

**MIS**  
**PROGRAM**  
**LECTURE**  
**CONTENTS**

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7111 (Management Information Systems)
<b>Instructor:</b>	Prof.Dr. Ercan Öztemel
Week #	Topics
1	Introduction to Management Information Systems
2	Information Systems, Organizations, and Strategy
3	Ethical and Social Issues in Information Systems
4	IT Infrastructure and emerging technologies
5	Foundations of Business Intelligence: Databases and Information Management
6	Telecommunications, the Internet, and Wireless Technology
7	Securing information systems
8	Midterm Exam
9	Achieving Operational Excellence and Customer Intimacy: Enterprise Applications
10	E-commerce: Digital Markets, Digital Goods
11	Managing knowledge
12	Business Intelligence and decision making
13	Building Information Systems
14	Managing projects
<b>References:</b>	Kenneth C. Laudon, Jane P. Laudon, Management Information System, Pearson Education Limited, ISBN: : 978-0-13-305069-1 , 13th edition, 2014

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7116 (Project Management)
<b>Instructor:</b>	Prof.Dr. Serol Bulkan
<b>Week #</b>	<b>Topics</b>
1	Introduction to Project Management
2	The Project Management and Information Technology Context
3	The Project Management and Information Technology Context
4	The Project Management Process Groups
5	Project Integration Management and Project Scope Management
6	Project and Investment Financial Evaluation
7	Project and Investment Financial Evaluation
8	Project and Investment Financial Evaluation
9	Project Time Management
10	Project Time Management
11	Project Cost Management
12	Project Quality Management and Project Human Resource Management
13	Project Communications Management and Project Risk Management
14	Project Procurement Management
<b>References:</b>	Kathy Schwalbe, Information Technology Project Management, Seventh Edition, 2014

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7117 (Business Intelligence)
<b>Instructor:</b>	Prof.Dr. Ercan Öztemel
Week #	Topics
1	Introduction to business intelligence
2	Business intelligence and decision making
3	BI architectures methods and methodologies
4	Data preparation and metedata
5	Report generation
6	Data mining
7	Case study
8	midterm
9	Artificial intelligence and business intelligence
10	Intelligent decisin making
11	Decisin making by machine learning
12	Decision making under uncertain knowlege
13	Case study
14	Flawless business intelligence
<b>References:</b>	S. Sharda, D. Delen, E. Turban, Business Intelligence and Analytics: Systems for Decision Support Global Edition (10th Edition), ISBN: 9781292009230, 2014

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7119 (Quality Assurance in Software Development)
<b>Instructor:</b>	Prof.Dr. Ercan Öztemel
Week #	Topics
1	Introduction to software quality assurance
2	Software project management
3	Software engineering
4	Software configuration management plan
5	software quality assurance Plan
6	Requirements engineering
7	Software development plan
8	Midterm
9	Software risk management plan
10	Software verification and validation plan
11	Software development process definition
12	Continuous improvement in software development processes
13	Standarts and CMMI overview
14	Future of software quality assurance
<b>References:</b>	IEEE 730, Standard for Software Quality Assurance Plans IEEE 828, Standard for Software Configuration Management Plans IEEE 829, Standard for Software Test Documentation IEEE 830, Recommended Practice for Software Requirement Specification IEEE 1008, Standard for Software Unit Testing

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7122 (Database Management Systems)
<b>Instructor:</b>	Prof.Dr. Beytullah Gültekin Çetiner
Week #	Topics
1	Understanding the World today and role of IT
2	History of Databases. Blockchain databases as distributed database platforms
3	Open Source Systems: Linux, MySQL and Bashscripting
4	Starting the Business Informations Systems and Modeling Data Requirements
5	Entity Relation Modeling by using Barker (Oracle) Notations
6	Entity Relation Modeling by using Barker (Oracle) Notations
7	Normalization, Advanced Relationships
8	Entity Relation Modeling by using idef1x Notations
9	Transforming data models to database designs
10	Using CASE (Computer Assisted Software Engineering) tools to automate database designs
11	Example Data Models and Database designs
12	SQL Programming
13	SQL Programming
14	GUI development, integrating front-end tools and blockchain systems with databases
<b>References:</b>	Lecture notes, datamodeling and database design resources, open source database management tools, blockchain systems

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7125 (Supply Chain Management Systems)
<b>Instructor:</b>	Prof.Dr. Gülfem Tuzkaya
Week #	Topics
1	Basic definitions, general knowledge about the course, importance of the logistics
2	Understanding Supply Chain Management
3	Supply Chain Performance
4	Supply Chain Drivers and Metrics
5	Designing Distribution Networks
6	Designing Distribution Networks
7	Network Design in the Supply Chain and Global Supply Chain Networks
8	Network Design in the Supply Chain and Global Supply Chain Networks
9	Forecasting
10	Forecasting
11	Aggregate Planning in a Supply Chain
12	Aggregate Planning in a Supply Chain
13	Presentations
14	Presentations
<b>References:</b>	Sunil Chopra, Peter Meindl, "Supply Chain Management", Prentice Hall, 2010, ISBN-10: 0136080405 Gianpaolo Ghiani, Gilbert Laporte, Roberto Musmanno, "Introduction to Logistics Systems Planning and Control", Wiley, 2004, ISBN: 0-470-84916-9.

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7126 (Decision Making Techniques in Management Information Systems)
<b>Instructor:</b>	Doç.Dr. Hüseyin Selçuk Kılıç
Week #	Topics
1	Introduction to decision making
2	Decision making under uncertainty and under risk
3	Decision trees and utility
4	Group decision making
5	Elementary Methods in Multiple Criteria Decision Making
6	Structuring the problem
7	Constructing the Decision Model in MCDM
8	Analyzing the Problem in MCDM (SAW, WP, TOPSIS)
9	Analyzing the Problem in MCDM (SAW, WP, TOPSIS) Cont.
10	Outranking methods (PROMETHEE)
11	Analytic Hierarchy Process (AHP)
12	Analytic Hierarchy Process (AHP) Cont.
13	Presentations
14	Presentations
<b>References:</b>	<p>Tzeng, G.-H., and Huang, J.-J. 2011. Multiple Attribute Decision Making (Methods and applications), CRC Press.</p> <p>Clemen, R. T. 1996. Making Hard Decisions (An introduction to decision analysis), Duxbury Press</p> <p>Taylor B.W. 2012. Introduction to Management Science, Pearson Education Inc., New Jersey.</p>



MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7136 (Financial Information Analysis)
<b>Instructor:</b>	Dr.Öğr.Üyesi Cem Çağrı Dönmez
Week #	Topics
1	PART I: INTRODUCTION
2	PART II: BUSINESS STRATEGY ANALYSIS
3	PART III: ACCOUNTING ANALYSIS I
4	PART IV: ACCOUNTING ANALYSIS II
5	PART V: FINANCIAL ANALYSIS I
6	PART VI: FINANCIAL ANALYSIS II
7	PART VII: FORECASTING I
8	PART VIII: FORECASTING II
9	PART VIII: VALUATION I
10	PART X: VALUATION II
11	PART XI: SYNTHESIS, REVIEW AND APPLICATION
12	PART XII: COMPREHENSIVE CASE
13	PART XIII: PROJECT WORKSHOP & PRESENTATIONS
14	PART XIV: GUEST SPEAKER
<b>References:</b>	

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7137 (Manufacturing Information Systems)
<b>Instructor:</b>	Prof.Dr. Serol Bulkan
Week #	Topics
1	History of Enterprise Resource Planning
2	The Theory of Constraints and ERP
3	Sales and Operations Planning
4	Buffer Resource Strategy
5	Enterprise Resource Management
6	Enterprise Resource Management
7	Operations Planning (Material and Capacity Requirements Planning)
8	Operations Planning (Material and Capacity Requirements Planning)
9	Operations Planning (Material and Capacity Requirements Planning)
10	Operations Planning (Material and Capacity Requirements Planning)
11	Product Life Cycle Management
12	Manufacturing Execution System
13	Distribution
14	Selecting the Right ERP System
<b>References:</b>	<p>1) ERP – Tools, Techniques, and Applications for Integrating the Supply Chain, Carol A. PTAK and Eli SCHRAGENHEIM, 2nd Edition, The St. Lucie Press, 2004.</p> <p>2) Manufacturing Information and Data Systems, Franjo Cecelja, Penton Press, 2002</p>

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7140 (Topics in Management Information Systems)
<b>Instructor:</b>	Prof.Dr. Beytullah Gültekin Çetiner
Week #	Topics
1	Introduction to Active Learning Techniques for MIS project development
2	Understanding the World and role of IT systems
3	Defining problems. Ill-defined problems and Welldefined problems. Solutions.
4	Learning Blockchain systems with active learning style
5	Introduction to Creative/inventive problem solving using TRIZ
6	40 TRIZ Principles
7	Continue to 40 TRIZ Principles
8	MIDTERM BREAK
9	Using TRIZ in solving problems creatively
10	Using TRIZ for MIS applications
11	Identifying and solving problems in MIS project developments
12	Reverse Engineering in MIS applications
13	Rehearsals for Project Presentations
14	Project Presentations
<b>References:</b>	Suddenly An Inventor Apperared, G. Altshuller; TRIZ Resources; Project Management Resources; Creative Problem Solving, Balamy

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7143 (Data Communications and Computer Networks)
<b>Instructor:</b>	Doç.Dr. Ali Fuat Alkaya
Week #	Topics
1	Introduction
2	Introduction to Computer Networks and Data Communications
3	Fundamentals of Data and Signals
4	Conducted and Wireless Media
5	Making Connections
6	Multiplexing and Compression
7	Errors, Error Detection and Error Control
8	Local Area Networks-I
9	Local Area Networks-II
10	Metropolitan Area Networks and Wide Area Networks
11	Internet
12	Voice and Data Delivery Networks
13	Network Security
14	Network Design and Management
<b>References:</b>	Data Communications and Computer Network, Curt White, Cengage Learning, 7th Ed. <a href="http://www.canvas.net">www.canvas.net</a> (for Announcements and file sharing) <a href="http://ues.marmara.edu.tr">ues.marmara.edu.tr</a> (for uploading quizzes and exams)

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7144 (Data Mining)
<b>Instructor:</b>	Doç.Dr. Ali Fuat Alkaya
Week #	Topics
1	Introduction
2	Data-Analytic Thinking
3	Business Problems and Data Science Solutions
4	Introduction to Predictive Modelling
5	Classification Trees
6	Fitting a Model to Data - Linear Regression
7	Fitting a Model to Data - Logistic Regression and SVMs
8	Overfitting and Its Avoidance
9	Similarity and Nearest Neighbors
10	Clustering
11	What is a Good Model?
12	Visualizing Model Performance
13	Evidence and Probabilities
14	Other Data Science Techniques
<b>References:</b>	Data Science for Business, Foster Provost & Tom Fawcett, O'Reilly <a href="http://www.canvas.net">www.canvas.net</a> (for Announcements and file sharing) <a href="http://ues.marmara.edu.tr">ues.marmara.edu.tr</a> (for uploading quizzes and exams)

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7146 (Information Security)
<b>Instructor:</b>	Dr.Öğr.Üyesi Merve Er
Week #	Topics
1	Introduction to Management of Security
2	Key Concepts of Information Security: Categories of Threats
3	Key Concepts of Information Security: Categories of Threats (cont)
4	Principles of Information Security Management
5	Principles of Information Security Management (cont.)
6	Governance and Strategic Planning for Security
7	Planning for Information Security Implementation
8	Dveloping the Security Program
9	Dveloping the Security Program (cont.)
10	Risk Management (Risk Identification & Assessment)
11	Risk Management (Controlling Risk)
12	Security Technology
13	Case Study
14	Case Study
<b>References:</b>	Whitman and Mattord (2017). Management Information Security. CengageLearning

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7147 (E-Marketing)
<b>Instructor:</b>	Dr.Öğr.Üyesi Övül Arıoğlu
Week #	Topics
1	Introduction
2	The Past, Present, and Future of E-Marketing
3	Strategic E-Marketing and Performance Metrics
4	The E-Marketing Plan
5	Global E-Markets
6	Ethical and Legal Issues
7	E-Marketing Research
8	Connected Consumers Online
9	Segmentation, Targeting, Differentiation, and Positioning Strategies
10	Product: The Online Offer
11	Price: The Online Value
12	The Internet for Distribution
13	E-Marketing Communication
14	Customer Relationship Management
<b>References:</b>	<p>Strauss, J. &amp; Frost, R. (2014). E-Marketing, Global Edition, 7/e. Pearson Prentice Hall.</p> <p>Chaffey, D. &amp; Ellis-Chadwick, F. (2016). Digital Marketing, 6/e. Pearson Prentice Hall.</p>

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7149 (Statistical Data Analysis)
<b>Instructor:</b>	Dr.Öğr.Üyesi Canan Ağlan Gökler
Week #	Topics
1	Introduction to Statistics
2	Tables and Charts for numerical data
3	Summary and description of data
4	Probability and Discrete probability distributions
5	Continuous probability distributions
6	Continuous probability distributions
7	Confidence Interval Estimations
8	Confidence Interval Estimations
9	Introduction to hypothesis testing
10	Tests for the mean
11	t test for the mean differences
12	test for variance differences
13	Linear Regression and correlation
14	Linear Regression and correlation
<b>References:</b>	Ott, R. L., & Longnecker, M. T. (2015). An introduction to statistical methods and data analysis. Cengage Learning. Devore, J. L. (2011). Probability and Statistics for Engineering and the Sciences. Cengage learning.



MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7150 (Computer Technology and Networks)
<b>Instructor:</b>	Dr.Öğr.Üyesi Salih Bayar
Week #	Topics
1	Syllabus and Introduction
2	What is a Modern Computer?
3	Computer Hierarchy & Computer Models
4	Number representations & Arithmetic Operations
5	Boolean Algebra & From Transistor to Logic Gates
6	Combinational Circuits
7	Karnaugh Maps
8	Sequential Circuits
9	Character Codes & CRC
10	CPU basics & Bus & Clocks & IO
11	Memory Organization
12	Memory Types & Hierarchy
13	Cache Memory
14	Virtual Memory
<b>References:</b>	Linda Null and Julia Lobur, The Essentials of Computer Organization and Architecture, Fifth Edition, Jones & Bartlett Learning, 2018, ISBN: 978-1284123036.

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7151 (Economics and Cost Analysis)
<b>Instructor:</b>	Dr.Öğr.Üyesi Cem Çağrı Dönmez
Week #	Topics
1	Introduction to Cost-Benefit Analysis
2	Conceptual Foundations of Cost-Benefit Analysis
3	Microeconomic Foundations of Cost-Benefit Analysis
4	Discounting Benefits and Costs in Future Time Periods
5	Option Price and Option Value
6	Predicting and Monetizing Impacts
7	Valuing Impacts from Observed Behavior: Experiments and Quasi Experiments
8	Valuing Impacts from Observed Behavior: Indirect Market Methods
9	Contingent Valuation: Using Surveys to Elicit Information about Costs and Benefits
10	Shadow Prices from Secondary Sources
11	Shadow Prices: Applications to Developing Countries
12	Distributionally Weighted Cost-Benefit Analysis
13	Cost-Effectiveness Analysis
14	GUEST SPEAKER
<b>References:</b>	

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7152 (Lean Management)
<b>Instructor:</b>	Doç.Dr. Hüseyin Selçuk Kılıç
Week #	Topics
1	Introduction to Lean Management: Lean Philosophy and Principles
2	Lean Thinking Concept and Lean Enterprises
3	Identifying Waste in the Management Process
4	Value Stream Mapping and Applying Waste Elimination
5	Lean Engineering
6	Strategy and Measurement in the Lean Enterprise
7	Lean Enterprise Self-Assessment Tool (LESAT)
8	Push and Pull Logic
9	Lean approach in service systems
10	Lean approach in service systems
11	Lean Leadership
12	Enterprise Integration
13	Presentations
14	Presentations
<b>References:</b>	<p>Womack, J. P., Jones, D. T., &amp; Roos, D. (1990). Machine that changed the world. Simon and Schuster.</p> <p>Wilson, L. (2010). How to implement lean manufacturing. Estados Unidos: McGraw-Hill.</p> <p>Schmidt, J. J., Lyle, D.(2010), Lean Integration: An Integration Factory Approach to Business Agility</p>

MANAGEMENT INFORMATION SYSTEMS PROGRAM LECTURE CONTENTS	
<b>Lecture:</b>	MIS 7153 (Risk Management)
<b>Instructor:</b>	Dr.Öğr.Üyesi Merve Er
Week #	Topics
1	Introduction: What is Risk and Uncertainty?
2	Internal & External Risks in Operating an Enterprise
3	Internal & External Risks in Operating an Enterprise (cont.)
4	Internal & External Risks in Operating an Enterprise (cont.)
5	Enterprise Risk Management Concept and Framework
6	Risk Identification
7	Risk Measurement and Metrics
8	Risk Analysis and Assessment
9	Risk response and risk treatment & Developing a strategy for dealing with risk
10	Risk Monitoring and Reporting
11	Risk from a Financial Perspective: Capital Allocation and Risk
12	Data and Technology: Data Management and Early Warning Systems
13	Case Study Analysis
14	Emerging risks and future developments
<b>References:</b>	<p>1) Lam, J. (2017). Implementing Enterprise Risk Management: From Methods to Applications. Wiley.</p> <p>2) Lam, J. (2014). Enterprise Risk Management: From Incentives to Controls. 2nd Edition. Wiley.</p> <p>3) Hopkin, P. (2018). Fundamentals of Risk Management: Understanding, Evaluating and Implementing Effective Risk Management. 5th Edition. Kogan Page.</p> <p>* Additionally, a reading list and some case studies will be given to students.</p>