems found in business and economics fields. Familiarizing students with the processes needed to develop, report and analyze big business data.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Interpret the distinction between supervised and unsupervised learning, and the interests and difficulties of both approaches. L02. Describe major algorithms from supervised learning such as linear regression and classification. L03. Interpret neural networks algorithm and the relation between training and generalization. L04. Interpret main algorithms from unsupervised learning including clustering algorithms. L05. Conduct original research on a personal project related to machine learning implementing an innovative new approach for solving questions related to this problem.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	3	5	4	2	1	0	1	0	0	2
L02	3	5	4	2	1	0	1	0	0	2
L03	3	5	4	2	1	0	1	0	0	2
L04	3	5	4	2	1	0	1	0	0	2
L05	4	5	5	4	5	5	4	3	5	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Introduction to ML, review of probability	L01, L02, L03, L04, L05
Linear Regression (one variable, multiple variables), logistic regression	L02
Decision trees	L01, L02, L05

Unsupervised learning, supervised learning	L02, L04
Neural networks, dimensionality reduction	L02, L03, L04

## DERS BİLGİLERİ

Kodu	<b>DSBE 520</b>
İsmi	<b>İşletme ve Ekonomi için Makine Öğrenmesi</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Ders, lisansüstü işletme, ekonomi ve ilgili alanlarda bilgi sahibi olan öğrencilere makine öğrenmesini konusunu tanıtır. Öğrenciler, makine öğrenmesinin teorik temellerini ve yeni problemleri çözmek için makine öğrenmesi prensiplerinin uygulama yollarını öğrenirler. Ders içeriği öğrencilerin makine öğrenmesi konusunda bilgileri olmadığı varsayılarak tasarlanır ve makine öğrenmesinin iki ana alanını içerir: denetimli öğrenme ve denetimsiz öğrenme. Denetimli öğrenme kısmında, sınıflandırma ve regresyon için çeşitli yöntemler tanıtılır. Denetimsiz öğrenme kısmında ise boyut indirgeme ve kümeleme tartışılır.



### COURSE RECORD

Code	<b>DSBE 521</b>
Name	<b>Advanced Statistics and Data Analysis</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	DSBE 511
Description	This course is a follow-up course to DSBE 511 Statistics and Data Analysis. The focus of the course is on broad treatment of applications of statistics concentrating on techniques used in fields of business and economics. The course aims to focus on how to define, collect, organize, visualize and analyze data for a business problem by applying formal statistical techniques. Topics include parameter estimation, confidence intervals, hypothesis testing, analysis of variance, decision analysis and multiple linear regression. In addition, course content includes computer implementations using available up-to-date statistical software.
Objectives	Understanding the role of statistics in research and business practices. Developing skills in data gathering and analysis. Interpreting statistical results.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Perform analysis of variance to compare two datasets. L02. Compute confidence intervals for unknown parameters of distributions. L03. Perform hypothesis testing with two samples. L04. Use linear, multiple regression models in data analysis.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010
L01	5	1	3	4	5	4	4	0	1	1
L02	5	0	2	4	3	4	5	0	1	1
L03	4	0	0	2	3	3	5	0	1	3
L04	4	0	0	1	3	3	4	0	2	4

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Introduction, correlation	L01
Linear regression (simple, multiple)	L02
Statistical inference for two samples	L03
Decision trees	L01,L03
ANOVA, Chi-square goodness of fit	L02, L03
Data visualization	L03, L04

## DERS BİLGİLERİ

Kodu	<b>DSBE 521</b>
İsmi	<b>Gelişmiş İstatistik ve Veri Analizi</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	DSBE 511
İçerik	Bu ders DSBE 511 İstatistik ve Veri Bilimi dersini takip eden bir derstir. Dersin odağı işletme ve ekonomi alanlarında kullanılan tekniklere odaklanılarak istatistik uygulamalarının geniş çerçevede incelenmesidir. Derste bilimsel istatistiksel teknikleri uygulayarak bir iş problemi için verilerin nasıl tanımlanacağı, toplanacağı, düzenleneceği, görselleştirileceği ve analiz edileceğine odaklanmak amaçlanır. Ders konuları parametre tahmini, güven aralıkları, hipotez testi, varyans analizi, karar analizi ve doğrusal regresyonu içerir. Ek olarak, ders içeriğinde mevcut güncel istatistiksel yazılımları kullanan bilgisayar uygulamaları bulunur.

### COURSE RECORD

Code	<b>DSBE 522</b>
Name	<b>Strategic Thinking</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	Subjects of economics, strategic management, and game theory are examined in connection with each other throughout the course. More specifically, strategic, and mutual decision-making processes of individuals, firms, and political actors are examined. Basic tools of game theory are introduced which help forming an understanding of different strategic situations and predicting the most likely outcome. Links between theory and practice are formed by examining "case studies". In addition, subjects of decision making in situations involving risk and uncertainty are examined.
Objectives	Developing an advanced understanding of the strategic interaction in business and daily life. Presenting game theoretical models. Introducing mechanism design.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Analyze pareto optimality and equilibrium in various interactions. L02. Design theoretical models for non-cooperative games. L03. Interpret real-life events with game theoretical approaches. L04. Derive Nash Equilibrium outcomes.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	5	0	0	5	0	0	5	0	3	5
L02	1	5	0	5	0	0	5	0	5	5
L03	4	0	4	5	0	0	5	0	5	5
L04	4	5	5	5	1	5	5	4	5	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Introduction to game theory, simultaneous and sequential games	L01, L02, L03, L04
Pareto optimality, Arrow's impossibility theorem	L01, L02, L03
Mechanism design	L01, L02, L03
Marketing strategies	L01, L02, L03, L04

### DERS BİLGİLERİ

Kodu	<b>DSBE 522</b>
İsmi	<b>Stratejik Düşünme</b>

Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Derste ekonomi, stratejik yönetim ve oyun teorisi konuları birlikte incelenir. Daha detaylı olarak, kişiler, firmalar ya da politik aktörlerin stratejik ve karşılıklı karar alma süreçleri incelenir. Farklı stratejik durumları algılama ve en olası sonucu tahmin etmeye yönelik oyun teorisinin temel araçları sunulur. Vaka çalışmalarıyla teori ve pratik arasında bağ kurulur. Ek olarak, risk ve belirsizlik içeren durumlarda karar alma konuları da incelenir.

### COURSE RECORD

Code	<b>DSBE 523</b>
Name	<b>Firms and Markets</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	Topics such as market competition, internal human resource management and organization, and strategy and structural planning relationships are included in the course content. The main purpose of the course is to have students gain necessary skills for analyzing subjects in the science of business administration with the help of analytical and microeconomic tools.
Objectives	Developing an advanced understanding of the key functioning of markets and competition. Introducing classical models of duopoly. Presenting advertising and related market strategies and their implications for market power.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Analyze the implications of imperfect competition on welfare. L02. Find Nash equilibrium under Cournot, Bertrand, Hotelling and Stackelberg settings. L03. Construct competition models where few firms interact under vertical and horizontal product differentiation. L04. Derive Nash equilibrium outcomes of intellectual property rights and advertisement.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	1	0	0	4	0	0	5	0	3	0
L02	1	0	0	5	0	0	5	0	2	0
L03	4	0	4	5	4	0	5	0	4	4
L04	4	5	5	5	5	4	5	4	5	4

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Cost concepts, perfect competition, profit maximization	L01
Pareto optimality, classical models of competition	L01, L02, L03
Empirical analysis of product differentiation	L01, L02, L03
Consumer inertia, R&D and intellectual property.	L01, L02, L03, L04

### DERS BİLGİLERİ

Kodu	<b>DSBE 523</b>
İsmi	<b>Firmalar ve Piyasalar</b>

Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Derste pazar rekabeti, firma içi insan kaynakları yönetimi ve organizasyonu, strateji ve yapısal planlama ilişkileri konuları incelenir. Dersin başlıca amacı işletme bilimi alanındaki konularının analitik ve mikroekonomik araçlarla incelenmesi için gerekli olan yetilerin kazandırılmasıdır.

### COURSE RECORD

Code	<b>DSBE 524</b>
Name	<b>Health Economics</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	Course content is focused on topics such as economic analysis of healthcare sector, economic evaluation techniques in healthcare sector, production and cost functions in healthcare services, impact of healthcare sector on economic growth and development, financing of healthcare sector, economic objectives of healthcare system, production and output in healthcare sector, cost in healthcare firms and organizations, demand of healthcare services and goods, supply of healthcare services and goods, market types in healthcare sector, economic evaluation in healthcare services, social security, state intervention in healthcare market, and healthcare labour force.
Objectives	Describing the institutional structure of health care sector. Analyzing effects of political, social and economic policies on public healthcare sector. Describing different types of medical care data and how those measurements are driven by reimbursement and quality measurement needs.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Analyze economic evaluation of a health program. L02. Analyze how health care outcomes are influenced by changing market forces, social forces and government forces. L03. Describe different types of medical economic data and how those measurements are driven by reimbursement and quality measurement needs. L04. Apply evidence-based principles and scientific knowledge bases to critical evaluation and decision-making in health economics.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	5	5	4	5	5	5	4	3	1	5
L02	5	5	4	5	5	5	4	3	1	5
L03	3	3	5	4	5	5	4	4	1	5
L04	0	4	3	5	0	5	4	5	0	4

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Introduction to health economics, basic concepts and development of health economics	L03, L04
Cost-benefit analysis, value of life, cost effectiveness analysis	L01, L02
Economic valuation techniques using cost-effectiveness analysis and modelling, cost-benefit modelling, option valuation and cost-effectiveness analysis methods	L01, L02
The role of economic evaluation and determination of priorities in health care decision-making process	L03, L04
Government intervention in the healthcare sector	L03, L04

## DERS BİLGİLERİ

Kodu	<b>DSBE 524</b>
İsmi	<b>Sağlık Ekonomisi</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Ders kapsamında sağlık sektörünün ekonomik açıdan analizi, sağlık sektöründe ekonomik değerlendirme teknikleri, sağlık hizmetlerinde üretim ve maliyet fonksiyonları, sağlık sektörünün ekonomik büyüme ve kalkınmaya etkisi, sağlık sektörünün finansmanı, sağlık hizmetleri sisteminin ekonomik amaçları, sağlık sektöründe üretim ve çıktı, sağlık işletmelerinde maliyet, sağlık hizmeti ve malı talebi, sağlık hizmeti ve malı arzı, sağlık sektöründe pazar türleri, sağlık hizmetlerinde ekonomik değerlendirme, sosyal güvenlik, sağlık pazarına devletin müdahalesi ve sağlık iş gücü konuları incelenir.



### COURSE RECORD

Code	<b>DSBE 525</b>
Name	<b>Behavioral and Experimental Economics</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	Course is divided into two parts. The first part focuses on the assumptions of neoclassical/mainstream economics in decision-making of economic agents, assumption of rationality (rational choice) in decision-making mechanisms, behavioral decision theory, social preferences, time preferences, behavioral game theory, bounded rationality and current developments in behavioral economics. The second part covers the historical origins of experimental approaches in economics, constructing and testing hypotheses, theoretical and experimental analysis of individual decisions, social behavior, distribution, experimental analysis of equity and reciprocity, programming of experiments with computer, and laboratory applications.
Objectives	Defining theories of behavioral economics. Providing knowledge on the fundamental assumptions of neoclassical economics. Showing examples of how behavioral economic theory modified decision making models in economics.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Demonstrate knowledge about concepts and subjects of behavioral economic theory. L02. Discuss methodological issues in economics. L03. Interpret the importance of the assumptions used in economic theory. L04. Evaluate the contribution of behavioral economics in the field of economics and in other fields.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	1	1	0	1	0	0	2	0	4	0
L02	2	0	0	2	0	0	0	0	3	0
L03	1	0	0	0	0	0	0	0	5	0
L04	0	1	0	3	1	0	0	0	4	0

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Expected utility theory	L01, L02, L03
Prospect theory	L02, L03, L04
Game theory	L01, L02, L04
Behavioral public policy	L03, L04
Experimental methods in behavioral economics	L02, L04

### DERS BİLGİLERİ

Kodu	<b>DSBE 525</b>
İsmi	<b>Davranışsal ve Deneysel Ekonomi</b>
Haftalık Saati	3+0 (Teori+ Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Ders iki bölüm olarak tasarlanır. İlk bölümün odağı ekonomik aktörlerin karar alma süreçlerindeki neoklasik ve ana akım ekonomik varsayımlar, karar alma mekanizmasındaki rasyonalite varsayımı davranışsal karar alma teorisi, sosyal tercihler, zaman tercihleri, davranışsal oyun teorisi, sınırlı rasyonalite ve davranışsal ekonomi alanındaki güncel gelişmeler konularıdır. İkinci bölümde ekonomi alanında deneysel yaklaşımın tarihsel kökeni, bireysel kararların teorik ve deneysel analizi, sosyal davranışlar, dağılım, eşitlik ve karşılıklılığı deneysel analizi, deneylerin bilgisayar ile programlanması ve laboratuvar uygulamaları konuları incelenir.

## COURSE RECORD

Code	<b>DSBE 526</b>
Name	<b>Marketing Modelling</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	-
Description	Marketing models are very important elements of real-world representation as models provide structural relations between marketing variables. Model building increases the quality of marketing decisions. Improved hardware and software enabled marketing managers to use marketing models as vital decision-making tools.
Objectives	Identifying the common models in marketing. Implementing advance quantitative marketing modeling techniques. Constructing marketing models for marketing analytics. Understanding demand models.
Learning Outcomes	<i>By the end of this course, students will be able to:</i> L01: Compare different models in marketing L02: Describe quantitative analysis in marketing L03: Formulate advance models in marketing L04: Stimulate different analytical models of marketing

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010
L01	5	5	1	2	2	2	3	2	2	5
L02	5	5	1	2	2	2	3	2	2	5
L03	5	5	1	2	2	2	3	2	2	5
L04	3	5	1	2	2	2	3	2	2	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topics	Outcomes
Building models for markets	L01, L03
Model specification	L01, L02, L03
Data Structures, Estimation and Testing	L03, L04
Models of Aggregate Demand	L03, L04
Database Marketing tools	L04

## DERS BİLGİLERİ

Kodu	<b>DSBE 526</b>
İsmi	<b>Pazarlama Modellemesi</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye / Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	-
İçerik	Pazarlamada modelleme stratejik öneme sahip bir alt disiplin olup, modelleme ile pazarlama değişkenleri arasında yapısal ilişkiler ortaya çıkarılmaktadır. Pazarlama modelleri gerçek dünyayı temsili etme özelliğinden dolayı büyük öneme sahiptir. Model oluşturma, pazarlama kararlarının kalitesini artırmaktadır. Donanım ve yazılımdaki teknolojik gelişmeler, pazarlama yöneticilerinin pazarlama modellerini hayati karar verme araçları olarak kullanmalarını sağlamaktadır.

### COURSE RECORD

Code	<b>DSBE 527</b>
Name	<b>Political Economics</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	This course will introduce students to the basics of the 'new economic policy' which helps to explain the relation between economy, politics and institutions from a rational choice point of view. Students will learn to analyze voters, politicians, bureaucrats, and members of interest groups as utility-maximizing actors which try to influence the institutional framework and the political processes of their country in order to achieve their interests. This approach will be applied to a variety of exemplary policy fields, from agricultural policy to trade policy.
Objectives	Introducing basics of new economic policy. Explaining the connections between economy, politics and institutions. Explaining economic problems arising from political processes. Providing students with exemplary applications in different policy fields.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Analyze the behavior of voters, politicians, bureaucrats and members of interest groups from a rational-choice point of view. L02. Analyze the connection between economy, politics, and institutions. L03. Evaluate problems of lobbying, rent-seeking and state capture critically. L04. Apply theories learned in different policy fields.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	3	4	2	2	0	0	4	1	0	0
L02	3	4	2	2	0	0	4	1	0	0
L03	3	4	2	2	0	0	3	1	0	0
L04	3	4	2	2	0	0	4	1	0	0

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Economy and its institutional framework	L01, L02
Economic theory of democracy, bureaucracy, interest groups	L01, L02, L03
Fields of Application: agricultural policy, industrial policy, regional policy	L02, L03, L04
Fields of Application: development policy, development aid	L02, L03, L04
Fields of Application: trade policy, international monetary system	L02, L03, L04

### DERS BİLGİLERİ

Kodu	<b>DSBE 527</b>
------	-----------------

İsmi	<b>Politik Ekonomi</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Ders, öğrencilere ekonomi, siyaset ve kurumlar arasındaki ilişkiyi rasyonel bir seçim bakış açısıyla açıklamaya yardımcı olan Yeni Ekonomi Politikasının temellerini tanıtır. Öğrenciler, çıkarlarına ulaşmak için ülkelerinin kurumsal çerçevesini ve siyasi süreçlerini etkilemeye çalışan, fayda maksimize eden aktörler olarak seçmenleri, politikacıları, bürokratları ve çıkar gruplarının üyelerini analiz etmeyi öğrenir. Bu yaklaşım, tarım politikasından ticaret politikasına kadar çeşitli örnek politika alanlarına uygulanır.

### COURSE RECORD

Code	<b>DSBE 528</b>
Name	<b>Energy Economics and Policy</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	The main purpose of the course is to provide and examine necessary information for understanding basic problems in energy economics. Subjects are developed in order to cover policy tools for analyzing market failures and solving related problems. In addition, topics such as energy and electricity markets, definition and analysis of resource and energy trading markets are examined.
Objectives	Describing the total amount of energy used in the world economy over time, the trends in energy intensity, the trends in energy prices. Identifying the key traditional and alternative energy resources and technologies, and analyzing their development costs, production structure, market characteristics and special issues. Comparing the social costs of traditional and alternative energy use with respect to climate change, other environmental impacts, and human health, and analyzing the basic methods used to arrive at these social cost estimates. Explaining what “energy security” means, how it relates (or not) to import dependence, how it can be measured, and how traditional and alternative energy resources and technologies rank in terms of energy security impacts.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Discuss research literature on energy economics and policy issues. L02. Describe current energy market trends and relations between current conditions and historical markets. L03. Describe theoretically and empirically the energy demand and supply, and how they interact in a market. L04. Analyze the effects of energy and environmental policies on the supply and demand of different types of energy.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	0	2	3	3	0	4	5	5	0	5
L02	0	2	3	2	0	5	4	5	0	5
L03	5	4	5	5	5	5	5	4	0	5
L04	5	4	5	5	5	5	5	4	0	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Overview of energy economics and policies, energy statistics, energy flows	L01, L02
The reality of policy making and the future of energy policy	L01, L02
Analyzing energy demand at micro and macro levels	L03, L04
Analyzing the supply of energy: technology costs and investment appraisal	L03, L04

## DERS BİLGİLERİ

Kodu	<b>DSBE 528</b>
İsmi	<b>Enerji Ekonomisi ve Politikası</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Derste temel olarak enerji ekonomisindeki basit problemleri anlamak için gerekli olan bilgilerin sunulması ve incelenmesi amaçlanır. Konular piyasa başarısızlıklarını analiz etmek ve ilgili sorunları çözmek için gerekli politika araçlarını içerecek şekilde geliştirilir. Ek olarak, enerji ve elektrik piyasaları, kaynak ve enerji ticaret piyasalarının tanımı ve analizi gibi konular incelenir.



**COURSE RECORD**

Code	<b>DSBE 529</b>
Name	<b>Environmental Economics and Policy</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	The main purpose of the course is to provide and examine necessary information for understanding basic problems in environmental economics. Subjects are developed in order to cover policy tools for analyzing market failures and solving related problems. In addition, topics such as common area usage theory, pollution market, definition and analysis of customer behavior are examined.
Objectives	Describing different perspectives on natural and environmental problems and their characteristics. Evaluating nature and environmental management policies through normative criteria. Describing the methods used to evaluate environmental products and services. Understanding and describing the working principles of market-based nature and environmental policy instruments.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Interpret the environmental issue has become a part of daily life. L02. Analyze the causes of environmental problems. L03. Comprehend the effects of the current social, economic, political and physical structure of the world by analyzing the necessary policies against environmental problems. L04. Give definitions and analyses of common area use theory, pollution market, customer behavior.

**CONTRIBUTION TO PROGRAMME OUTCOMES\***

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	0	3	0	5	0	5	2	1	0	1
L02	5	5	5	5	5	5	5	4	0	3
L03	5	5	5	5	5	5	5	3	0	4
L04	5	5	5	5	5	5	5	3	0	4

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

**COURSE CONTENT DETAILS**

Topic	Outcomes
Overview of environmental and ecological economics	L01, L02
Concepts of ecological economics	L01, L02
Relationship between human and environment	L01, L02
National income and environmental accounting	L03, L04
Analysis of common area use theory, pollution market, customer behavior.	L03, L04
Pollution analysis and policy	L03, L04
Analysis of environmental regulation	L03, L04

## DERS BİLGİLERİ

Kodu	<b>DSBE 529</b>
İsmi	<b>Çevre Ekonomisi ve Politikası</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Derste temel olarak çevre ekonomisindeki basit problemleri anlamak için gerekli olan bilgilerin sunulması ve incelenmesi amaçlanır. Konular piyasa başarısızlıklarını analiz etmek ve ilgili sorunları çözmek için gerekli politika araçlarını içerecek şekilde geliştirilir. Ek olarak, ortak alan kullanım teorisi, kirlilik piyasası, müşteri davranışları tanımı ve analizi gibi konular incelenir.

### COURSE RECORD

Code	<b>DSBE 530</b>
Name	<b>Spatial Economics</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/ Spring
Type	Elective
Prerequisites	
Description	Spatial Economics is an introductory course of urban economics, regional economics and neighborhood analysis. The course examines the influence of contextual socio-economic affairs on economic growth and development, and on the individuals' outputs at micro-meso-macro scales. While introducing spatial econometric models, the course uses GeoDa, QGIS, R and STATA software for applied examples.
Objectives	Developing an understanding of geography and geographical analysis for advanced economic studies. Introducing the field of spatial economics and econometrics. Providing hands-on instruction and practice for using spatial analysis software.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Apply spatial economic models in their areas of interest. L02. Undertake neighborhood analysis. L03. Identify datasets necessary for regional studies. L04. Grasp the distance concept such as defined in spatial econometric models. L05. Produce maps by using various coordinate systems.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010
L01	5	5	5	5	5	4	5	2	5	5
L02	4	3	4	4	5	2	5	1	3	4
L03	5	5	4	3	5	3	5	1	2	4
L04	5	5	5	3	5	4	3	0	4	5
L05	5	1	3	4	5	3	5	2	3	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Spatial dependencies and the role of spatial economics	L01, L02, L03
Interpretation of spatial econometrics	L01, L02, L03
Spatial lag and error models	L01, L02, L03, L04
Spatial analysis software	L01, L02, L03, L04, L05

### DERS BİLGİLERİ

Kodu	<b>DSBE 530</b>
İsmi	<b>Mekansal Ekonomi</b>
Haftalık Saati	3+0 (Teori+Pratik)

Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Mekânsal Ekonomi dersi, kent ekonomisi, bölgesel modeller ve mahalle çalışmalarına bir giriş niteliğindedir. Derste, mekânsal sosyoekonomik ilişkilerin mikro-meso-makro ölçeklerde ekonomik büyüme, ekonomik gelişim ve bireylerin çıktılarına etkileri analiz edilir. Derste mekânsal ekonometri modellerini sunulurken, GeoDa, QGIS ve Stata yazılımları üzerinden uygulamalı örnekler yürütülür.

### COURSE RECORD

Code	<b>DSBE 531</b>
Name	<b>Corporate Finance for Data Science</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	Following subjects are covered throughout the course: introduction to financial assets, investment decision rules, valuation of securities, portfolio selection theorem, and investment performance measurements. Therefore the course content covers the basics of risk management, financial derivatives and financial engineering. In addition, it is aimed to teach how to make financial decisions and express these decisions using various computer programs. Course content can be divided into three main parts: Investment decision making, security valuation, and risk and return.
Objectives	Introducing long term and short-term financing decision of businesses. Evaluating investment decisions to maximize the value of the firm. Introducing tools and techniques used in jobs in valuation, asset management, issue management, credit rating and analyst positions.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Exemplify which main sources of finance a company has. L02. Recognize financial markets, institutions and instruments. L03. Analyze economic or financial data with data science methods. L04. Apply portfolio management and corporate finance analysis with data science.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	0	4	0	0	0	5	5	3	5	4
L02	0	4	0	0	0	0	3	1	5	4
L03	5	5	5	5	5	5	4	3	5	5
L04	5	5	4	5	5	5	5	4	5	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Introduction to corporate finance for data science, price and return data, distributional properties of return data, stationarity of data	L01, L02, L03, L04
Autocorrelation (ACF) and partial ACF of time series data	L03, L04
Autoregressive (AR) models and their properties	L03, L04
Moving average (MA) models and their properties	L03, L04
Unit root non-stationarity, regression with time series errors	L03, L04
Volatility modeling, ARCH, GARCH	L03, L04

### DERS BİLGİLERİ

Kodu	<b>DSBE 531</b>
------	-----------------

İsmi	<b>Veri Bilimi için Kurumsal Finansman</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Derste finansal varlıklara giriş, yatırım kararı kuralları, varlıkların değerlemesi, portfolio tercih teoremi ve yatırım performans ölçüm kriterleri konuları kapsanır. Böylece ders konuları risk yönetimi, finansal türevler ve finansal mühendisliğin temellerini içerir. Ek olarak, derste finansal kararların nasıl alındığı ve bu kararların çeşitli yazılım programları ile nasıl gösterilebileceği öğretilir. Ders üç ana bölümden oluşur: Yatırım kararı verme, varlıkların değerlemesi ve risk ve getiri.

**COURSE RECORD**

Code	<b>DSBE 532</b>
Name	<b>Numerical Methods for Advanced Finance</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	In this course, it is aimed to provide necessary theoretical and practical background for devising financial analysis and financial models and solving financial problems by using basic statistical and mathematical concepts and tools. Subjects such as implementations of financial calculations and models in real problems, implementations of models and analysis techniques learnt throughout the course in financial problems by collecting data from existing sources, and related topics are covered.
Objectives	Providing an understanding of fundamental concepts in financial econometrics for advanced finance. Analyzing volatility modeling, asymmetric volatility models and granger causality. Practicing applications of mathematical knowledge to financial accounts and models.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Explain how formulas used in advanced finance are found by combining basic finance information with mathematical and statistical concepts. L02. Apply financial calculations and models to real problems. L03. Apply the models and analysis techniques learned in the course to financial problems by collecting data from available sources. L04. Interpret data analysis results.

**CONTRIBUTION TO PROGRAMME OUTCOMES\***

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	5	1	5	5	5	5	5	0	5	4
L02	4	4	4	5	5	5	3	5	5	4
L03	5	2	5	5	5	5	5	3	5	4
L04	5	0	5	5	5	5	5	5	5	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

**COURSE CONTENT DETAILS**

Topic	Outcomes
Fundamental concepts in financial econometrics	L01, L02, L03, L04
Volatility modeling, asymmetric volatility models	L01, L02, L03, L04
Granger causality	L01, L02, L03, L04
Autoregressive distributed lag model -ARDL, dynamic regressions	L01, L02, L03, L04

**DERS BİLGİLERİ**

Kodu	<b>DSBE 532</b>
İsmi	<b>İleri Finans için Sayısal Yöntemler</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Derste öğrencilerin temel istatistiksel ve matematiksel kavram ve araçları kullanarak finansal analizleri ve modelleri kurgulayabilmeleri ve finansal problemleri çözümlayebilmeleri için gerekli olan teorik ve pratik altyapının sağlanması amaçlanır. Finansal hesap ve modellerin gerçek problemler uygulanması, mevcut kaynaklardan veri toplanarak derste öğrenilen modellerin ve analiz tekniklerinin finans problemlerine uygulanması ve ilgilikonular kapsanır.



### COURSE RECORD

Code	<b>DSBE 533</b>
Name	<b>Linear Programming For Data Science</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	The main purpose of this course is to introduce the theory, algorithm and calculation methods of linear programming. It covers the topics such as modeling linear programming problems, mathematical analysis of linear programming (polyhedral theory, duality, optimality conditions, level of complexity), network flow models, simplex algorithm and its variations, decomposition techniques, interior point methods.
Objectives	Endowing students with concepts, techniques and tools to design, analyze and improve operational capabilities of an organization. Providing an understanding of importance of linear programming for data science in the overall business strategy of the firm. Developing students' problem solving and critical thinking abilities in improving organization capability.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Identify the need for quantitative managerial decision making tools to improve decision making in a business context. L02. Achieve an understanding of building blocks of quantitative managerial decision making models. L03. Achieve solving, analyzing and interpreting quantitative decision making models using spreadsheets, Lingo, GAMS. L04. Classify the best solution with respect to changes in the parameters of the problem.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010
L01	5	5	4	0	0	0	0	4	5	5
L02	5	5	0	0	0	0	0	0	5	5
L03	5	5	0	0	0	0	0	0	5	5
L04	5	4	0	5	2	2	5	0	5	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Review of linear algebra, modeling linear programming problems, nature of linear programs	L01
Formulation of LP model types , convex analysis and polyhedral sets	L01, L02, L03
Linear programming (LP): graphical solution methods, computer solution and sensitivity analysis	L03, L04
Simplex method, revised simplex method, duality and sensitivity analysis	L02, L03, L04
Wolf-Dantzig and Benders decompositions	L02, L03, L04

Polynomial algorithms, special cases of optimization problems	L02, L03, L04
Interior point methods, introduction and straightforward optimization methods	L02, L03, L04

## DERS BİLGİLERİ

Kodu	<b>DSBE 533</b>
İsmi	<b>Veri Bilimi için Doğrusal Programlama</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Dersin temel amacı, doğrusal programlamaya dair kuram, algoritma ve hesaplama yöntemlerinin öğretilmesidir. Doğrusal programlama problemlerinin modellenmesi, doğrusal programlamanın matematiksel analizi (polyhedral teori, dualite, optimalite koşulları, karmaşıklık seviyesi), serim akış modelleri, simplex algoritması ve varyasyonları, ayrıştırma teknikleri ve iç nokta metotları konuları kapsanır.

### COURSE RECORD

Code	<b>DSBE 534</b>
Name	<b>Advanced Supply Chain Management</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7,5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	The main purpose of the course is to teach the analysis of a business or a process which includes the basic topics of supply chain management such as purchasing, production, distribution and after-sales services. Students are provided with knowledge on the concepts, techniques, and tools that are necessary for designing, analyzing and developing operational capabilities of an organization. By the end of the course, students will have acquired knowledge on basic functions of supply chain management (transport costs, storage location selection, distribution, production, after-sales, etc.) in business processes
Objectives	Giving knowledge of effective logistics and supply chain management practices. Analyzing and examine current operations. Making organizational improvements.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Analyze the value that the advanced supply chain creates in penetrating the market and benefiting customers. L02. Evaluate reformulations of advanced supply chain strategies according to increasing competition structure. L03. Evaluate new developments in information technologies used in advanced supply chain management. L04.State ethical decision-making skills and practices in dealing with supplier and customer organizations.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	4	5	4	5	0	5	4	5	0	5
L02	4	5	0	4	0	5	4	5	0	5
L03	0	5	0	0	0	2	0	5	0	3
L04	0	5	0	4	0	5	0	5	0	1

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Advanced supply chain management and development process	L01, L02, L04
Planning in advanced supply chain management	L01, L02, L04
Advanced supply chain management and information technologies	L03
Demand forecasting in advanced supply chain management	L04
Supplier relations	L04

### DERS BİLGİLERİ

Kodu	<b>DSBE 534</b>
İsmi	<b>İleri Tedarik Zinciri Yönetimi</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz /Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Dersin temel amacı, tedarik zinciri yönetiminin temel konuları olan satın alma, üretim, dağıtım ve satış sonrası hizmetler gibi konuların kapsanarak bir işin veya sürecin analizinin öğretilmesidir. Derste bir organizasyonun operasyonel yeteneklerini tasarlamak, analiz etmek ve geliştirmek için gerekli kavramlar, teknikler ve araçlar sunulur. Dersin sonunda öğrencilerin tedarik zinciri yönetiminin (nakliye maliyetleri, depo yeri seçimi, dağıtım, üretim, satış sonrası v.b.) iş süreçlerindeki temel fonksiyonları hakkında bilgi sahibi olmaları amaçlanır.

### COURSE RECORD

Code	<b>DSBE 535</b>
Name	<b>Advanced Cost Accounting</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall /Spring
Type	Elective
Prerequisites	
Description	Cost Accounting is defined as the branch of accounting consisting of subjects related to identifying aggregate and unit costs incurred in a business, auditing of business costs, examination of prices, and determination of sale prices. Course is aimed at providing skills and knowledge on determining costs of goods, evaluating costs of inventories, developing methods to decrease costs within boundaries of quality standards and expense controlling. In addition, it is aimed that students gain knowledge on coordinating planning activities and making management decisions on future investment plans of the business through reporting structured, regular, effective and reliable information on costs.
Objectives	Understanding how to manage inventory in a just of time manufacturing environment. Describing decision analysis, relevant information including qualitative and quantitative. Understanding cost allocation of support departments, and allocation of common costs and revenues. Understanding theory of constraints, and how to identify the constraint and restructure the rest of the organization around it.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Calculate the costs of products with different methods. L02. Calculate the loading of costs on products. L03. Create cost methods and cost systems. L04. Analyze stock valuation methods critically. L05. Load general production costs on the products with different methods.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	0	2	5	4	0	3	5	0	5	4
L02	4	3	4	5	0	4	2	0	5	4
L03	0	5	1	1	0	1	2	0	5	4
L04	0	0	3	5	0	4	5	0	5	4
L05	0	0	5	5	0	4	5	0	5	4

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Subject and basic concepts of cost accounting	L01, L02, L03, L04, L05
Cost of goods sold table in manufacturing enterprises	L01, L02, L04, L04
Cost distribution methods and attribution of costs to products	L01, L02, L05
Current costing systems	L01, L02, L03

## DERS BİLGİLERİ

Kodu	<b>DSBE 535</b>
İsmi	<b>İleri Maliyet Muhasebesi</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz /Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Maliyet muhasebesi konu olarak bir üretim işletmesinde üretilen ürün ve hizmetlerin toplam ve birim maliyetlerinin saptanması, işletme giderlerinin denetimi, fiyat incelemeleri ve satış fiyatlarının belirlenmesinin oluşturduğu muhasebe dalıdır. Maliyet muhasebesi dersini alan öğrencilerin, mamullerin maliyetlerinin saptanması, stok değerlerinin hesaplanması, giderlerin kontrolü ve kalite standartlarının korunması koşulu ile olanaklar ölçüsünde maliyetlerin düşürülmesini sağlayacak yöntemlerin geliştirilmesi konularında bilgi sahibi olmaları amaçlanır. Bunlara ek olarak öğrencilerin maliyetlerle ilgili düzenli, etkili ve güvenilir bilgiler verilerek planlama faaliyetlerinin koordine edilmesi ve işletmenin gelecekte yatırım planları ile ilgili yönetim kararlarının alınması konularında da bilgi sahibi olmaları amaçlanır.

### COURSE RECORD

Code	<b>DSBE 536</b>
Name	<b>Advanced Financial Statement Analysis</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall /Spring
Type	Elective
Prerequisites	
Description	Course can be qualified as a first step into the world of accounting theory and it covers subjects related to preparation of financial statements. Subjects such as the conceptual framework, processes of record keeping and reporting, and development of accounting standards are covered. Course content is mainly focused on the analysis, summarization, reporting and interpretation of financial information. It is aimed that, by the end of the course, students will be able to prepare financial statements.
Objectives	Describing and making use of the framework for a complete monetary evaluation. Developing proficiency in calculating and interpreting financial ratios. Conducting high level equity valuations utilizing information in financial statements, notes, management disclosures, economic and industry analysis, competitive analysis, and analyst reports.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Pull apart financial statements to get at the relevant information. L02. Summarize the relevance of cash flows, dividends, earnings. L03. Analyze growth and value a growth firm. L04. Calculate a firm's P/E ratio.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	0	4	5	0	0	4	4	2	5	4
L02	0	2	2	5	0	2	4	0	5	4
L03	3	2	5	5	0	2	4	0	5	4
L04	0	2	5	5	0	3	4	0	5	4

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Accounting and business	L02, L03, L04
Qualitative characteristics of financial statement	L01, L02, L04
Detection and recording of financial events	L02, L03, L04
Preparation of financial statements	L01, L02, L04
Analysis of financial statements	L01, L02, L04

### DERS BİLGİLERİ

Kodu	<b>DSBE 536</b>
İsmi	<b>İleri Finansal Tablolara Analizi</b>

Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Ders muhasebe teorisine giriş niteliğinde olup temel olarak mali tabloların hazırlanması konusu işlenir. Kavramsal çerçeve, muhasebe standartlarının geliştirilmesi ile birlikte kayıt tutma ve raporlama süreçleri de dersin kapsamında incelenir. Derste, mali bilgilerin analizi, özetlenmesi, raporlanması ve yorumlanması üzerinde durulur. Dersin sonunda, öğrencilerin mali tabloları hazırlayabilmeleri amaçlanır.



### COURSE RECORD

Code	<b>DSBE 537</b>
Name	<b>Marketing Management for Data Science</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	
Description	This is a graduate class yet beginning level marketing course that focuses specifically on the key terms, frameworks, and approaches that constitute the contemporary marketing theory as well as its applications in practical business circles. The purpose of the course is to provide the students with a keen understanding of the marketing function in business firms and of the methods of using this knowledge in developing and implementing successful marketing strategies. Proper use of information technologies and specific forms of data to foster the efficiency and effectiveness of marketing decisions shall be specifically emphasized
Objectives	Introducing concept markets. Providing knowledge of the role of value concept in marketing. Developing an appreciation of the role of marketing research. Explaining product life-cycle concept and market planning.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Identify markets and market segments. L02. Interpret the role of value concept in marketing, L03. Locate role of marketing research. L04. Assess the pricing.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	2	5	2	2	2	2	3	2	1	2
L02	2	5	2	2	2	2	3	2	1	2
L03	5	5	5	2	4	4	3	2	1	3
L04	5	5	5	2	5	5	3	3	1	4

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
History of the thought of marketing	L01
Marketing and micro-macro environment	L03
Market segmentation, target marketing, positioning	L02, L03, L04
Product and branding strategies	L02
Pricing methods and tactics	L01, L04

### DERS BİLGİLERİ

Kodu	<b>DSBE 537</b>
İsmi	<b>Veri Bilimi için Pazarlama Yönetimi</b>

Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Çağdaş pazarlama teorisini oluşturan temel terimleri ve yaklaşımları, bunun yanı sıra pratik iş dünyasındaki uygulamaları içeren lisansüstü ancak başlangıç düzeyinde bir pazarlama dersidir. Dersin amacı, öğrencilere firmalarda pazarlama işlevi ve bu bilgiyi başarılı pazarlama stratejileri geliştirme ve uygulamada kullanma yöntemleri hakkında keskin bir anlayış sağlamaktır. Pazarlama kararlarının verimliliğini ve etkinliğini artırmak için bilgi teknolojilerinin ve belirli veri biçimlerinin doğru kullanımı özellikle vurgulanacaktır.

busi

**COURSE RECORD**

Code	<b>DSBE 538</b>
Name	<b>Strategic Management For Data Science</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	-
Description	This course introduces the concept of strategic management through case analyses and considers the basic direction and goals of an organization, the environment (social, political, technological, economic, and global factors), industry and market structure, and organizational strengths and weaknesses. The emphasis is on the development and successful implementation of strategy in different types of firms across industries.
Objectives	Endowing students with concepts, tools and techniques related to strategic management. Enabling students to apply the five generic competitive strategies. Developing management and leadership skills in both external and internal operations. Advancing ethics, corporate social responsibility, environmental sustainability and strategy.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Identify crucial factors that impact strategic decision-making, implementation, and evaluation. L02. Conduct an organizational resource-based situational analysis. L03. Assess the environment evaluate the volatility of the industrial position. L04. Develop comprehensive business strategies through a scenario planning process. L05. Evaluate alternative strategic actions.

**CONTRIBUTION TO PROGRAMME OUTCOMES\***

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010
L01	1	2	0	0	0	0	0	4	5	3
L02	1	2	0	1	0	0	0	1	4	5
L03	1	1	1	0	0	1	1	3	5	4
L04	1	1	1	1	0	2	1	3	5	4
L05	0	1	0	0	0	0	0	3	4	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

**COURSE CONTENT DETAILS**

Topic	Outcomes
Charting a company's direction: its vision, mission, objectives and strategy	L02, L03, L04
Evaluating a company's external and internal environment	L01, L02, L03
The five generic competitive strategies	L04, L05
Managing internal operations, organizational culture and leadership	L04, L05

---

Ethics, corporate social responsibility, environmental sustainability and strategy

---

L01, L02, L03,  
L04, L05

## DERS BİLGİLERİ

Kodu	<b>DSBE 538</b>
İsmi	<b>Veri Bilimi İçin Stratejik Yönetim</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	
İçerik	Bu ders, vaka analizleri yoluyla stratejik yönetim kavramının tanımını, bir organizasyonun temel yönünü ve hedeflerini, çevresini (sosyal, politik, teknolojik, ekonomik ve küresel faktörler), endüstri ve pazar yapısını ve organizasyonun güçlü ve zayıf yönlerini geliştirmeyi amaçlar. Bu ders endüstrilerdeki farklı firma türlerinde stratejinin geliştirilmesi ve başarılı bir şekilde uygulanması konusunda yardımcı olacaktır.

**COURSE RECORD**

Code	<b>DSBE 539</b>
Name	<b>Advanced International Business</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Elective
Prerequisites	-
Description	Course is aimed at introducing the basic concepts and principles of international trade. In addition, globalization, international trade, customs, foreign environment in overseas operations, international trade policies and programs, international economic policies, North American Free Trade Agreement (NAFTA), European Union and other economic integrations, management decisions and international marketing, related implementations in management and finance are also examined.
Objectives	Introducing key concepts in international business. Providing knowledge about how international business differs from domestic business. Providing knowledge about government intervention. Helping students to better interpret why and how firms internationalize.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Assess cross-cultural, commercial, country and financial risks in international business. L02. Describe why nations trade in the context of international trade theories. L03. Analyze global market opportunities. L04. Explain global sourcing strategies and supply-chain management.

**CONTRIBUTION TO PROGRAMME OUTCOMES\***

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	2	5	4	5	2	2	3	2	2	4
L02	2	5	1	5	2	2	3	2	2	4
L03	5	5	4	5	4	4	5	2	2	4
L04	2	5	2	5	2	2	3	2	2	4

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

**COURSE CONTENT DETAILS**

Topic	Outcomes
Globalization of markets and internationalization of the firm	L01, L02
The cultural environment of international business	L01
Theories of international trade and investment	L02
Political and legal systems in national environments	L01, L03, L04
Global market opportunity assessment	L03

**DERS BİLGİLERİ**

Kodu	<b>DSBE 539</b>
------	-----------------

İsmi	<b>İleri Uluslararası İşletmecilik</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	-
İçerik	Ders, uluslararası ticaretin temel kavram ve ilkelerini tanıtmayı amaçlamaktadır. Ayrıca küreselleşme, uluslararası ticaret, gümrükleme, denizaşırı operasyonlarda dış çevre, uluslararası ticaret politikaları ve programları, uluslararası ekonomik politikalar, Kuzey Amerika Serbest Ticaret Anlaşması (NAFTA), Avrupa Birliği ve diğer ekonomik entegrasyonlar, yönetim kararları ve uluslararası pazarlama, ilgili uygulamalar yönetim ve finans da incelenmektedir.

### COURSE RECORD

Code	<b>DSBE 591</b>
Name	<b>Social Science Research Methods and Publication Ethics</b>
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	7.5
Level/Year	Graduate/1
Semester	Fall/Spring
Type	Compulsory
Prerequisites	
Description	Course covers subjects related to research ethics in all kinds of scientific/artistic research and studies, all kinds of scientific/artistic activities conducted, scientific/artistic research and development projects supported and/or carried out, and, research ethics related to thesis and scientific publications and scientific research and development projects conducted during graduate education, issues of publication ethics and ethical violations related to any publication published or submitted for publication in audio visual publication channels, topics of plagiarism, forgery, distortion, republishing, slicing and unfair writing.
Objectives	Introducing science and scientific research. Providing knowledge of research philosophy and research design. Providing knowledge of different research methods. Providing knowledge of publication ethics.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Demonstrate knowledge scientific research and theories. L02. Implement research philosophy and research design. L03. Demonstrate knowledge of research methods: quantitative, qualitative and mixed methods, and developing a research paper. L04. Implement publication ethics.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
L01	5	5	5	5	5	5	5	5	5	5
L02	5	5	5	5	5	5	5	5	5	5
L03	5	5	5	5	1	5	5	5	5	5
L04	5	5	5	5	1	5	5	5	5	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Nature of business research	L01, L02, L03, L04
Research philosophy, research design	L01, L02, L03, L04
Research aim, objectives and questions	L01, L02, L03, L04
Reviewing literature	L01, L02, L03, L04
Different research methods (quantitative, qualitative and mixed)	L01, L02, L03, L04
Ethics in business research	L01, L02, L03, L04

## DERS BİLGİLERİ

Kodu	<b>DSBE 591</b>
İsmi	<b>Sosyal Bilimler Araştırma Yöntemleri ve Yayın Etiği</b>
Haftalık Saati	3+0 (Teori+ Pratik)
Kredi	3
AKTS	7,5
Seviye/Yıl	Lisansüstü/1
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Zorunlu
Ön Şart	
İçerik	Derste her tür bilimsel/sanatsal araştırma ve çalışmalar ile gerçekleştirilen bilimsel/sanatsal etkinlikler ile ilgili araştırma etiği konuları, desteklenen ve/veya yürütülen bilimsel/sanatsal araştırma-geliştirme projeleriyle ilgili araştırma etiği konuları, lisansüstü eğitim sırasında yapılan tez ve bilimsel yayınlar ile yürütülen bilimsel/sanatsal araştırma-geliştirme projeleriyle ilgili araştırma etiği konuları incelenir. Ek olarak, görsel ve işitsel yayın organlarında yayımlanan ya da yayımlanmak üzere gönderilmiş olan her tür yayınlara ilgili yayın etiği sorunları ve etik ihlalleri, intihal, sahtecilik, çarpıtma, tekrar yayım, dilimleme ve haksız yazarlık konuları incelenir.



### COURSE RECORD

Code	DSBE 597
Name	MSc Special Topics
Hour per week	4+0 (Theory + Practice)
Credit	4
ECTS	10
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Compulsory
Prerequisites	
Description	The course provides instructions for the preparation of theses. MSc Special Topics course is followed in accordance with the decision of the Board of Institute.
Objectives	Presenting current trends and discussions on academic theses. Identifying relevant data and data sources. Introducing theoretical frameworks and methods relevant to research questions. Developing sections and subsections of theses.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Construct a systematic literature review on their research topics. L02. Define a research question. L03. Identify gaps in the literature. L04. Collect data from various sources. L05. Conduct analysis. L06. Interpret results based on related literature and theory.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010
L01	5	5	0	5	0	5	4	5	5	5
L02	5	5	0	5	0	0	0	5	4	5
L03	5	4	0	5	0	0	0	0	0	5
L04	5	2	5	0	5	5	5	0	5	5
L05	5	0	0	5	5	5	5	0	5	5
L06	5	2	0	5	0	5	5	0	5	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Development of an original academic thesis	L01, L02, L03, L04, L05, L06

### DERS BİLGİLERİ

Kodu	DSBE 597
İsmi	Yüksek Lisans Uzmanlık Alanı
Haftalık Saati	4+0 (Teori + Pratik)

Kredi	4
AKTS	10
Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Zorunlu
Ön Şart	
İçerik	Bu ders tezlerin yazımıyla ilgili bilgiler sunulur. Yüksek Lisans Uzmanlık Alanı dersi Enstitü kuru kararı ile alınır.

### COURSE RECORD

Code	DSBE 599
Name	MSc Thesis
Hour per week	0+1 (Theory + Practice)
Credit	1
ECTS	45
Level/Year	Graduate/1,2
Semester	Fall/Spring
Type	Compulsory
Prerequisites	
Description	The course aims to provide systematic information on the development of a novel research question. Throughout the course, students construct the content of an original research project, conduct analyses and write their theses. The course is taken by each student who is at the thesis stage of the program; and the result is evaluated as "Pass / Fail" by the thesis advisor.
Objectives	Presenting research tools necessary for conducting reseach. Developing a novel research question with students. Introducing rules for academic thesis writing.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> L01. Identify relevant literature to their research interest. L02. Discuss the gaps in the literature. L03. Frame their thesis project. L04. Write an original thesis.

### CONTRIBUTION TO PROGRAMME OUTCOMES\*

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010
L01	5	5	0	5	4	0	0	0	0	0
L02	5	5	0	5	0	0	0	0	0	5
L03	5	4	5	5	0	5	5	0	5	5
L04	5	3	5	5	5	5	5	0	5	5

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

### COURSE CONTENT DETAILS

Topic	Outcomes
Development of an original thesis	L01, L02, L03, L04

### DERS BİLGİLERİ

Kodu	DSBE 599
İsmi	Yüksek Lisans Tezi
Haftalık Saati	0+1 (Teori + Pratik)
Kredi	1
AKTS	45

Seviye/Yıl	Lisansüstü/1,2
Dönem	Güz/Bahar
Dersin Dili	İngilizce
Tip	Zorunlu
Ön Şart	
İçerik	Ders, yeni bir araştırma sorusunun geliştirilmesi hakkında sistematik bilgi sağlamayı amaçlamaktadır. Ders boyunca öğrenciler özgün bir araştırma projesinin içeriğini oluşturur, analizler yapar ve tezlerini yazarlar. Ders, programın tez aşamasında olan her öğrenci tarafından alınır; ve sonuç tez danışmanı tarafından “Geçti/Kaldı” olarak değerlendirilir.