Course Description	
Course Code	YS 440
Course Name	WEB SERVICES
Prerequisite Courses	
Language of the Course	The English
Course Coordinator	
Instructor(s)	
Course Assistants	
The aim of the course	1. Introduction to Networking and the world wide web. 2. Building multi-tier enterprise applications. 3. Introduction to the .NET framework. 4. .NET Interoperation services. 5. Client-side programming: HTTP, CGI, Cookies, JavaScript, HTML, XML. 6. Server-side programming: Web Forms, ASP.NET Web Services, ADO.NET Data AccesS. 7. Client/Server Programming, 3-tier architecture. 8. .NET Remoting. 9. ASP.NET Web services and web service security. 10. RESTful, SOAP, DISCO, and UDDI. 11. Simple Object Access Protocol (SOAP) and Web Services. 12. Software as a Service (SaaS). 13. Content Management Systems (CMS) and DotNetNuke. 14. Windows SharePoint Services.
Course Content	This course will cover the practical aspects of multi-tier application development using the .NET framework. The goal of this course is to introduce the students to the basics of distributed application development. We will introduce the students to Web Service development and .NET remoting. Technologies covered include the Common Language Runtime (CLR), .NET framework classes, C#, ASP.NET, and ADO.NET. We will also cover service-oriented architecture, design, performance, security, content management systems and deployment issues encountered in building multi-tier distributed applications.

Weekly Course Content	
Week 1	Introductions, course mechanics, .NET Overview, CLR, Assemblies (monolithic vs. component-based applications), Execution Model, Client-Side vs. Server-Side Programming, Web Technologies
Week 2	HTML, JavaScript, CSS, DOJO, Jquery, DOJO, OpenDesigns, Introduction to C#: Types and program structure
Week 3	Development Environment Setup, ISS, SQL Server and Visual Studio, Advanced C#: OOP, Delegates, Events, Attributes, unsafe code, .NET Interop
Week 4	.NET Framework Class Library (FCL): System, Collections, I/O, Networking, Threading, Transactions, Exceptions
Week 5	Databases and Data Access using ADO.NET & LINQ
Week 6	Introduction to ASP.NET, programming model, server controls, data binding
Week 7	ASP.NET state management, tracing, caching, error handling, security, deployment, user and custom controls, DotNetNuke
Week 8	Midterm exam
Week 9	Exposing and consuming ASP.NET Web Services, XML, RESTful, SOAP, DISCO, UDDI
Week 10	Continue with Web Services
Week 11	Developing Secure Web Services
Week12	.NET remoting
Week 13	Content Management Systems (CMS)
Week 14	Windows SharePoint Services and DotNetNuke
Week 15	Final exam.

Course Learning Outcomes	
1	Students will be able to understand the development and deployment cycles of enterprise applications
2	Students will be able to utilize the .NET framework to build distributed enterprise applications.
3	Students will be able to develop ASP.NET Web Services, secure web services, and .NET remoting applications.
4	Students will be able to understand the protocols behind web services including: SOAP, DISCO, and UDDI.
5	Students will be able to understand the 3-tier software architecture (presentation/client tier, application tier, data tier) and develop multi-tier applications.
6	Students will be able to understand and experiment with the deployment of enterprise applications.
7	Students will be able to develop web applications using a combination of client-side (JavaScript, HTML, XML, WML) and server-side technologies (ASP.NET, ADO.NET).
8	Students will be able to develop network applications using state-of-the-art RPC technologies including: .NET remoting, and Web Services (SOAP).
9	Students will be able to develop modules and web applications using DotNetNuke and Windows SharePoint Services.
10	

Contribution of the Course to Program Qualifications		Contribution Level
01	The student will have the ability to apply analytical approach, mathematics and science knowledge in software and engineering issues.	4
02	The student will have the ability to identify, define, formulate and solve a problem in software and computer systems.	5
03	The student will have gains scientific research skills in software and engineering problems, has the ability to design a system, part or process.	4
04	The student will have the ability to use the design capability, techniques and tools required for engineering applications.	2
05	The student will have the ability to design, implement and interpret experimental work and software projects by analyzing the results.	4
06	The student will have the ability to work between disciplines and teamwork.	5
07	The student will have the ability to work in international environments and adapt to different cultures.	4
08	The student will have verbal and written communication skills in Turkish and English.	5
09	The student will have the awareness of the necessity of lifelong learning and the ability to realize it.	3
10	The student will gain knowledge of legal issues with the awareness of professional and ethical responsibility.	3
11	The student will have managerial skills (leadership, organization, time and risk management, quality awareness, efficiency, etc.).	5
12	The student will have the ability to participate in social activities, to acquire regular sports habits and to use time in the best way.	5
13	The student will have the ability to find unusual ways and produce projects.	3
14	The student will have professional self-confidence, being an entrepreneur and taking initiative.	3
15	It is sensitive about the problems of the age and looks after the national interests.	4

ECTS WORKLOAD			
	Number	**Duration (hours)**	**Number*Duration**
Face to face education	14	2	28
Out-of-class study time (pre-study, reinforcement)	14	1	14
Homeworks	5	2	10
Presentation / Seminar preparation	0	0	0
Quizzes	0	0	0
Preparation for midterm exams	1	10	10
midterm exams	1	2	2
Project (Semester assignment)	0	0	0
Lab	0	0	0
field work	0	0	0
Preparation for the final exam	1	12	12
Semester final exam	1	2	2
Research	5	2	10
TOTAL WORKLOAD			**88**
ECTS			**3**

Evaluation		
SEMESTER EVALUATION	**Number**	**Contribution Percentage**
Midterm	1	65
Quiz	0	0
Homework	5	35
SEMESTER TOTAL		**100**
Contribution rate of mid-term evaluations to success		40
Contribution rate of the final exam to success		60
GRAND TOTAL		**100**

RESOURCES	
Textbook	
Helpful Resources	