

EASTERN MEDITERRANEAN UNIVERSITY

FACULTY OF COMPUTER AND INFORMATION SCIENCES

INFORMATION TECHNOLOGY

Information Technology

Bachelor's Degree Program

MODULES HANDBOOK

Tel: +90 392 630 1245

E-mail: cis.info@emu.edu.tr

Information Technology (English)
4-Year Curriculum

Semester	Ref Code	Course Code	Full Course Title	Course Category	Credit				Prerequisite	ECTS
					Lec	Lab	Tut	Credit		
1	NP411	ITEC123	Information Technology and Programming Fundamentals	UC	3	2	0	4		8
1	NP412	ITEC109	Information Security Fundamentals	AC	3	0	0	3		6
1	NP413	MGMT101	Introduction to Business -I	AC	3	0	0	3		6
1	NP414	MATH133	Basic Mathematics	AC	3	0	1	3		6
1	NP415	ENGL191	Communication in English - I	UC	3	0	1	3		4
2	NP421	ITEC114	Structured Programming	AC	3	2	0	4	ITEC123	6
2	NP422	ITEC116	Human-Computer Interaction and Design	AC	2	2	0	3		6
2	NP423	MATH134	Discrete Mathematics for Information Technology	AC	3	0	1	3		6
2	NP424	ENGL192	Communication in English - II	UC	3	0	1	3	ENGL191	4
2	NP425*	TUSL181 / HIST280	Turkish as a Second Language / Atatürk's Principles and History of Turkish Reforms	UC	2	0	0	2		2
2	NP426	ITEC172	Artificial Intelligence Fundamentals	AC	3	0	1	3		6
3	NP431	ITEC217	Database Management Systems - I	AC	3	2	0	4		6
3	NP432	ITEC213	Data Structures and Applications	AC	3	2	0	4	ITEC114	6
3	NP433	MATH211	Introduction to Statistics	AC	3	0	1	3		6
3	NP434	ITEC233	Web Programming –I	AC	3	2	0	4		6
3	NP435	ITEC255	Computer Organization and Architecture	AC	3	0	1	3		6
4	NP441	ITEC202	Operating Systems	AC	3	2	0	4		6
4	NP442	ITEC227	Database Management Systems - II	AC	3	2	0	4	ITEC217	6
4	NP443	ITEC218	Machine Learning Fundamentals	AC	3	2	0	4		6
4	NP444	ITEC243	Object-Oriented Programming	AC	3	2	0	4	ITEC114	6
4	NP445	ITEC259	Digital Logic Design	AC	3	2	0	4		6
5	NP451	ITEC309	Computer Networks - I	AC	4	0	0	4		7
5	NP452	ITEC315	System Analysis and Design	AC	3	2	0	4		7
5	NP453	ITEC337	Web Programming -II	AC	3	2	0	4	ITEC233, ITEC217	6
5	NP454	ITEC325	Deep Learning Fundamentals	AC	3	0	1	3		6
5	NP455	UE-01	University Elective - I	UE	3	0	0	3		4
6	NP461	ITEC310	Computer Networks - II	AC	3	2	0	4	ITEC309	7
6	NP462	ITEC344	Distributed Application Development	AC	3	1	0	3		6
6	NP463	ITEC316	Software Engineering	AC	3	0	1	3	ITEC315	6
6	NP464	ITEC347	Analysis of Algorithms	AC	3	0	1	3		5
6	NP465	AE-01	Area Elective - I	AE	3	0	1	3		6
7	35771	ITEC400	Summer Training	AC	0	0	0	0		6

7	NP472	ITEC402	Graduation Project Orientation	AC	0	0	0	0		2
7	NP473	ITEC455	Mobile Programming	AC	3	1	0	3	ITEC344	7
7	NP474	ITEC458	Cloud Computing and Security	AC	3	1	0	3		7
7	NP475	AE-02	Area Elective - II	AE	3	0	1	3		6
7	NP476	UE-02	University Elective - II	UE	3	0	0	3		4

8	NP481	ITEC404	Graduation Project	AC	3	0	0	3	ITEC402	10
8	NP482	MGMT401	Management Information Systems	AC	3	0	1	3		6
8	NP483	ITEC417	Cybersecurity	AC	3	1	0	3		8
8	NP484	UE-03	University Elective - III	UE	3	0	0	3		4

AC = Area Core AE = Area Elective UC = University Core UE = University Elective
Lec = Lecture Hours Lab = Laboratory Hours Tut = Tutorial Hours

❖ **To enroll in a course, you must have successfully completed the course prerequisites.**

*** International students should register TUSL181 - Turkish Citizens students should register HIST280**

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Information Security Fundamentals
Course Code	ITEC109
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3,0,0) 3
Prerequisite	-
Language	English
Level	First Year
Teaching Format	3 Hours Lectures per week
ECTS Credit	6
Course Web Site	lms.emu.edu.tr

Instructor(s)	Dr. Yeşim Kapsıl Çırak	**Office Tel**	+90 392 6302310
E-mail	yesim.kapsil@emu.edu.tr	**Office No**	CT216

Course Description

The course's main objectives are familiarity with ethics, awareness of contemporary challenges, and a fundamental understanding of IT history. An overview of ethical theories and associated issues, including privacy, networking, security, and reliability, are covered in the course. The course covers topics from many angles, including government oversight, cybercrimes, and intellectual property. Students will study global concerns like social networking, cyberspace, cybernetics, and online crimes. The goal of this course is to develop students' critical thinking skills and provide them with the ability to make their own decisions. In addition, students will have the skill to reconcile opposing viewpoints, which will effectively equip them to work as ethical and responsible team members and as individual users of innovative technologies.

General Learning Outcomes

On successful completion of this course students should be able to:

- Explain fundamental ethical theories and their relevance to information technology.
- Identify and analyze contemporary ethical challenges in areas such as privacy, networking, security, and system reliability.
- Evaluate the role of government oversight, laws, and regulations in addressing cybercrimes and intellectual property issues.
- Discuss global concerns including social networking, cyberspace, cybernetics, and online crimes from multiple perspectives.
- Apply critical thinking skills to assess ethical dilemmas in IT and propose reasoned solutions.
- Compare and reconcile opposing viewpoints on ethical issues in technology.
- Demonstrate the ability to make independent, ethical decisions as both individual technology users and team members.
- Reflect on the historical development of IT and its impact on ethical and social challenges today.

Teaching Methodology / Classroom Procedures

In the beginning of each class there will be a short lecture about the importance of the topic.
Students will form teams and choose a project from the specified topics to be presented in class.
Case Studies, drama and dialogue will be used as powerful tools to help IT students to identify, discuss and understand the role of ethics in their professional practice.
Students are encouraged to use internet to research and present various related topics in a team work.
Lecture notes and announcements will be posted on the web site.
Students are responsible to know and use all the course material placed on the web (http://lms.emu.edu.tr and track the designated dates for timely submission of the assignment and for timely attendance to all quizzes.

There is a project assignments as follows:

- ✓ A project that will be select from students related topic.

There is written midterm and final exam which all topics.

Course Materials / Main References
Text Book: George Reynolds, Ethics in Information Technology, Sixth Edition, *Cengage Learning, 2018.* **Resource Books:** - George Reynolds, *Ethics in Information Technology,* Fourth Edition, Course Technology, 2011. - Michael J. Quinn, *Ethics in the Information Age,* Sixth Edition, Pearson Prentice-Hall, 2015. - Albert Bayet, *Bilim Ahlakı,* Türkiye İş Bankası Kültür Yayınları, 2000. **Lecture Notes:** - lms.emu.edu.tr

Weekly Schedule / Summary of Topics	
Week 1-2	**An Overview of IT Ethics**
Week 3-4	**Ethics for IT Workers and IT Users**
Week 5	**Cyberattacks and Cybersecurity**
Week 6	**Privacy**
Week 7	**Freedom of Expression**
Week 8-9	**Midterm Exams**
Week 10	**Intellectual Property**
Week 11	**Ethical Decisions in Software Development**
Week 12	**The Impact of Information Technology on Society**
Week 13	**Social media**
Week 14	**Ethics of IT Organizations**
Week 15	**Review of Topics**
Week 16-17	**Final Exams**

Requirements
▪ Each student can have only one make-up exam. One who misses an exam should provide a medical report within 3 days after the missed exam. The make-up exam will be organized at the end of the term after the finals and will cover all the topics. No make-up exam will be given for the quizzes. ▪ If a student has attended less than 60% of the lecture/lab/tutorial hours for the relevant course, has not taken any exams (midterms, final exams), and has not completed any of the graded course activities (quizzes, homework, projects, lab works, etc.), they will not be able to take make-up exams and will be assigned NG letter grade. ▪ If a course is repeated, attendance will not be required for that course, but the student will be required to fulfill all course requirements beyond the attendance requirement.

Method of Assessment			
Evaluation and Grading	**Project/Presntation**	**Mid**	**Final Exam**
Percentage	30%	30%	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY

FACULTY OF COMPUTER AND INFORMATION SCIENCES

INFORMATION TECHNOLOGY

COURSE POLICY SHEET

Course Title	Structured Programming
Course Code	ITEC114
Type	Full Time
Semester	Fall - Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3,2,0) 4
Prerequisite	ITEC123
Language	English
Level	First Year
Teaching Format	3 Hours Lecture, 2 Hours Laboratory per week
ECTS Credit	6
Course Web Site	http://lms.emu.edu.tr

Instructor	Asst.Prof.Dr.Akile Oday	**Office Tel**	+90 392 6301183
E-mail	akile.oday@emu.edu.tr	**Office No**	CT114

Course Description

This module aims to introduce computer programming and emphasis in problem solving on the fundamentals of structured design using the principles of Top Down problem solving strategy. This course is a continuation of the study on the concepts of programming structures. The module also aims to explore the logic of programming and implement them in programming structures including functions, arrays, pointers, strings, structures and text file.

General Learning Outcomes

On successful completion of this course students should be able to:

- Analyze and explain the behavior of simple programs involving the fundamental programming constructs covered by this unit.
- Modify and expand short programs that use standard conditional and iterative control structures and functions.
- Design, implement, test, and debug a program that uses each of the following fundamental programming constructs: basic computation, simple I/O, standard conditional and iterative structures, and the definition of functions.
- Choose appropriate conditional and iteration constructs for a given programming task.
- Apply the techniques of structured (functional) decomposition to break a program into smaller pieces.
- Describe the mechanics of parameter passing and the issues associated with scoping.
- Write programs that use each: functions, arrays, files, strings and pointers.

Teaching Methodology / Classroom Procedures

- The students are expected to be active learners in this course. The teaching methodology of this course is based on a lecture based discussion of concepts followed by supervised as well as unsupervised applications of these concepts in Lab. At the end of every major topic discussion, the students will have to work on corresponding

Lab assignments where they have to apply the knowledge and skills they learned in class.

- The student will be provided before coming each Lab Session to read Lab Assignments.
- Every week the student has to follow the following :

  ✓ Three hours of Lectures to learn the basic skills and theoretical information needed.
  ✓ Two hours of supervised Lab applications to apply the information/knowledge given during the lectures
  ✓ Students are required to attend all classes and all Lab sessions.
  ✓ Students are expected to carry out the assigned readings, attend quizzes.

- Students are responsible to know and use all the course material placed on the web (http://lms.emu.edu.tr) and for timely attendance to all quizzes.
- There are two assignments
- There are two written quizzes
- There is a written midterm exam which covers Functions and Array s
- There is a written final exam which covers all topics

Course Materials / Main References
Text Book: **"C How to Program", by DEITEL & DEITEL, Seventh Edition, 2012, ISBN-13: 978-0-13-299044-8**   ***Lecture Notes:***   - Lecture , Lab and tutorial notes on web link http://lms.emu.edu.tr

Weekly Schedule / Summary of Topics	
Week 2	**Review (ITEC113)**
Week 3-4	**C Functions (Chapter 5)** In this chapter, you'll: - Construct programs modularly from small pieces called functions. - Use common math functions in the C standard library. - Create new functions. - Use the mechanisms that pass information between functions. - Learn how the function call/ return mechanism is supported by the function - Use simulation techniques based on random number generation. - Write and use functions that call themselves
Week 5-6	**C Arrays (Chapter 6)** In this chapter, you'll learn: - To use the array data structure to represent lists and tables of values. - To define an array, initializean array and refer to individual elements of an array. - To define symbolic constants. - To use arrays to store, sort and search lists and tables of values. - To define and manipulate multidimensional arrays.

Week 7-8	**C pointers (Chapter 7)** In this chapter, you'll learn: - Pointers and pointer operators. - To use pointers to pass arguments to functions by reference. - The close relationships among pointers, arrays and strings. - To use pointers to functions. - To define and use arrays of strings.
Week 9-10	**Midterm Exams**
Week 11	**C Characters and Strings (Chapter 8)** In this chapter, you'll: - Use the functions of the character-handling library (<ctype.h>). - Use the string-conversion functions of the general utilities library(<stdlib.h>). - Use the string and character input/output functions of the standard input/output library (<stdio.h>). - Use the string-processing functions of the string handling library(<string.h>).
Week 12-13	**C Structures (Chapter 10)** - Create and use structures - Pass structures to functions by value and by reference
Week 14-15	**C File Processing (Chapter 11)** In this chapter, you'll: - Understand the concepts of files - Create, read and write data using sequential-access file processing.
Week 16-18	**Final Exams**

Requirements
▪ Each student can have only one make-up exam. One who misses an exam should provide a medical report within 3 days after the missed exam. The make-up exam will be organized at the end of the term after the finals and will cover all the topics. ▪ No make-up exam will be given for the quizzes. ▪ Students should follow the announcement in the course web site.

Method of Assessment					
Evaluation and Grading	**Quizzes (2)**	**Assignments(2)**	**Lab Performance**	**Midterm Exam**	**Final Exam**
Percentage	10 %	10 %	15 %	30 %	35 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Human-Computer Interaction and Design – Human-Computer Interaction
Course Code	ITEC116/ITSE116 - ITEC215/CMPR108
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(2,2,0) 3
Prerequisite	-
Language	English
Level	Second Year
Teaching Format	2 Hours Lecture and 2 Hours Laboratory per week
ECTS Credit	6
Course Web Site	http://lms.emu.edu.tr

Instructor	Dr. Şensev Payan İlkan	**Office Tel**	+90 392 630 1665
E-mail	sensev.alicik @emu.edu.tr	**Office No**	CT110
Lab Instructors	Negar Afshartous	**E-posta / E-mail**	negar.afshartous@emu.edu.tr

Course Description

The purpose of this course is to provide students with an understanding of human computer interaction concepts and theories. It mainly focuses on how humans perceive and interact with computers. Upon successful completion of the course, students will become aware of a great variety of interaction techniques and also acquire the ability to apply the correct principles in the process of designing graphical user interfaces. The laboratory sessions aim to introduce the basic multimedia elements (i.e. text, sound, image, animation) and how to sew these elements to produce a multimedia project using different tools such as 3Ds Max and Photoshop. Upon the completion of the laboratory sessions students will gain experience with multimedia software's and develop good quality multimedia products.

General Learning Outcomes

On successful completion of this course students should be able to:

- Describe the relationship between the cognitive principles and their application to interfaces.
- Learn how to analyze users and their goals, tasks, and actions.
- Design a low-fidelity web-page prototype which can be evaluated.
- Employ user-centered methodologies in the development, evaluation, and deployment of interactive systems.
- Develop skills in using effective color, typography, multimedia elements in graphical user interface design.
- Utilize multimedia elements to produce and deliver an effective multimedia project.
- Use multimedia development tools as 3Ds Max and Photoshop
- Capture and edit sound, image and video.
- Gain awareness of the developments in multimedia world.

Teaching Methodology / Classroom Procedures
▪ 2 hours of lecture and 2 hours of laboratory session per week are conducted for this course. ▪ There are TWO exams namely Midterm Exam, and Final Exam. ▪ There are TWO assignments namely Assignment 1, and Assignment 2. Assignments are to be saved as .DOC (WORD DOCUMENT) format, and should be submitted on LMS, before the due time. ▪ Laboratory exercises will be worth 10% and lab quiz will be 20%

Course Materials / Main References
Textbook: **Human Computer Interaction** Alan Dix – Janet Finlay – Gregory Abowd – Russell Beale, PRENTICE HALL © 1993, 1998, 2004. THIRD EDITION https://www.researchgate.net/publication/224927543_Human-Computer_Interaction Tay Vaughan, Multimedia: Making it work, 8th edition, McGraw Hill Technology Education, 2011. ISBN 13:978-0-07-174846-9 **Alternative Textbook:** Daniel D. McCracken, Rosalee J. Wolfe, ***User-Centered Web Site Development: A Human-Computer Interaction Approach***, Pearson Prentice Hall, 2004. ISBN-13: 978-0-13-041161-7 ***Course Materials:*** The lecture notes, lab notes, assignments, and announcements are available on the course web site (LMS.EMU.EDU.TR)

Weekly Lecture Schedule / Summary of Topics	
Week 1	**Course Registration**
Week 2	**CHAPTER1-Introduction to HCI**
Week 3	**CHAPTER2-The Human**
Week 4	**CHAPTER3-The Computer**
Week 5	**CHAPTER4-The Interaction**
Week 6	**CHAPTER5-Paradigms**
Week 7	**CHAPTER6-Interaction Design Basics**
Week 8-10	**Midterm Examinations**
Week 11	**CHAPTER7-HCI in the software process**
Week 12	**CHAPTER8-Evaluation techniques**
Week 13	**CHAPTER9-Universal Design**
Week 14	**Bayram Holiday**
Week 15	**CHAPTER10-User Support**
Week 16-18	**Final Examinations**

***For the weekly lab schedule please check the lab outline**

Requirements
▪ Each student can have only one make-up exam. One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. The make-up exam will be done at the end of the term and will cover all the topics. No make-up exam will be given for the quizzes. ▪ Instructions for the submission of assignments will be posted on the course website. It is each student's responsibility to read and follow the instructions. Failure to follow the submission instructions may result in the assignment receiving a mark of zero. ▪ You must have a printed copy of the corresponding "Lab Outline" before coming to the Lab. "Lab Outlines" will be posted on the instructor's website. ▪ If a student has attended less than 60% of the lecture/lab/tutorial hours for the relevant course, has not taken any exams (midterms, final exams), and has not completed any of the graded course activities (quizzes, homework, projects, lab works, etc.), they will not be able to take make-up exams and will be assigned NG letter grade. ▪ If a course is repeated, attendance will not be required for that course, but the student will be required to fulfill all course requirements beyond the attendance requirement. ▪ Students are expected to attend the lectures/labs on time (within the first 10 minutes).

Method of Assessment				
Evaluation and Grading	**Assignments x 2**	**Lab Work**	**Midterm Exam**	**Final Exam**
Percentage	10 %	30 %	25 %	35 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 - 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY

FACULTY OF COMPUTER AND INFORMATION SCIENCES

INFORMATION TECHNOLOGY

COURSE POLICY SHEET

Course Title	Information Technology and Programming Fundamentals
Course Code	ITEC123
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	240 Hours
EMU Credit	(3,2,0) 4
Prerequisite	-
Language	English
Level	First Year
Teaching Format	3 Hours Lecture, 2 Hours Laboratory Peer Week
ECTS Credit	8
Course Web Site	lms.emu.edu.tr

Instructor(s)	Dr. Yeşim Kapsıl Çırak	**Office Tel**	+90 392 6302310
E-mail	yesim.kapsil@emu.edu.tr	**Office No**	CT216

Course Description

The course aims to equip students with a foundational understanding of IT infrastructure and essential skills to recognize and apply basic security measures. The course covers essential topics such as hardware and software components, operating systems, networks, algorithms, numbering systems, database management and the fundamentals of cybersecurity. The course also introduces structured programming and problem-solving techniques, using flowcharts and pseudo-code to develop critical thinking skills. Programming applications will be carried out in the C++ language. By the end of the course, students will have a foundation in IT infrastructure and security, as well as the programming skills necessary for more advanced IT coursework.

General Learning Outcomes

On successful completion of this course students should be able to:

- Identify and describe the fundamental components of IT infrastructure, including hardware, software, operating systems, and networks.
- Explain and apply basic concepts of algorithms and numbering systems in computing contexts.
- Demonstrate an understanding of database management principles and perform basic data operations.
- Recognize key cybersecurity principles and apply basic security measures to protect IT systems.
- Use flowcharts and pseudo-code to design structured solutions for computational problems.
- Develop basic programming applications using the C++ language, applying structured programming techniques.
- Apply logical and critical thinking skills to solve problems using programming and algorithmic approaches.
- Build a foundational knowledge base in IT infrastructure, security, and programming, preparing for more advanced IT coursework.

Teaching Methodology / Classroom Procedures

The students are expected to be active learners in this course. The teaching methodology of this course is based on a lecture based discussion of concepts followed by supervised as well as unsupervised applications of these concepts in Lab. At the end of every major topic discussion, the students will have to work on corresponding Lab assignments where they have to apply the knowledge and skills they learned in class.

The student will be provided at the beginning of each lab session with the corresponding Lab Assignments in digital form at the start of each Lab Session

Every week the student has to follow the following :

- Three hours of Lectures to learn the basic skills and theoretical information needed.
- Two hours of supervised Lab applications to apply the information/knowledge given during the lectures
- Students are required to attend all classes and all Lab sessions.
- Students are expected to carry out the assigned readings, attend quizzes and submit assignment on time.

Students are responsible to know and use all the course material placed on the lms (http://lms.emu.edu.tr) and track the designated dates for timely submission of the assignment and for timely attendance to all quizzes.

There are lab assignments as follows:

- ✓ A lab assignment given from related topic every week.
- ✓ Students who attend more than 15 minutes late to the ITEC123 laboratory session will be permitted to attend the session; however, they will receive only 50% of the laboratory point.

There is written midterm and final exam which all topics.

Course Materials / Main References
Text Book: "C How to Program", by DEITEL & DEITEL, 978-0132990448, 2017,7th edition "Discovering Computers: Digital Technology, Data, and Devices", by Jennifer Campbell, Mark Ciampa, Steven Freund & Mark Frydenberg, 978-0357675366, 2022, 17th edition ***Resource Books:*** - "C for Business Programming", by John C. Molluzo - "Problem Solving using C: Structured programming techniques" by Yuksel Uckan ***Lecture Notes:*** - Lecture and Lab notes on LMS

Weekly Schedule / Summary of Topics	
Week 1-2	**Introduction to Fundamental Computer Programming Concepts**
Week 3-4	**Components of IT infrastructure: Operating Sys., Network, Database Mgmt. Sys and Cybersecurity Principles**
Week 5	**Introduction to C ++ Programming and Structured Development in C ++**
Week 6	**C ++ Formated Input/Output**
Week 7	**Structured Development in C ++**
Week 8-9	**Midterm Exams**
Week 10-11	**Structured Development in C ++ (cont.)**
Week 11-12	**C++ program Control**
Week 13-14	**Introduction to C Arrays**
Week 15	**Revision**
Week 16-17	**Final Exams**

Requirements

- Each student can have only one make-up exam. One who misses an exam should provide a medical report within 3 days after the missed exam. The make-up exam will be organized at the end of the term after the finals and will cover all the topics. No make-up exam will be given for the quizzes.
- If a student has attended less than 60% of the lecture/lab/tutorial hours for the relevant course, has not taken any exams (midterms, final exams), and has not completed any of the graded course activities (quizzes, homework, projects, lab works, etc.), they will not be able to take make-up exams and will be assigned NG letter grade.
- If a course is repeated, attendance will not be required for that course, but the student will be required to fulfill all course requirements beyond the attendance requirement.

Method of Assessment			
Evaluation and Grading	**Labs**	**Midterm Exam**	**Final Exam**
Percentage	30 %	30 %	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Ders Adı / Course Title	Yapay Zekanın Temelleri/ Artificial Intelligence Fundamentals
Ders Kodu / Course Code	ITEC172
Tipi /Type	Tam Zamanlı / Full Time
Yarıyıl /Semester	Fall/Güz - Bahar/Spring
Türü / Category	AD (Ana Ders) / AC (Area Core)
İş Yükü / Workload	180 Hours
DAÜ Kredi Değeri /EMU Credit	(3,1,0) 3
Ön Koşul / Prerequisite	
Dil / Language	İngilizce / English
Seviye / Level	Birinci Yıl / First Year
Öğretim Formatı / Teaching Format	Haftalık 3 saat Ders, 1 Saat Uygulama / 3 Hours Lecture and 1 Hour Lab per week
ECTS Değeri / ECTS Credit	6
Ders WEB Sitesi / Course Web Sites	lms.emu.edu.tr

Öğretim Elemanı / Instructor	Cem Yağlı	**Ofis Tel / Office Tel**	+90 392 6301137
E-posta / E-mail	Cem.yagli@emu.edu.tr	**Ofis No /Office No**	CT109

Ders İçeriği / Course Description

Turkish:

Bu ders, öğrencilere Yapay Zeka'nın (YZ) temel kavramlarını, tekniklerini ve uygulama alanlarını tanıtmayı amaçlamaktadır. Dersin başında YZ'nin tarihsel gelişimi ve etik boyutları ele alınmakta, ardından akıllı ajanlar, problem çözme stratejileri ve arama algoritmaları detaylı olarak incelenmektedir. Öğrenciler, bilgi temsili, mantıksal akıl yürütme ve belirsizlikle başa çıkma konularını uzman sistemler, Prolog ve Lisp programlama alıştırmaları ile öğrenirler. Doğal dil işleme konusunun ardından, dersin son haftalarında makine öğrenmesi ve derin öğrenme gibi modern YZ konuları ele alınmakta; Scikit-learn ve TensorFlow gibi Python kütüphaneleriyle uygulamalı çalışmalar yapılmaktadır. Ders sonunda öğrenciler, temel YZ sistemlerini tasarlama ve uygulama konusunda hem teorik bilgiye hem de pratik becerilere sahip olacaklardır.

English:

This course introduces students to the fundamental concepts, techniques, and applications of Artificial Intelligence (AI). It begins with the historical evolution and ethical considerations of AI, followed by an in-depth exploration of intelligent agents, problem-solving strategies, and search algorithms. Students will learn knowledge representation, logical reasoning, and uncertainty handling through expert systems, Prolog, and Lisp programming exercises. The course also covers natural language processing and culminates with modern AI topics such as machine learning and deep learning, including hands-on Python labs using libraries like Scikit-learn and TensorFlow. By the end of the course, students will gain both theoretical understanding and practical skills to design and implement basic AI systems.

Öğrenme Çıktıları / General Learning Outcomes

Türkçe:
Bu dersi başarıyla tamamlayan öğrenciler:

- Yapay Zeka teorisi ve uygulamalarının tarihsel gelişim süreci hakkında yeterli bilgiye sahip olacak, ayrıca bu süreçde geliştirilmiş teknolojiler ve bu teknolojileri ifade etmede kullanışlan kavramlara hakim olacaklar.
- YZ uygulamalarının tarihsel gelişimi esnasında kullanılan Lisp, Prolok dilleri ve günümüzde yaygın olarak kullanılan Python dili ve en yaygın YZ kütüphaleleri konusunda da fikir sahibi olacaklardır.
- YZ nın amacına uygun – etik kullanımı konusunda da bilgi sahibi olacaklardır.
- YZ Teknik ve algoritmalarının dayanağı olan sorgulama yöntemlerinin teorisi konusunda fikir sahibi olacaktır.
- Son dönemde oldukça popular olan makine öğrenme teknikleri, modelletri konusunda bilgi sahibi olacaktır.

English:

After completing this course successfully, students will be able to:

- Students will acquire a comprehensive understanding of the historical development of Artificial Intelligence (AI) theory and its practical applications, along with familiarity with the key technologies and terminologies that have emerged throughout this evolution.
- They will gain insight into the programming languages historically used in AI development, such as Lisp and Prolog, as well as proficiency in contemporary tools, including Python and its most widely adopted AI libraries.
- Learners will also develop awareness of the ethical considerations surrounding the responsible and purpose-driven use of AI technologies.
- The course will provide foundational knowledge of the theoretical frameworks underlying AI algorithms, particularly the logic-based and query-driven reasoning methods that support intelligent decision-making.
- Additionally, students will be introduced to modern machine learning techniques and models, with emphasis on their structure, functionality, and practical implementation in real-world scenarios.

Teaching Methodology / Classroom Procedures

Türkçe:

- Her hafta üç saat ders ve bir saat lab uygulaması olacak şekilde dersler verilmektedir.
- Lab uygulamaları derslerde anlatılan konulara parallel olarak verilmektedir.
- Öğrencilerin dönem içerisindeki performansları aşağıdaki kıstaslara göre ölçülmektedir:
    - Ara Sınav-1 (%25)
    - Ara Sınav-2 (%25)
    - Dönem Sonu Sınavı (%25)
    - Lab. Performansı, Ödevler, Dönem Projesi (25%)

Dersle ilgili tüm material, ara ve final sınavları, ödevler, dönem projesi üniversitemizin online eğitim portal üzerinde (https://lms.emu.edu.tr) paylaşılacaktır.

English:

- Each week, there are three lecture hours and one lab hour.
- Laboratory works are organized to go in parallel with the theory given in lecture hours in the classroom.
- Students' performance evaluated by:
    - First Midterm Exam. (25%)
    - Second Midterm Exam (25%)
    - Final exam (25%)
    - Lab. Performance, Home works, and Term Project (25%)
- The sharing of all course-related material, midterm and final exams, homework, and term project will be on the online education system of our university (https://lms.emu.edu.tr).

Ders Materyalleri / Referanslar -Course Materials / Main References

Ders Kitabı / Text Book:

K. R. Chowdhary, Fundamentals of Artificial Intelligence. Singapore: Springer, 2023. ISBN: 978-81-322-3972-7

Ek Kaynak/ Additional Resources:

- Understanding Artificial Intelligence: Fundamentals and Applications. Piscataway, NJ, USA: IEEE Press, 2023. ISBN: 978-1-5044-9880-4
- N. Talagala, S. Ghanta, and AIClub, Fundamentals of Artificial Intelligence: Volume 1. Independently Published, 2022. ISBN: 979-8795777597
- M. Mitchell, Artificial Intelligence: A Guide for Thinking Humans. New York, NY, USA: Farrar, Straus and Giroux, 2019. ISBN: 978-0374257835

Haftalık Ders Programı / Konu Özeti - Weekly Schedule / Summary of Topics	
Hafta / week 1	**Türkçe:** **Ders**: Yapay Zekâya Giriş • Tanım, kapsam ve tarihsel gelişim

	• Etik ve toplumsal etkiler **Lab Çalışması**: Python nedir? Python ve AI. Python u nasıl indirir ve kurarım. Basit Girdi/Çıktı işlemleri. **English:** **Lecture**: Introduction to Artificial Intelligence • The Aim and Definition of Artificial Intelligence • History • Popular Applicable Fields of Artificial Intelligence of Today **Lab work**: What is Python? Python and AI. How to download and install Python. Simple I/O processes.
Hafta / week 2-3	**Türkçe:** **Ders**: Zeki Etmenler • Etmen türleri ve ortamlar • Rasyonellik ve performans ölçütleri **Lab Çalışması**: Python un temelleri 1 & 2 **English:** **Lecture**: Intelligent Agents • Agent types and environments • Rationality and performance measures **Lab work**: Python Fundamentals 1 & 2
Hafta / week 4	**Türkçe:** **Ders**: Problem Çözme ve Arama Stratejileri • Bilgisiz arama: BFS, DFS • Bilgili arama: A*, Açgözlü algoritmalar **Labwork:** Python - 3 **English:** **Lecture**: Problem Solving and Search Strategies • Uninformed search: BFS, DFS • Informed search: A*, Greedy algorithms **Labwork:** Python – 3
Hafta / week 5-6	**Türkçe:** **Ders**: Rekabetçi Arama ve Oyun Oynama • Minimax algoritması, Negmax algoritmsı • Alpha-beta budama **Labwork:** Python – 4&5 **English:** **Lecture**: Adversarial Search and Game Playing • Minimax algorithm, Negmax alghorithm • Alpha-beta pruning **Labwork:** Python – 4&5
Hafta / week 7	**Türkçe:** **Ders**: Bilgi Temsili • Önerme ve yüklem mantığı • Ontolojiler ve anlamsal ağlar **Labwork:** Python - 6 **English:** **Lecture**: Knowledge Representation • Propositional and predicate logic • Ontologies and semantic networks

	Labwork: Python – 6
Hafta / week 8	**Türkçe:** **Ders**: Mantıksal Akıl Yürütme • Çıkarım kuralları • Çözümleme ve ileri/geri zincirleme **Labwork:** Python - 7 **English:** **Lecture**: Logical Reasoning • Inference rules • Resolution and forward/backward chaining **Labwork:** Python – 7
Hafta / week 9	**Türkçe:** **Ders**: Belirsizlikle Baş Etme • Olasılıksal akıl yürütme • Bayes ağları **Labwork:** Python - 8 **English:** **Lecture**: Handling Uncertainty • Probabilistic reasoning • Bayesian networks **Labwork:** Python – 8
Hafta / week 10	**Türkçe:** **Ders**: Uzman Sistemler • Mimari ve bileşenler • Kural tabanlı sistemler ve uygulamalar **Labwork:** Python - 9 **English:** **Lecture**: Expert Systems • Architecture and components • Rule-based systems and applications **Labwork:** Python – 9
Hafta / week 10	**Türkçe:** Ders: Prolog ve Lisp'e Giriş • Sözdizimi ve anlam • Temel programlama alıştırmaları **Labwork:** Python – 10 **English:** **Lecture**: Introduction to Prolog and Lisp • Syntax and semantics • Basic programming exercises **Labwork:** Python – 10
Hafta / week 11	**Türkçe:** **Ders**: Doğal Dil İşleme (NLP) • Metin işleme ve tokenizasyon • Dil modelleri ve uygulamaları **Labwork:** Python – 11

	English: **Lecture**: Natural Language Processing (NLP) • Text processing and tokenization • Language models and applications **Labwork:** Python – 11
Hafta / week 12	**Türkçe:** **Ders**: Makine Öğrenmesi Temelleri • Denetimli ve denetimsiz öğrenme • Scikit-learn ile tanışma **Labwork:** Python – 12 **English:** **Lecture**: Machine Learning Fundamental • Supervised and unsupervised learning • Introduction to Scikit-learn **Labwork:** Python – 12
Hafta / week 13	**Türkçe:** **Ders**: Derin Öğrenme ve Sinir Ağları • Sinir ağlarının temelleri • TensorFlow ile uygulamalı çalışmalar **Labwork:** Python – 13 **English:** **Lecture** Deep Learning and Neural Networks • Basics of neural networks • Hands-on with TensorFlow **Labwork:** Python – 13

Gereksinimler / Requirements
Türkçe • Dönem sonu sınavına giremeyen öğrenci, sınav tarihinden en geç 3 gün içerisinde yasal ve sınava girmeme gerekçesini açıklayan doctor raporunu idareye ibraz etmek mecburiyetindedir. • Notlar açıklandıktan sonraki yedi gün içerisinde öğrenci notuna itiraz edebilir. • Dersin WEB sitesindeki (https://lms.emu.edu.tr) tüm duyuruları takip etmek öğrencinin sorumluluğundadır. • Ara sınavların ve dönem sonu sınavı sonucları da aynı WEB sitesinde açıklanacaktır. **English:** ▪ One who misses final exam should provide a medical report or a valid excuse within 3 days after the missed exam. ▪ Students who fail to attend the lectures regularly may be given NG grade. ▪ Once the grades are announced, the students have only one week to do objection about their grades. ▪ It is the students' responsibility to follow the announcement in the course web site (https://lms.emu.edu.tr). ▪ Midterms exams and final exam scores will be announced at the same WEB site

	Değerlendirme Yöntemi / Method of Assessment			
Değerlendirme ve Harf Notu / Evaluation and Grading	**Arasınav-1 / Midterm-1**	**Arasınav-2 / Midterm-2**	**Dönem Sonu SInavı / Final Exam**	**Ödevler / Home works Lab Performansı / Lab performance**
Yüzdelikler / Percentage	25%	25%	25%	25%

Grading Criteria * / Değerlendirme Kriterleri										
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

Değerlendirme Kriterleri / Grading Criteria :

Turkish:

Harf notları dönem sonunda hesaplanan ortalamalara göre belirlenir. Ortalamalarının dağılımı harf notlarının değerlendirilmesinde önemli bir rol oynayacaktır.

English:

Letter grades will be decided upon after calculating the averages at the end of the semester. Distribution of the averages will play a significant role in the evaluation of the Letter Grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Operating Systems
Course Code	ITEC202
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3,2,0) 4
Prerequisite	-
Language	English
Level	Second Year
Teaching Format	3 Hours Lecture, 2 Hours Laboratory per week
ECTS Credit	6
Course Web Site	Lms.emu.edu.tr

Instructor(s)	Dr. Şensev Payan İLKAN	**Office Tel**	+90 392 6301665
E-mail	sensev.alicik@emu.edu.tr	**Office No**	CT110

Course Description

This course is an introduction to the basic concepts of operating systems, with both theoretical and practical issues being considered. Upon completion of the course, the student should understand the fundamental concepts and issues involved in operating systems design, and know about the basic services provided by operating systems in general. Topics include process description and control, deadlock, process scheduling, threads, SMP, partitioning, paging, segmentation, memory management algorithms, disk scheduling and file systems. In addition to theory and concepts, specific implementation related information is covered using the Linux Operating System.

General Learning Outcomes

On successful completion of this course students should be able to:

- Explain the basic concepts of modern operating systems.
- Describe the role and purpose of operating systems.
- Describe the concept of a process and list the various process states.
- Analyse the algorithms for deadlock detection and avoidance and evaluate the conditions that lead to deadlock.
- Define the concept of how programming languages, operating systems, and hardware architectures interact.
- Analyse the processor scheduling policies.
- Explain the concepts of physical memory and virtual memory management.
- Compare the performances of disk arm scheduling techniques.

Teaching Methodology / Classroom Procedures

- Each week there are two lecture sessions mainly held in the form of a seminar, two lab sessions where students work on practical aspects of the course and one tutorial session which is organized for solving questions related to lectures and encourages students to voice their difficulties about solving these questions.
- Laboratory sessions are organized in parallel to theoretical study given in classrooms. During the lab sessions, particular aspects of the Unix Operating System are demonstrated. Students perform different experiments and submit reports for evaluation each week.

- Students are encouraged to use internet to search for various related topics. Lecture notes, Lab descriptions, assignments, and announcements will be posted on the course's web site.
- There are two written quizzes which are held one week before the midterm and final exam periods.
- There is a written midterm exam which covers chapters 1, 2, 3, and 4. There is a written final exam which includes chapters 5, 6, 7, 8 and 9. There is no term project.
- Class attendance is compulsory.
- There is an assignment given at the first and second period of the semester.

Course Materials / Main References

Text Book:

William Stallings, Operating Systems, Internal and Design Principles, Seventh Edition, Pearson Prentice-Hall, 2011.

Resource Books:

1. Ann McIver McHoes and Ida M. Flynn, *Understanding Operating Systems*, Fifth Edition, Thomson, 2008. **ISBN**-10: 1423901606 ; **ISBN**-13: 978-1423901600
2. William S. Davis and T. M. Rajkumar, *Operating Systems*, *A Systematic View*, Sixth Edition, Addison Wesley, 2004.

   ISBN-13: 978-0321267511 ; **ISBN**-10: 0321267516

Lecture Notes:

All course materials are also available online in Adobe PDF (Portable Document Format).

Weekly Schedule / Summary of Topics	
Week 1	**Computer System Overview and Structure:** Basic definition of Operating System (OS), Hardware and software components of an OS and Functions of an OS. Desirable features of an OS.
Week 2	**Computer System Overview and Structure:** Interrupts, Types of interrupts, Interrupt handling, Interrupt processing, Multiple interrupt processing and I/O concept. Characteristics of modern operating systems, Microkernel architecture and symmetric multiprocessing.
Week 3	**Processor Utilization:** Uniprogramming and Multiprogramming. Resource Utilization, Windows Overview, Windows Architecture, Disk Operating System and Operating System Organization.
Week 4	**Introduction to UNIX:** Introduction to basic UNIX commands, UNIX File System, Working with directories, Introduction to Unix shell, Writing and executing simple shell scripts.
Week 5	**Microsoft Windows Overview:** Windows OS Versions, What is DOS, Usage share of operating systems, Windows Architecture
Week 6	**Process Description and Control:** Basic process concepts and process states, Process description, OS control structure, Process control structure, Process termination, Process identification and threads, Fork system call.
Week 7	**Deadlock:** Categories of resources, Resource allocation graphs, Conditions for deadlock, Prevention occurrence of a deadlock, Banker's algorithm, Deadlock avoidance, Deadlock detection and recovery.
Week 8-10	**Midterm Examinations**
Week 11	**Memory Managements:** Memory management requirement, Memory partitioning, Dynamic memory partitioning algorithms, Buddy system, Reallocation, Paging, Segmentation.
Week 12	**Virtual Memory:** Characteristics of paging and segmentation, Locality and virtual memory, Virtual memory paging, virtual memory segmentation.
Week 13	**Virtual Memory:** Combined Paging and Segmentation, Basic Page Replacement Algorithms, Windows memory management.
Week 14	**Processor Scheduling:** Types of Processor Scheduling, Scheduling algorithms.
Week 15	**Processor Scheduling:** Continue on Scheduling algorithms, Traditional UNIX Scheduling.
Week 16	**Disk Scheduling:** Disk performance parameters, Disk scheduling policies.

Week 17-19	**Final Examinations**
Week 20	**Make-up Examinations**

Requirements

- Each student can have only one make-up exam. One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. The make-up exam will be done at the end of the term and will cover all the topics. No make-up exam will be given for the quizzes.
- Students who do not pass the course and fail to attend the lectures regularly may be given NG grade.
- You must collect at least 50% of the total Lab marks in order to pass the course.
- Instructions for the submission of assignments will be posted on the course website. It is each student's responsibility to read and follow the instructions. Failure to follow the submission instructions may result in the assignment receiving a mark of zero.
- You must have a printed copy of the corresponding "Lab Outline" before coming to the Lab. "Lab Outlines" will be posted on the instructor's website.

Method of Assessment					
Evaluation and Grading	**4 x Assignments**	**Quizzes**	**Lab**	**Midterm Exam**	**Final Exam**
Percentage	20%	---	20 %	25 %	35 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 - 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY/DOĞU AKDENİZ ÜNİVERSİTESİ

FACULTY OF COMPUTER AND INFORMATION SCIENCES/BİLGİSAYAR VE BİLİŞİM BİLİMLERİ FAKÜLTESİ

INFORMATION TECHNOLOGY/BİLİŞİM SİSTEMLERİ VE TEKNOLOJİLERİ

COURSE POLICY SHEET/DERS İÇERİĞİ

Ders Adı / Course Title	Veri Yapıları ve Uygulamaları / Data Structures and Applications
Ders Kodu / Course Code	BTBS213/ITEC213
Tipi / Type	Tam Zamanlı / Full Time
Yarıyıl / Semester	Güz/Fall-Bahar/Spring
Türü / Category	Alan Zorunlu /Area Core
İş Yükü / Workload	180 Saat / 180 Hours
DAÜ Kredi Değeri / EMU Credit	(3,2,0) 4
Ön Koşullar / Prerequisite	BTBS114/ITEC114
Dil / Language	İngilizce / English
Seviye / Level	İkinci Yıl / Second Year
Öğretim Formatı / Teaching Format	Haftada 3 Saat Ders, 2 Saat Laboratuvar / 3 Hours Lecture, 2 Hours Laboratory per week
ECTS Değeri / ECTS Credit	6
Ders Sitesi / Course Web	https://lms.emu.edu.tr

Öğretim Elemanı / Instructor	Assoc. Prof. Dr Emre Özen	**Ofis Tel / Office**	0392 630 1358
E-posta / E-mail	emre.ozen@emu.edu.tr	**Ofis No /Office No**	CT102

Dersin Kısa Tanımı / Course Description

Türkçe:

Bu ders kullanıcı tanımlı veri yapıları ve bunları kullanan algoritmaları kapsamak üzere tasarlanmıştır. Derste, tablo, liste, ağaç, kuyruk, yığıt gibi bilgi depolamakta kullanılan veri yapıları ve uygulamaları işlenecektir. Ders sonunda öğrenciler veri yapılarının nasıl yaratılacağını ve uygulanacağını öğrenip, çeşitl alanlarda uygulayacaklardır.

English:

This course is designed to cover the basic block structures of the C language and data structure. Pointer, structure, linked lists, stacks, queues, and trees will be introduced and discussed with examples. Upon completion of this course, the student should understand how to create and manipulate stacks, queues, and binary trees. Also, students will discuss each of the major types of data structures and implement programs that create and manipulate these data structures.

Öğrenme Çıktıları / General Learning Outcomes

Türkçe:

Dersi başarı ile tamamlamış öğrenciler

- Veri yapıları konusunu anlama ve bilgilerini geliştirme,
- İşaretçiler, kendine referans yapıları ve özyineleme kullanarak bağlantılı veri yapıları oluşturma,
- Bağlantılı listeler, kuyruklar, yığınlar ve ikili ağaçlar oluşturma ve değiştirebilme,
- Bağlantılı veri yapılarının çeşitli önemli uygulamalarını anlama

yeterliliklerini kazanacaklardır.

English:

On successful completion of this course students should:

- Developed knowledge and understanding of the concept of data structure.
- Form linked data structures using pointers, self-referential structures and recursion.
- Able to create and manipulate linked lists, queues, stacks and binary trees.
- Understand various important applications of linked data structures. .

Öğrenim Yöntem ve Teknikleri / Teaching Methodology

Türkçe:

- Ders, haftada üç saat teorik anlatım ve iki saat uygulama şeklinde yapılacaktır.
- Dönem içerisinde **dört tane yazılı kısa sınav**, bir tane yazılı vize, laboratuvar değerlendirmesi, ödev ve bir de yazılı dönem sonu sınavı yapılacaktır.
- Her laboratuvar seansı sonrasında işlenen konu ile ilgili değerlendirme yapılacaktır.
- Dersi alan öğrenciler verilen görevleri yerine getirmekle sorumludur.
- Dersle ilgili tüm bilgiler (ders materyalleri, duyurular gibi) dersin sitesinde bulunacaktır.

English:

- The course has three hours of lectures and two hours of laboratories in a week.
- There will be **four written quizzes**, one written midterm exam, lab evaluation, homework, and one written final exam within the semester.
- There will be a written test at the end of each laboratory session.
- Students are supposed to submit the assigned tasks on time.
- Course-related materials will be posted on the course website.

Ders Materyalleri / Referanslar -Course Materials / Main References

Ders Kitabı / Textbook:

Yashavant Kanetkar, Data Structures Through C,3rd Edition,BPB Publications,2019.

Resource Book(s):

Narasimha Karumanchi, Data Structures and Algorithms Made Easy,CareerMonk,2017.

Ders Notları / Lecture Notes:

Ders notları dersin web sayfasında Power point formatında mevcuttur.

All course materials are also available online as PowerPoint.

Haftalık Ders Programı / Konu Özeti - Weekly Schedule / Summary of Topics	
Week 1	**BTBS114 ders tekrarı / Review of BTBS114**
Week 2	**C Veri Yapıları / C Data Structures.** **Özyinelemeli fonksiyonlar / Recursion & Backtracking**
Week 3	**Soyut ver tipleri, çalışma süresi analizleri/ Abstract Data Types, Running Time Analysis**
Week 4-5	**C'de Dosya İşleme / C File Processing** **Rastgele Erişimli Dosyalar /Random-Access Files**.
Week 6	**İşaretci Öperatorleri / Pointer Operators** **İşaretçi İfadesi ve İşaretçi Aritmetiği /Pointer Expression and Pointer Arithmetic**.
Week 7	**Bağlantılı Listeler / Linked lists**
Week 8	**Kuyruklar / Queues (as an array, as a linked list, Circular, priority queues)**
Week 9	**Ara Sınavlar / Midterm Examinations Week**
Week 10	**Yığınlar / Stacks (as an array, as a linked list)**
Week 11	**Ağaçlar / Trees (Binary, AVL)**
Week 12-13	**Graphs(depth-first search, breadth-first search, Dijkstra's Algorithm)**
Week 14- 15	**Arama ve Sıralama Algoritmaları / Search & Sort Algorithms(Linear, Binary, Heap, Bubble etc.)**
Week 16	**Dönem Sonu Sınavları / Final Examinations Week**

Gereksinimler / Requirements

Türkçe:

- Her öğrencinin bir telafi sınavı alma hakkı vardır. Öğrencinin bir sınava katılamadığı durumda sınav tarihinden itibaren en geç üç iş günü içerisinde sağlık (mazaret) raporu sunmakla yükümlüdür. Telafi sınavı, tüm konuları içerecek şekilde dönem sonu, sınav haftasından sonra yapılacaktır.
- Sınav sonuçları açıklandıktan sonra bir hafta içersinde aldığı nota itiraz etme hakkı vardır. Bu süre sonunda herhangi bir itiraz dikkate alınmayacaktır.
- Tüm öğrenciler, dersin sitesini ve bu sitede yapılacak olan duyuruları takip etmekle yükümlüdür. Site takip edilmediği takdirde yaşanacak kayıplar öğrencilerin sorumluluğundadır.
- Derslere düzenli katılamayan öğrencilere NG harf notu verilecektir.

English:

- Each student can have only one make-up exam. One who misses an exam should provide a medical report (excuse) within 3 days after the missed exam. The make-up exam will be organized at the end of the term after the finals and will cover all the topics. No make-up exam will be given for the quizzes.
- Once the grades are announced, the students have only one week to do objections to their grades.
- It is the student's responsibility to follow the announcement on the course website.
- Students who do not pass the course and fail to attend the lectures regularly may be given NG grade.

	Değerlendirme Yöntemi / Method of Assessment				
Değerlendirme ve Harf Notu / Evaluation and Grading	**Ödev / Homework**	**Lab / Lab**	**Kısa Sınavlar / Quizes**	**Ara Sınav / Midterm Exam**	**Dönem Sonu Sınavı / Final Exam**
Yüzdelikler / Percentage	10%	20 %	10 %	20 %	40 %

Değerlendirme Kriterleri* / Grading Criteria *

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Harf notları dönem sonunda hesaplanan ortalamalara göre belirlenir. Ortalamaların dağılımı harf notlarının değerlendirilmesinde önemli bir rol oynamaktadır.

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Database Management Systems - I		
Course Code	ITEC217		
Type	Full Time		
Semester	Fall/Spring		
Category	AC (Area Core)		
Workload	180 Hours		
EMU Credit	(3,2,0) 4		
Prerequisite	-		
Language	English		
Level	Second Year		
Teaching Format	3 Hours Lecture, 2 Hours Laboratory per week		
ECTS Credit	6		
Course Web Site	http://lms.emu.edu.tr		
Instructor(s)	Şebnem Çoban	**Office Tel**	+90 392 6301677
E-mail	sebnem.coban@emu.edu.tr	**Office No**	CT117

Course Description

The main aim of the course is to teach students how to model the data at the conceptual level and finally implement the model in SQL. The emphasis of the course is on practical aspects of data modelling such as designing entity relationship diagrams and normalization. Main topics covered: Database terminology and concepts, components of Database Management System (DBMS), data modelling using Entity-Relationship Diagram, converting entity-relationship diagram to relations, normalization. The course covers key components of SQL including data definition, data manipulation, data querying, and security features such as data integrity constraints and access control using GRANT and REVOKE.

General Learning Outcomes

Upon successful completion of this course students should be able to:

- Explain the basic concepts of Database Management Systems
- Explain the basic concepts of Entity Relationship Diagram model
- Analyze data requirements
- Design Entity Relationship Diagrams
- Exemplify and practice the rules and techniques of converting Entity Relationship Diagrams to Relational Schema
- Explain and examine the concepts of normalization
- Practice the normalization rules
- Distinguish the basics of SQL language
- Exemplify and practice the syntax rules to create database objects in SQL language
- Exemplify and practice the syntax rules to write SQL commands to manipulate data stored in the tables

Teaching Methodology / Classroom Procedures

The course advances in two branches.

- In the lecture sessions, practical data modeling methods are discussed. The students may get weekly homework from both the lecture and the lab material in order to practice.

- In the laboratories, SQL is taught using Oracle. Students are obliged to practice using the APEX accounts provided for them. By the end of the semester, the students learn how to design tables in the lectures and how to create and access the tables using SQL in the labs.

All course-related information (such as course materials and announcements) will be available on the course website (https://lms.emu.edu.tr).

Course Materials / Main References
Text Book(s): Coronel, Carlos, and Steven Morris. Database Systems: Design, Implementation, and Management. 11th ed. Australia: Course Technology Cengage Learning, 2015. Print. ISBN-13: 9781285196145 ***Resource Books:*** • Adamski, Joseph J., and Philip J. Pratt. Database Management Concepts. 7th ed. S.l.: Course Technology Cengage Learning, 2012. Print. ISBN-13: 978-1111825911 • Connolly, Thomas M., and Carolyn E. Beg. Database Systems: A Practical Approach to Design, Implementation, and Management. 6th ed. Boston: Pearson, 2015. Print. ISBN-13: 978-0132943260 ***Lecture Notes:*** All course materials are also available online in Adobe PDF (Portable Document Format).

Weekly Schedule / Summary of Topics	
Week 1, 2	**The Worlds of Database Systems:** Evolution of Database Systems. Overview of DBMSs.
Weeks 3, 4	**The Entity-Relationship Data Model:** Elements of the E/R Model, Data Modeling Concepts, Entity Relationship Diagrams, Designing ER Diagrams for simple problems. Multi-way relationships, roles in relationships, attributes of relationships
Weeks 5, 6	**The Entity-Relationship Data Model:** Converting multi-way relationships to binary, Inheritances, Weak Entities, and Problems with ER Models, Designing more complicated ER diagrams.
Weeks 7	**The Relational Data Model:** Intro to Relational Data Model, From E/R Diagram to Relational Designs.
Weeks 8, 9	**Midterm Exams**
Weeks 10, 11	**The Relational Data Model:** Converting weak entities and subclass structures to relations.
Week 12, 13	**The Relational Data Model:** Functional Dependencies, Normalization, Brief explanation about Normal Forms. Anomalies. Rules about Normal Forms. First Normal Form (1NF), Second Normal Form (2NF), Third Normal Form (3NF)
Weeks 14, 15	**The Relational Data Model:** Boyce-Codd Normal Form (BCNF), and Advanced Examples
Week 16	**Managing Transactions and Concurrency:** Transaction Properties (ACID), Tasks of Transactions, Design Principles and Modeling of constraints, and General Review
Weeks 17, 18	**Final Exams**

Weekly Schedule / Summary of Topics for Lab		
Week 1	Lab I	Lab Overview, Introduction to SQL and SQL*Plus
Week 2, 3	Lab II	Oracle Functions - Single Row Functions, Character Functions
Weeks 4, 5	Lab III	Oracle Functions - Conversion Functions, Date Functions
Week 6	Lab IV	Set Operators - Union, Intersect, Minus
Week 7	Lab V	Group (or Aggregate) Functions. *Group by* and *Having* clauses

Weeks 8, 9	**Midterm Exams**	
Weeks 10-12	Lab VI	Joins. Retrieving information from multiple tables. Complex Joins- Self Join, Outer Join, etc.
Weeks 13,14	Lab VII	Sub-Queries – Single and Multiple Row Subquery
Weeks 15-16	Lab VIII	DDL, DML Commands- Create, Alter, Drop, Insert, Delete, Update DCL Commands - Controlling DB users- Grant, Revoke, and General Review
Weeks 17, 18	**Final Exams**	

Requirements
• Only one make-up exam will be given for either the Midterm or Final exam at the end of the semester (after final exams). In special circumstances, the permission of the department board is required. Students who miss both exams (Midterm and Final) may take a re-sit exam only if their attendance is above 60%. • Students are responsible for both lab and lecture materials for the quiz, midterm, and final exams. • Homework and project must be prepared using a computer and delivered in the desired format (e-mail, soft-copy and/or hard copy). • Late or handwritten homework/project will not be accepted. • Copying or plagiarizing will be punished by grading zero. • If a student has attended less than 60% of the lecture/lab/tutorial hours for the relevant course, has not taken any exams (midterms, final exams), and has not completed any of the graded course activities (quizzes, homework, projects, lab works, etc.), they will not be able to take make-up exams and will be assigned NG letter grade.

Method of Assessment				
Evaluation and Grading	**Quiz**	**Lab Assignments + Lab Quizzes**	**Midterm Exam**	**Final Exam**
Percentage	10%	10% + 10%	30%	40%

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester. The distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
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INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Machine Learning Fundamentals
Course Code	ITEC218
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(3,2,0) 4
Prerequisite	-
Language	English
Level	Second Year
Teaching Format	3 Hours Lecture, 2 Hours Laboratory
ECTS Credit	6
Workload of a student	180 Hours
Course Web Site	https://lms.emu.edu.tr

Instructor	Prof. Dr. Nazife Dimililer	**Office Tel**	+90 392 6301034
E-mail	nazife.dimililer@emu.edu.tr	**Office No**	CT215

Course Description

The machine learning field covers a vast collection of automated methods that improve their own performance by learning patterns from data. This course provides students with a foundational understanding and programming competencies in machine learning, without requiring an extensive background in mathematics or statistics. It reinforces theoretical knowledge through practical applications. Students learn about the main categories of machine learning: supervised, unsupervised, and reinforcement learning. Topics include widely used algorithms such as Decision Trees, Support Vector Machines, Naive Bayes, and Clustering methods, as well as model evaluation techniques and preprocessing steps.

General Learning Outcomes

Upon successful completion of this course, students should be able to:

- Define the fundamental concepts of machine learning and its role within the broader field of Artificial Intelligence.
- Describe the differences between supervised, unsupervised, and reinforcement learning paradigms and their respective applications.
- Identify and use the core machine learning algorithms, including Decision Trees, Support Vector Machines, and Naive Bayes.
- Discuss the significance of data preprocessing steps, such as normalization and feature selection, in preparing datasets for modelling.
- Evaluate the performance of different models using standard validation techniques and metrics like accuracy and error rates.
- Outline the practical challenges and ethical considerations involved in implementing machine learning solutions in an IT environment.

Teaching Methodology / Classroom Procedures

- Each week there are three lecture sessions, and two lab sessions.
- Lecture sessions introduce and discuss ML concepts and algorithms. The focus is on understanding the algorithms rather than theoretical proofs.
- The laboratory sessions are organized in parallel with the topics covered in the lecture where students learn how to implement each ML algorithm or concept.

- Class discussions, case studies and projects allow the students to explore topics in greater depth.
- Lecture notes, Lab descriptions, assignments, and announcements will be posted on the course's web site.

Course Materials / Main References
Reference Books: 1. Mark E. Fenner, Machine Learning with Python for Everyone, Pearson, 2020. 2. John Paul Mueller and Luca Massaron, Machine Learning For Dummies, John Wiley & Sons, 2021 3. Machine Learning Crash Course for Engineers, Springer, 2024. 4. Andriy Burkov, The Hundred-Page Machine Learning Book, 2019 ***Lecture Notes:*** Most course materials are also available online in Adobe PDF pr ppt format.

Weekly Schedule* / Summary of Topics	
Week 1	**Lecture:** Definition of AI, ML; The ML pipeline. **Lab:** Setting up the environment (Python/Scikit-Learn).
Week 2	**Lecture:** Categories of Machine Learning Algorithms and Basic Terminologies: supervised , unsupervised, reinforcement learning; Features vs. Labels; Train/Test splitting. **Lab:** Overview of python: Handling files, data and datasets in Python
Week 3	**Lecture:** Model Evaluation & Validation: Evaluation metrics, Confusion Matrix, Cross validation **Lab:** Overview of Python: Handling datasets, overview of related libraries and classes
Week 4-5	**Lecture:** Decision Trees: Information Gain and Entropy; Pruning; Building your first classifier for categorical data. **Lab:** Implementation and visualization of a decision tree using python libraries
Week 6	**Lecture:** Naive Bayes: Probability basics; Bayes' Theorem; Text classification (e.g., Simple Spam Detection). **Lab:** Implementation of NB algorithm
Week 7	**Lecture:** Clustering: Unsupervised learning; K-Means algorithm; Elbow method for choosing clusters; Real-world segmentation. **Lab:** Implementation and visualization of clustering
Week 8-9	**Midterm Examinations**
Week 10	**Lecture:** K-nearest neighbors: Distance metrics (Euclidean); Choosing 'K'; Feature scaling importance (Normalization/Standardization). **Lab:** Implementation of K-nn algorithm
Week 11	**Lecture:** Linear Regression: Predicting continuous values; Simple vs. Multiple Regression; Residuals and Line of Best Fit **Lab:** Implementation and visualization of Linear regression
Week 12-13	**Lecture:** Support Vector Machines (SVM): Linear vs. Non-linear separation; The "Kernel Trick" explained simply; Margin maximization. **Lab:** Implementation of SVM
Week 14-15	**Lecture:** Handling imbalanced datasets: Algorithm level techniques, Data level techniques, Advanced evaluation metrics **Lab:** Implementation of undersampling/oversampling
Week 15 (if time permits)	**Lecture:** Genetic Algorithms: Introduction to Bio-inspired computing; Selection, Crossover, and Mutation; Optimization basics. **Lab:** Implementation of Genetic Algorithms
Week 16-17	**Final Examinations Week**

The order in which topics are covered may change.

Attendance and Course Participation Policy

- Each student is entitled to only one make-up exam during the semester. A valid medical report must be submitted within three (3) days after the missed exam. The make-up exam will be held after the final exams and will cover all course topics.
- No make-up exams will be provided for quizzes or assignments.
- Once the grades are announced, students have one (1) week to submit any grade objections.
- It is the student's responsibility to regularly check the course LMS page for announcements and updates.
- Students who have attended less than 60% of the total lecture, lab, or tutorial hours, and who have not participated in any exams (midterm or final) nor completed any graded components (quizzes, homework, projects, lab work, etc.), will not be eligible for make-up exams and will receive an NG (No Grade) letter grade.
- In the case of a repeated course, attendance to lectures is not mandatory; however, students must fulfill all other course requirements such as lab work as stated in the syllabus.

Method of Assessment			
Evaluation and Grading	**Homework/Quiz/Lab**	**Midterm Exam**	**Final Exam**
Percentage	25%	35 %	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 – 52	40 - 49	0 - 39

* Letter grades will be decided after calculating the class average at the end of the semester and distribution of the grades will play a significant role in the evaluation.

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INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Database Management Systems -II
Course Code	ITEC227
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(3,2,0) 4
Prerequisite	ITEC217
Language	English
Level	Second Year
Teaching Format	3 hours of lecture, 2 Hours laboratory per week
ECTS Credit	6
Workload	180 Hours
Course Web Site	http://lms.emu.edu.tr

Instructor(s)	Prof. Dr. Nazife Dimililer	**Office Tel**	+90 392 6301034
E-mail	nazife.dimililer@emu.edu.tr	**Office No**	CT215

Course Description

This course is the second database course in the curriculum. It covers advanced database design and implementation topics with an emphasis on enterprise-level systems. Students learn about different types of DBMSs, DBMS components, and architecture. The course also addresses security aspects, including Global Data Protection Regulations, Security trends, and Database security controls. Laboratory work focuses on PL/SQL programming, including triggers, stored procedures, functions, cursors, and exception handling to support efficient and secure database applications.

General Learning Outcomes

On successful completion of this course, students should be able to:

- Explain DBMS architectures, components, and enterprise database concepts,
- Describe the database development life cycle,
- List and explain phases of database design,
- Analyse data requirements in order to develop a conceptual data model using ERDs,
- Design a data model at the conceptual level,
- Transform a conceptual database design to a logical database design for the relational model,
- Identify and solve problems in ERDs in order to correct improve a data model,
- Write stored programs such as functions, procedures, and triggers.

Teaching Methodology / Classroom Procedures

▪ Each week there are three lecture sessions, two lab sessions.
  ▪ Lecture sessions discuss database design, management and related concepts. The focus of the course is on data modeling and analysis of data requirements. Lecture sessions are organized as seminars and case studies of selected topics.
▪ In general, laboratory sessions are organized independent of the material covered during lectures. During the lab sessions, PL/SQL language is used to design and implement stored programs. Additionally some selected advanced SQL constructs may be covered.
▪ Class discussions, case studies and projects allow the students to explore topics in greater depth.
▪ Student's performance is assessed through
  o Written exams (midterm and final) that include both lecture and lab related problems
  o Project where students work in pairs to analyze the data requirements of a business and produce a database design and implementation document
  o Lab work where students show the practical application of the tasks discussed in lab session
▪ Students are encouraged to use internet to search for various related topics.
▪ Lecture notes, Lab descriptions, assignments, and announcements will be posted on the course's web site.

Course Materials / Main References
The following books have been used as reference for designing the lecture notes. ***Resource Books:*** 1. Thomas Connolly, Carolyn Begg, Database Systems: A Practical Approach to Design, Implementation and Management, ISBN-13: 9781292081656 2. Carlos Coronel, Steven Morris , Database Systems: Design, Implementation, & Management, 11th Edition, ISBN-13: 9781285196145 , Course technology 3. Joseph Adamski, Philip Pratt, Concepts of Database Management, 7th Edition, Course Technology ***Lecture Notes:*** All course materials are also available online at the course web site lms.emu.edu.tr

Weekly Schedule / Summary of Topics for Lecture	
1 week	**Introduction :** Revision of ERD, inheritance relationships, weak relationships.
2 weeks	**Case Studies**: Designing ERDs using various forms of data requirements such as forms, reports and formal requirements
2 weeks	**Database Design:** General definitions and concepts on database design and DBMS**,** System Development Life Cycle; Database Life Cycle; Overview of Conceptual Design, Logical design, Physical Design; Database Design strategies.
2 weeks	**Midterm Exams**
1-2 weeks	**Conceptual Database Design:** User views, steps of conceptual design: identifying entities, relationships, attributes attribute domains; integrity constraints; validation.
1-2 weeks	**Logical Design:** Steps of logical database design: removing M:N, is-a & multiway relationships, multivalued & composite attributes etc.; common problems in ERDs; validation against user transactions and using normalization, merging user views etc.
1-2 weeks	**Physical Database design and Monitoring and Tuning Operational Systems**: Steps of Physical Database Design – designing base relations, views, constraints, choosing file organizations, indexes, estimating disk space requirements, security mechanisms etc.; Denormalization to improve performance; Importance of monitoring and tuning the operational system; Measuring efficiency; Effect of resources on performance
2 weeks	**Database Architecture**: Centralized and Client-Server Systems; Server System Architectures; Parallel Systems; Distributed Systems; DDBMS characteristics; Levels of data and process distribution
1 week	**Global Data Protection Regulations:** Introduction to data protection in database systems; key principles of GDPR (data minimization, purpose limitation, lawful processing, storage limitation,

	integrity and confidentiality); concepts of personal and sensitive data, consent, data ownership, right to access and delete, and data breaches; implications of data protection for database design.
1 week	**Security Trends:** Overview of current security trends including cloud database security, data breaches, ransomware attacks, Zero Trust architecture, and AI-related security risks; discussion of real-world cases and their impact on database systems.
3 weeks	**Final Exams**

Weekly Schedule / Summary of Topics for Lab	
1 week	General concepts and components of PL/SQL; Programming blocks; Simple Anonymous Blocks; If statements
1 week	Anonymous Block: Loops, basic loop; while loop; for loop
2 week	Anonymous Block: Implicit cursor using SQL statements: INSERT, DELETE, UPDATE, SELECT INTO, attributes of cursors with brief introduction on exception handling related to implicit cursor
2 week	Anonymous Block: Explicit cursor using SELECT, attributes of cursors, brief introduction on exception handling related to explicit cursor, cursor loops, cursor with parameters
2 weeks	Midterm Exams
1 week	Exception handling: Pre-defined exceptions, Unnamed exceptions, user defined exceptions
2 weeks	Procedures and Functions in PL/SQL
1 weeks	Triggers in PL/SQL
1 week	Secure Database Programming & Auditing: users and roles, basic access control implementation on tables and views, preventing SQL injection, basic password handling concepts, auditing using triggers.
3 weeks	Final Exams

Attendance and Course Participation Policy

- Each student is entitled to only one make-up exam during the semester. A valid medical report must be submitted within three (3) days after the missed exam. The make-up exam will be held after the final exams and will cover all course topics.
- No make-up exams will be provided for quizzes or assignments.
- Once the grades are announced, students have one (1) week to submit any grade objections.
- It is the student's responsibility to regularly check the course LMS page for announcements and updates.
- Students who have attended less than 60% of the total lecture, lab, or tutorial hours, and who have not participated in any exams (midterm or final) nor completed any graded components (quizzes, homework, projects, lab work, etc.), will not be eligible for make-up exams and will receive an NG (No Grade) letter grade.
- In the case of a repeated course, attendance to lectures is not mandatory; however, students must fulfill all other course requirements such as lab work as stated in the syllabus.

Method of Assessment				
Evaluation and Grading	**Lab Work+Quiz**	**Project/Homework**	**Midterm Exam**	**Final Exam**
Percentage	15%	10%	35%	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 - 100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

*** Grading Criteria :**

Letter grades will be determined after calculating the averages at the end of the semester. Distribution of the averages will be taken into account in the evaluation of the Letter Grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Object Oriented Programming		
Course Code	ITEC243-CMPR209		
Type	Full Time		
Semester	Fall/Spring		
Category	AC (Area Core)		
Workload	180 Hours		
EMU Credit	(3,2,0) 4		
Prerequisite	ITEC114		
Language	English		
Level	Second Year		
Teaching Format	3 Hours Lecture, 2 Hours Laboratory per week		
ECTS Credit	6		
Course Web Site	http://lms.emu.edu.tr		
Instructor(s)	Şebnem Çoban	**Office Tel**	+90 392 6301677
E-mail	sebnem.coban@emu.edu.tr	**Office No**	CT117

Course Description
The main objective of this course is to teach students object-oriented programming techniques using the Visual C++ programming language. The main topics covered include classes and objects, data abstraction and encapsulation, information hiding, composition, inheritance, templates, function overloading, operator overloading, friend functions, and classes, and dynamic memory allocation.

General Learning Outcomes
Upon successful completion of this course students should: • Describe how constructors and destructors relate to the life of an object • Describe the relationship between an object and its corresponding class • Describe the relationship between the static structure of the class and the dynamic structure of the instances of the class • Compare and contrast the concepts of overloading and overriding methods in an object-oriented language • Design and implement, and test the implementation of “has-a” and “is-a” relationships among objects using a class hierarchy and inheritance • Design how the class mechanism supports encapsulation and information hiding • Design, implement, test, and debug simple programs in an object-oriented programming language • Discuss and identify the concepts of encapsulation, abstraction, composition, inheritance, and polymorphism

Teaching Methodology / Classroom Procedures
Home works will be mostly in the form of programming assignments. Quizzes (announced or not) may be given in class to test your progress. Lab work is extremely important and will include instructor-guided programming exercises as well as independent self-study. A midterm exam and a comprehensive final exam will be held during the exam periods announced in the University’s Academic Calendar. Attendance is essential for the learning process. Class lectures will not exactly follow the text, so you are expected to attend all classes. You are accountable for all material covered, all announcements made, and all handouts given out during class. Lab attendance is also desired since lab exercises are crucial in the development of your programming skills. Course grades will be a function of your performance in quizzes, and exams as well as of your participation in class and enthusiasm in the lab.

Course Materials / Main References
Textbook **:** Gaddis, Walters, Muganda. Starting out with C++ Early Object. 7/E. Addison Wesley, 2014. Print. ISBN-13: 978-0133778816 ***References*** **:** • Deitel, Deitel. C++ How to program. 8/E. Prentice Hall, 2012. Print. ISBN-13: 978-0-13-266236-9 • Lafore. Object-Oriented Programming in C++. 4/E. SAMS, 2002. Print. ISBN-13: 978-0672323089 ***Lecture Notes:*** All course materials are also available online in Adobe PDF (Portable Document Format).

Weekly Schedule / Summary of Topics	
Week 1	**Introducing C++** Introduction to C++ programming Differences between structured programming and OOP The *cout* Object, The *#include* Directive, The *cin* Object, data types
Weeks 2,3	**Functions** Defining and Calling Functions Using Function Arguments Value Returning Functions Using Reference Variables as Parameters Overloading Functions Static Variables Function Templates
Weeks 4,5	**Introduction to Classes and Objects** Introduction to Classes Introduction to Objects Using a Constructor with a Class Types of Constructors Destructors
Weeks 6, 7	**More on Classes** Arrays *this* Pointer, Constant Member Functions, and Static Members Pointers The Relationship Between Arrays and Pointers Dynamic memory management (new & delete)
Weeks 8, 9	**Midterm Exams**
Week 10, 11	Friend Functions
Weeks 12, 13, 14	Composition Inheritance
Weeks 14, 15	Operator Overloading and General Review
Weeks 16, 17	**Final Exams**

Requirements
• Only one makeup exam will be held at the end of the semester to make up for at most one exam. The only exemptions are when there are special circumstances and then the permission of the departmental board is required. • Students are responsible for both lab and lecture materials for the midterm and final exams. • All homework should be prepared using a computer and turned in the media (e-mail or hard copy) specified in the homework description. • Late or handwritten homework will not be accepted. • Copying or plagiarizing will be punished by grading zero.

Method of Assessment				
Evaluation and Grading	**Midterm Exam**	**Quizzes**	**Lab Assignments and Participation**	**Final Exam**
Percentage	30%	10%	20%	40%

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and the distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Computer Organization and Architecture
Course Code	ITEC255
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(3,0,1) 3
Prerequisite	-
Language	English
Level	Second Year
Teaching Format	3 Hours Lecture and 1 Hour Tutorial per week
ECTS Credit	6 What is ECTS? Why ECTS is needed? How does it work?
Workload of a student	180 Hours
Course Web Site	https://lms.emu.edu.tr

Instructor	Assist. Prof. Dr. Hüsnü Bayramoğlu	**Office Tel**	+90 392 6302894
E-mail	husnu.bayramoglu@emu.edu.tr	**Office No**	CT103

Course Description

This course covers basic topics about computer architecture and organization. The course provides the study of the structure, characteristics and operation of modern-day computer systems including a basic background on the computers evolution, its design process and its internal characteristics which include processor components, control unit architecture, memory organization and system organization.

All major internal components of a computer including processor, cache memory, random access memory, magnetic disk, optical memory and input/output connections are considered from an architectural perspective. Binary integer and floating-point representation in arithmetic logic unit (ALU) with arithmetical operations are explained. Scheduling processes and memory management in operating systems are described.

General Learning Outcomes

On successful completion of this course students should be able to:

- Describe the terms: computer architecture and computer organization.
- Describe the evolution of computers in history.
- Describe I/O system and interconnection structures of computer.
- Draw a block diagram, including interconnections of the main components of a computer.
- Describe how a computer stores and retrieves information to/from memory and hard drives.
- Explain error detection and correction in semiconductor memories.
- Identify high performance architecture design.
- Explain how the cache memory is implemented.
- Explain a wide variety of memory technologies both internal and external.
- Define the terms: bus, serial, parallel, data rate, point-to-point, multipoint.
- Describe various data representations and explain how arithmetic and logical operations are performed.

Teaching Methodology / Classroom Procedures

- The course has three hours of lectures per week.
- There is one hour tutorial session per week which is organized for solving questions related to lectures and encourages students to voice their difficulties about the topics covered during the lecture hours.
- Lecture notes and tutorials are posted on the course web site.

- There is one midterm exam and one final exam.
- Midterm exam includes Chapter 1, 2, 3, 4 and 5.
- Final exam includes Chapter 6, 7, 8 and 9.
- There are two quizzes where the chapters included will be announced during the semester.
- There is an assignment. A topic related to computer architecture is given as a research study. A report is written and submitted before the deadline to the instructor. The deadline will be announced on the web site.
- Plagiarism test result must be obtained from Turnitin and it must be less than 20% for submitting the project report, otherwise it will not be accepted for grading. A Turnitin account will be created for each student to upload their reports and obtain the plagiarism test result.
- The student is responsible for checking the course web site regularly and viewing the latest announcements.

Course Materials / Main References

Textbook:

- William Stallings, Computer Organization and Architecture-Designing for Performance, 9th Edition, Pearson Higher Education, 2013. ISBN 13: 978-0132936330

Reference Books:

- William Stallings, Computer Organization and Architecture-Designing for Performance, 10th Edition, Pearson Higher Education, 2015. ISBN 13: 978-0134101613
- William Stallings, Computer Organization and Architecture-Designing for Performance, 11th Edition, Pearson Higher Education, 2018. ISBN 13: 978-0134997193

Weekly Schedule / Summary of Topics	
Week 1	What is Computer Organization and Computer Architecture?
Week 2	History and Evolution of Computers, Von Neuman Architecture
Week 3	Working principles of microprocessors and implementation of Interrupts
Week 4	Computer Interconnection Structures, Bus Interconnection, System Bus, Mezzanine Bus, PCI
Week 5	Overview of Computer Memories, Cache Memory, Design Elements and Principles of Cache Memory
Week 6	Semiconductor Memories, Random Access Memory (RAM), Read Only Memory (ROM), Internal structure of a RAM chip
Week 7	Error Detection and Correction in Semiconductor Memories, Hamming Code Algorithm, Advanced DRAM Organizations, DDR-SDRAM
Week 8-9	**Midterm Examinations**
Week 10	Overview of External Memories, Magnetic Disk, RAID, Optical Memory, Magnetic Tape, SSD, Flash Memory
Week 11	External Devices, I/O Modules, I/O Processors, Direct Memory Access, Serial and Parallel Interfaces, Point-to-point and Multipoint Interfaces
Week 12	Operating System Overview, Scheduling of Processes, Lifetime of a Process, States of a Process
Week 13	Operating System Memory Management, Swapping, Partitioning, Paging, Segmentation, Virtual Memory
Week 14	Overview of Arithmetic Logic Unit, Binary Integer Number Representation, Binary Integer Arithmetic, 2's complement representation, Sign magnitude representation
Week 15	Binary Floating-Point Number Representation
Week 16-17	**Final Examinations**

Requirements

- Each student can have only one make-up exam.
- One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam.
- The make-up exam is done at the end of the term and covers all the topics.
- If a student has attended less than 60% of the lecture/lab/tutorial hours for the relevant course, has not taken any exams (midterms, final exams), and has not completed any of the graded course activities (quizzes,

homework, projects, lab works, etc.), they will not be able to take make-up exams and will be assigned NG letter grade.

- If a course is repeated, attendance will not be required for that course, but the student will be required to fulfill all course requirements beyond the attendance requirement.
- Once the grades are announced, the students have only one week to do objection about their grades.
- It is the students' responsibility to follow the announcement on the course web site.

Method of Assessment				
Evaluation and Grading	**Assignment**	**2 Quizzes**	**Midterm Exam**	**Final Exam**
Percentage	15 %	10 %	35 %	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 – 52	40 - 49	0 - 39

* Letter grades will be decided after calculating the class average at the end of the semester and distribution of the grades will play a significant role in the evaluation.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Digital Logic Design
Course Code	ITEC259
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(3,2,0) 4
Prerequisite	-
Language	English
Level	Second Year
Teaching Format	3 Hours Lecture and 2 Hours Laboratory per week
ECTS Credit	6
Workload of Student	180 Hours
Course Web Site	https://lms.emu.edu.tr/

Instructor(s)	Prof. Dr. Ahmet Rizaner	**Office Tel**	+90 392 630 2480
E-mail	ahmet.rizaner@emu.edu.tr	**Office No**	CT112

Course Description

Digital logic design is concerned with the design of digital electronic circuits which are employed in the design and the construction of systems such as digital computers and many other applications that require digital hardware. The course presents the basic tools for design of digital circuits and provides the fundamental concepts used in the design of digital systems.

General Learning Outcomes

On successful completion of this course students should be able to:

- Practice arithmetic computations in binary numbering system.
- Explain the basic operations and theorems of Boolean algebra.
- Apply rules of Boolean algebra to simplify Boolean expressions.
- Explain how to translate Boolean expressions into equivalent truth tables and logic gate implementations.
- Explain the fundamentals of logic design from the gate up to the system level.
- Design efficient combinational and sequential logic circuit implementations from functional description of digital systems.
- Practice simple simulations to verify the operation of logic circuits.

Teaching Methodology / Classroom Procedures

- Each week there are three lecture sessions, and two lab sessions.
  - Laboratory sessions are organized in parallel to theoretical study given in classrooms.
  - During the laboratory sessions, particular aspects of Digital Logic Design are demonstrated. Students perform different experiments and submit reports for evaluation each week.
- Students are encouraged to use internet to search for various related topics. Lecture notes, assignments, and announcements will be posted on the course's web site.
- There are three quizzes. The dates of the quizzes will be announced during the lecture hours.
    - Quiz 1 includes Digital Systems and Binary Numbers and Boolean Algebra and Logic Gates topics s
    - Quiz 2 includes Gate-Level Minimization and Combinational Logic topic
    - Quiz 3 includes Synchronous Sequential Logic topic
  - The duration of the quizzes is 45 minutes.
  - There is one midterm exam which covers Binary Systems, Boolean Algebra, Logic Gates and Gate-Level

Minimization topics.

- There is one final exam which includes Combinational Logic and Synchronous Sequential Logic topics.
- There is no term project.
- Class attendance is compulsory.
- The student is responsible to check the course web site and regularly and view the latest announcements.

Course Materials / Main References

Text Book:

M. M. Mano and M. D. Ciletti, Digital Design, 5th Ed., Prentice-Hall, 2013, ISBN-13: 978-0-13-277420-8 .

Resource Books:

1. M.M. Mano and C. R. Kime, Logic and Computer Design Fundamentals, 5h Ed. Prentice-Hall, 2015, ISBN-13: 978-0133760637.
2. J. F. Wakerly, Digital Design Principles and Practice, 4rd Ed., Prentice-Hall, 2005, ISBN-13: 978-0131863897.

Lecture Notes:

All course materials are also available online in Adobe PDF (Portable Document Format).

Weekly Schedule / Summary of Topics	
Weeks 1-2	**Digital Systems and Binary Numbers:** Digital Systems. Binary Numbers. Number Base Conversions. Octal and Hexadecimal Numbers. Complements. Signed Binary Numbers. Binary Codes. Binary Storage and Registers. Binary Logic.
Weeks 3-5	**Boolean Algebra and Logic Gates:** Basic Definitions. Axiomatic Definition of Boolean Algebra. Basic Theorems and Properties of Boolean Algebra. Boolean Functions. Canonical and Standard Forms. Other Logic Operations. Digital Logic Gates.
Weeks 6-7	**Gate-Level Minimization:** The Map Method. Four-Variable Map. Five-Variable Map. Product of Sums Simplification. Don't-Care Conditions. NAND and NOR Implementation. Exclusive-OR Function.
Weeks 7-9	**Midterm Examinations Period**
Weeks 10-12	**Combinational Logic:** Combinational Circuits. Analysis Procedure. Design Procedure. Binary Adder-Subtractor. Decimal Adder. Binary Multiplier. Magnitude Comparator. Decoders. Encoders. Multiplexers.
Weeks 13-15	**Synchronous Sequential Logic:** Sequential Circuits. Latches. Flip-Flops. Analysis of Clocked Sequential Circuits. State Reduction and Assignment. Design Procedure.
Weeks 16-18	**Final Examinations Periods**

Requirements

- Each student can have only one make-up exam. One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. The make-up exam will be done at the end of the term and will cover all the topics. No make-up exam will be given for the quizzes.
- Students who do not pass the course and fail to attend the lectures regularly may be given NG grade.
- Instructions for the submission of assignments, online quizzes and exams will be posted on the course website. It is each student's responsibility to read and follow the instructions. Failure to follow the submission instructions may result in the assignment receiving a mark of zero.

Method of Assessment				
Evaluation and Grading	**Quizzes**	**Lab**	**Midterm Exam**	**Final Exam**
Percentage	18 %	12 %	30 %	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Code	ITEC295	**Course Title**	Investigation of Computer Forensics
Semester	Fall / Spring	**Language**	English
Category	University /Area Elective	**Level**	Third/Fourth Year
Workload	180 Hours	**Teaching Format**	3 Hours Lecture, 1 Hour Laboratory
EMU Credit	(3,0,1) 3	**ECTS Credit**	6
Prerequisite(s)	-	**Course Web**	lms.emu.edu.tr

Instructors(s)	Dr. Özlem Görkan Evre		
e-mail(s)	ozlem.gorkan@emu.edu.tr	**Office No:**	

Course Description

This course focuses on the use of the most popular forensics tools and provides specific guidance on dealing with civil and criminal matters relating to the law and technology. Includes discussions on how to manage a digital forensics operation in today's business environment.

General Learning Outcomes

On successful completion of this course students should be able to:

- Explain the digital forensics profession and investigations.
- Describe data acquisition, processing crime and incident scenes.
- Investigate cell phone and mobile device.
- Investigate emails and computer history.
- Write report for high tech investigations.
- Explain the concepts of virtual machine and cloud forensics.
- Describe the ethics for the investigator and expert witness.

Teaching Methodology / Classroom Procedures

- Each week there are two hours lecture sessions, and two hours lab sessions.
- Laboratory sessions are organized in parallel to lecture given in classrooms. During the lab sessions, students will apply a systematic approach to an investigation, conduct different investigations and submit reports for evaluation each week.
- Different application software's will be used during the lab sessions to conduct an investigation and report writing.

All course materials are also available online in PowerPoint Slide.

Course Materials / Main References

Text Book:

Bill Nelson, Amelia Phillips, Christopher Steuart, *Guide to Computer Forensics and Investigations Fifth Edition*. Cengage Learning, 2016, ISBN-13: 978-1-285-06003-3.

Resource Books:

- Marjie T. Britz*, Computer Forensics and Cyber Crime: An Introduction (3rd Edition)*.
- Darren R. Hayes, *A Practical Guide to Computer Forensics Investigations (Pearson IT Cybersecurity Curriculum (ITCC))*.
- ***Lecture Notes:***

Weekly Schedule / Summary of Topics	
Week 1	Understanding the Digital Forensics Profession and Investigations
Week 2-3	Processing Crime and Incident Scenes
Week 4	Current Computer Forensics Tools
Week 5-6	Recovering Graphics Files
Week 7	Computer Forensics Analysis and Validation
Week 8	Virtual Machine and Cloud Forensics
Weeks 9	Email Investigations Cell Phone and Mobile Device Forensics
Weeks 10-11	Expert Testimony in High Tech Investigations Ethics for the Investigator and Expert Witness Report Writing for High Tech Investigations
Week 12	Review

Requirements
▪ Each student can have only one make-up exam. One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. The make-up exam will be done at the end of the term and will cover all the topics. No make-up exam will be given for the quizzes. ▪ Students who do not pass the course and fail to attend the lectures regularly may be given NG grade. ▪ Instructions for the submission of assignment will be posted on the course website. It is each student's responsibility to read and follow the instructions. Failure to follow the submission instructions may result in the assignment receiving a mark of zero.

Method of Assessment				
Evaluation and Grading	**Assignment**	**Term Project**	**Midterm Exam**	**Final Exam**
Percentage	10%	20 %	30 %	40 %

Değerlendirme Kriterleri /Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
85 -100	80 - 84	75 - 83	70 - 74	66 - 73	63 - 65	60 - 63	57 - 59	54 - 56	50 - 53	45 - 49	0 – 44

Değerlendirme Kriterleri / Grading Criteria :

Türkçe:

Harf notları dönem sonunda hesaplanan ortalamalara göre belirlenir. Ortalamalarının dağılımı Harf Notlarının değerlendirilmesinde önemli bir rol oynayacaktır.

English:

Letter grades will be decided upon after calculating the averages at the end of the semester. Distribution of the averages will play a significant role in the evaluation of the Letter Grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Computer Networks I
Course Code	ITEC309
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	210 Hours
EMU Credit	(4,0,0) 4
Prerequisite	-
Language	English
Level	Third Year
Teaching Format	4 Hours Lecture per Week
ECTS Credit	7
Course Web Site	lms.emu.edu.tr

Instructor(s)	Prof. Dr. Ali Hakan Ulusoy	**Office Tel**	+90 392 6302881
E-mail	alihakan.ulusoy@emu.edu.tr	**Office No**	CT108

Course Description

This course provides a broad introduction to the fundamentals of computer networks with focus on the functions performed at each layer of the network architecture and common layer protocol standards. Upon completion of the course, students develop an understanding of the general principles of networking. The content of the course is based around the Internet Model (TCP/IP) which deals with the major issues in the bottom two (Physical, Data Link) layers of the model. Specific attention is given to the introductory concepts of networking, principles of network architecture and layering, telecommunication aspects of physical layer, transmission media, switching, error detection and correction, issues related to data link control, LANs and WANs.

General Learning Outcomes

On successful completion of this course students should be able to:

- Identify the concepts of data communications and networking.
- Explain two dominant networking models: Open System Interconnection (OSI) and Internet model (TCP/IP).
- Explain the relationship between data and electromagnetic signals.
- Describe digital and analog transmission.
- Name the characteristics of the transmission media.
- Describe the concept of switching.
- Describe how the telephone network and cable network can be used to carry data.
- Analyze the error detection and correction mechanisms.
- Examine flow and error control mechanisms.
- Describe the duties of the data link layer that are related to the use of the physical layer.
- Summarize wired and wireless local area networks.
- Name connecting devices.
- Describe SONET, a wide area network that uses fiber-optic technology.
- Examine how the virtual-circuit switching, Frame Relay and ATM, can be used in wide area networks.

Teaching Methodology / Classroom Procedures

- The course has four hours of lectures in a week mainly held in the form of a seminar.
- Lecture notes are posted on the course web site.

- There are four written quizzes which are held two before the midterm and two before the final exam periods.
  - Quiz 1 includes chapters 1, 2 and 3.
  - Quiz 2 includes chapters 4, 5 and 7.
  - Quiz 3 includes chapter 10.
  - Quiz 4 includes chapters 11, 12 and 13.
  - The duration of the quizzes is 20 mins.
- There are four assignments before the quizzes.
- There is a written midterm exam which covers chapters 1, 2, 3, 4, 5, 7, 8 and 9.
- There is a written final exam which includes chapters 10, 11, 12, 13, 14, 15, 17 and 18.
- There is no term project.
- Class attendance is compulsory.
- The student is responsible to check the course web site regularly and view the latest announcements. Failure to follow the submission instructions may result in the assignment receiving a mark of zero.
- Students are encouraged to use internet to search for various related topics.

Course Materials / Main References

Text Book:

Behrouz A. Forouzan, Data Communications and Networking, Fourth Edition, McGraw-Hill, 2007, ISBN: 978-007-325032-8.

Resource Books:

1. William Stallings, Data and Computer Communications, Tenth Edition, Pearson, 2014.
2. Tomasi, Introduction to Data Communications and Networking, Pearson, 2005.
3. James F. Kurose, Keith W. Ross, Computer Networking: A Top–Down Approach Featuring the Internet, Sixth Edition, Pearson, 2013.

Lecture Notes:

All course materials are also available online in PowerPoint Format or Adobe PDF (Portable Document Format).

Weekly Schedule / Summary of Topics	
Week 1	**Introduction:** Data Communications, Networks, The Internet, Protocols and Standards.
Week 2	**Network Models:** Layered Tasks, The OSI Model, Layers in the OSI Model, TCP/IP Protocol Suit, Addressing.
Week 3	**Data and Signals:** Analog and Digital, Periodic Analog Signals, Digital Signals, Transmission Impairment, Data Rate Limits, Performance.
Week 4	**Digital Transmission:** Digital-to-Digital Conversion, Analog-to-Digital Conversion, Transmission Modes.
Week 5	**Analog Transmission:** Digital-to-Analog Conversion, Analog-to-Analog Conversion. **Transmission Media:** Guided Media, Unguided Media: Wireless.
Week 6	**Switching:** Circuit-switched Networks, Datagram Networks, Virtual-Circuit Networks, Structure of a Switch.
Week 7	**Using Telephone and Cable Networks for Data Transmission:** Telephone Network, Dial-up Modems, Digital Subscriber Line, Cable TV Networks, Cable TV for Data Transfer.
Weeks 8-9	**Midterm Examinations**
Week 10	**Error Detection and Correction:** Types of Errors, Block Coding, Linear Block Codes, Cyclic Codes, Checksum.
Week 11	**Data Link Control:** Framing, Flow and Error Control, Protocols, Noiseless Channels, Noisy Channels, HDLC, Point-to-Point Protocol.
Week 12	**Multiple Access:** Random Access, Controlled Access, Channelization. **Wired LANs: Ethernet:** IEEE Standards, Standard Ethernet, Changes in the Standard, Fast Ethernet, Gigabit Ethernet.
Week 13	**Wireless LANs:** IEEE 802.11, Bluetooth. **Connecting LANs, Backbone Networks, and Virtual LANs:** Connecting Devices, Backbone Networks, Virtual LANs.
Week 14	**SONET/SDH:** Architecture, SONET Layers, SONET Frames, STS Multiplexing, SONET Networks, Virtual Tributaries.
Week 15	**Virtual-Circuit Networks: Frame Relay and ATM:** Frame Relay, ATM, ATM LANs.
Weeks 16-18	**Final Examinations**

Requirements
▪ Each student can have only one make-up exam. ▪ One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. ▪ The make-up exam is done at the end of the term after the letter grades are announces together with the re-sit exam and covers all the topics. ▪ No make-up exam is given for the quizzes. ▪ Students who fail to attend the lectures regularly may be given NG grade. ▪ Once the grades are announced, the students have only one week to do objection about their grades.

Method of Assessment				
Evaluation and Grading	**4 Assignments**	**4 Quizzes**	**Midterm Exam**	**Final Exam**
Percentage	10 %	25 %	30 %	35 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 - 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Computer Networks II
Course Code	ITEC310
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(3,2,0) 4
Prerequisite	ITEC309
Language	English
Level	Third Year
Teaching Format	3 Hours Lecture and 2 Hours Laboratory work per week
ECTS Credit	7 What is ECTS? Why ECTS is needed? How does it work?
Workload	210 Hours
Course Web Site	https://lms.emu.edu.tr

Instructor(s)	**Office Tel**	**Office No**	**E-mail**
Assist. Prof. Dr. Hüsnü Bayramoğlu	+90 392 6301984	CT200A	husnu.bayramoglu@emu.edu.tr

Course Description

This course provides the student with fundamental knowledge of the various aspects of computer networking and enables students to appreciate recent developments in the area. The content of the course is based around the Internet Model (TCP/IP) which deals with the major issues in the upper three (Network, Transport, Application) layers of the model. Specific attention is given to IP addresses, network layer protocols such as IP, ARP, ICMP and IGMP, delivery, forwarding and routing of packets in the Internet, services and duties of the transport layer introducing protocols like UDP, TCP and SCTP, congestion control and quality services. The course also discusses DNS and some common applications protocols on the Internet.

General Learning Outcomes

On successful completion of this course students should be able to:

- Interpret logical or IP addressing.
- Explain the main protocol IP at the network layer that supervises and controls the delivery of packets from source to destination.
- List some auxiliary protocols, ARP, RARP, BOOTP, DHCP, IGMP, ICMPv6, defined at the network layer that help the IP protocol do its job.
- Examine delivery and routing packets on the Internet.
- Summarize the three protocols, UDP, TCP and SCTP, at the transport layer.
- Explain congestion and quality of service.
- Define DNS.
- Explain three common applications on the Internet: remote login, electronic mail, and file transfer.
- Summarize the ideas and issues in the famous world wide web (WWW) and client/server application program (HTTP).
- Describe network management.
- Explain multimedia and a set of widely used application programs.

Teaching Methodology / Classroom Procedures
▪ The course has three hours of lectures and two hours of practical laboratory work per week. ▪ Lecture notes are posted on the course web site. ▪ There is one midterm and one final exam. ▪ Midterm exam includes chapters 19, 20, 21, 22 and 23. ▪ Final exam includes chapters 24, 25, 26, 27, 28 and 29. ▪ There are two quizzes where the chapters included will be announced during the semester. ▪ Laboratory sessions are organized in parallel to theoretical study given at lecture hours. During the lab sessions, particular aspects of the Computer Networks are demonstrated. Students perform different experiments and submit reports for evaluation each week. ▪ There are no assignments or term projects. ▪ The student is responsible for checking the course web site regularly and viewing the latest announcements. ▪ Students are encouraged to use Internet to search for various related topics.

Course Materials / Main References
Text Book: Behrouz A. Forouzan, Data Communications and Networking, Fourth Edition, McGraw-Hill, 2007, ISBN: 978-0073250328 ***Resource Books:*** 1. Behrouz A. Forouzan, Data Communications and Networking, Fifth Edition, McGraw-Hill, 2012, ISBN: 978-0073376226 2. William Stallings, Data and Computer Communications, Tenth Edition, Pearson, 2014. 3. Tomasi, Introduction to Data Communications and Networking, Pearson, 2005. 4. James F. Kurose, Keith W. Ross, Computer Networking: A Top–Down Approach Featuring the Internet, Sixth Edition, Pearson, 2013.

Weekly Schedule / Summary of Topics	
Week 1	**Network Layer: Logical Addressing:** IPv4 Addresses, IPv6 Addresses.
Week 2	**Network Layer: Internet Protocol:** Internetworking, IPv4, IPv6, Transition from IPv4 to IPv6.
Week 3	**Network Layer: Address Mapping, Error Reporting, and Multicasting:** Address Mapping, ICMP, IGMP, ICMPv6.
Weeks 4	**Network Layer: Delivery, Forwarding, and Routing:** Delivery, Forwarding, Unicast Routing Protocols, Multicasting Routing Protocols.
Weeks 5-6	**Process-to-Process Delivery: UDP, TCP and SCTP:** Process-to-Process Delivery, User Datagram Protocol (UDP), TCP, SCTP.
Week 7	**Congestion Control and Quality of Services:** Data Traffic, Congestion, Congestion Control, Quality of Services, Techniques to Improve QoS, Integrated Services, Differentiated Services, QoS in Switched Networks.
Week 8-9	**Midterm Examinations**
Week 10	**Domain Name System:** Name Space, Domain Name Space, Distribution of Name Space, DNS in the Internet, Resolution, DNS Messages, Registrars, Dynamic Domain Name System (DDNS), Encapsulation.
Week 11	**Remote Logging, Electronic Mail, and File Transfer:** Remote Logging, Electronic Mail, File Transfer.
Week 12	**WWW and HTTP:** Architecture, Web Documents, HTTP.
Week 13	**Network Management: SNMP:** Network Management System, Simple Network Management Protocol (SNMP).
Weeks 14-15	**Multimedia:** Digitizing Audio and Video, Audio and Video Compression, Streaming Stored Audi/Video, Streaming Live Audio/Video, Real-Time Interactive Audio/Video, RTP, RTCP, Voice over IP.
Weeks 16-17	**Final Examinations**

Requirements
▪ Each student can have only one make-up exam. ▪ One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. ▪ The make-up exam is done at the end of the term and covers all the topics ▪ If a student has attended less than 60% of the lecture/lab/tutorial hours for the relevant course, has not taken any exams (midterms, final exams), and has not completed any of the graded course activities (quizzes, homework, projects, lab works, etc.), they will not be able to take make-up exams and will be assigned NG letter grade. ▪ If a course is repeated, attendance will not be required for that course, but the student will be required to fulfill all course requirements beyond the attendance requirement. ▪ Each laboratory session consists of attendance points and performance points for assignment submission. No attendance points will be given to those students who attend the laboratory session after the first 15 minutes. ▪ Once the grades are announced, the students have only one week to do objection about their grades. ▪ It is the students' responsibility to follow the announcement on the course web site.

	Method of Assessment			
Evaluation and Grading	**Laboratory**	**2 Quizzes**	**Midterm Exam**	**Final Exam**
Percentage	20 %	10 %	35 %	35 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided after calculating the class average at the end of the semester and distribution of the grades will play a significant role in the evaluation.

EASTERN MEDITERRANEAN UNIVERSITY

FACULTY OF COMPUTER AND INFORMATION SCIENCES

INFORMATION TECHNOLOGY

COURSE POLICY SHEET

Course Title	System Analysis and Design
Course Code	ITEC315
Type	Full Time
Semester	Fall/Spring
Category	Area Core
Workload	210 Hours
EMU Credit	(3,2,0) 4
Prerequisite	-
Language	English
Level	Third Year
Teaching Format	3 Hours Lecture, 2 Hours Laboratory per week
ECTS Credit	7
Course Web Site	https://Lms.emu.edu.tr

Instructor(s)	Halide SARIÇİZMELİ	**Office Tel**	+90 392 6301661
E-mail	halide.saricizmeli@emu.edu.tr	**Office No**	CT 111

Course Description

This aim of this course is to provide the students with theoretical and practical skills related to system design and analysis process with an emphasis on object oriented approach. An overview of systems development projects and approaches is followed by thorough coverage of systems analysis and design issues equipping the students with the ability to perform OOA using the OMG Unified Modeling Language (UML). The topics covered are project management and planning, requirements gathering, documentation, analysis and modeling, input/output/user interface design, team organizations.

General Learning Outcomes

On successful completion of this course students should be able to:

- Define the key role and the required skills of the system analyst.
- Define the purpose and various phases of the traditional systems development life cycle (SDLC).
- Interpret the UP life cycle and disciplines.
- Practice the Microsoft Project to build the project schedule
- Interpret the responsibilities of project manager and Elements of project management.
- Examine the techniques for information gathering.
- Create storyboard to show the sequence of forms used in a dialogs
- Create Software Requirements Document
- Analyze and design events and resulting use case.
- Practice UML diagram (use case diagram and use Case specification, activity diagram and domain class diagram, design class diagram, sequence diagram, state chart diagram, package diagram, deployment diagram etc.).
- Identify the design activities and environments
- Discuss software architectures.

Teaching Methodology / Classroom Procedures

- The course has three hours of lectures in a week mainly held in the form of a seminar.
- The practical aspect of the course is made-up of 2 hours/pw in order to provide the students the use of Microsoft project tools for scheduling a project and Visual paradigm tool for drawing UML diagrams
- Lecture notes, tutorials and lab exercises are posted on the course web site.

- There are two written quizzes which are held one week before the midterm and final exam periods.
- There is a practical exam from Microsoft Project and Visual Paradigm.
- There is a written midterm exam
- There is a written final exam
- There is a term project which includes requirements analysis for the propose system and UML diagrams.
- Class attendance is compulsory.

The student is responsible to check the course web site regularly and view the latest announcements.

Course Materials / Main References
Text Book: Satzinger, John W., Robert B. Jackson, and Stephen D. Burd. Object-oriented analysis and design: with the unified process. 1st ed. Boston, MA: Thomson Course Technology, 2005. Print. ISBN: 978-0619216436   ***Lecture Notes:***   All course materials are also available online in PDF format on course web site.

Weekly Schedule / Summary of Topics	
Week 1	**Course Overview:** Introduction to case tools, brief explanation of course procedures and project.
Week 2	**Chapter 1:** The World of the Modern System Analyst: the key role of system analyst, technologies that analyst needs to understand, analyst role in a system development project. **Chapter 2:** Object Oriented Development and the Unified Process: The System Development Life Cycle, Methodologies, models, tools, and techniques, The Unified Process as a system Development methodology, Overview of object oriented concepts, tools to support system development.
Week 3	**Chapter 3:** Project Management and Inceptıon Phase: Project management, The UP and Inception phase, completing the inception phase, project monitoring and controlling.
WEEK 4-6	**Chapter 4:** The requirements discipline: The requirement discipline in more detail, system requirements, models and modelling, techniques for information gathering, validating the requirements.
Week 7	**Chapter 5:** Use Cases and Domain Classes: Events and use cases, problem domain classes, The UML class diagram, Use cases, the domain model and iteration planning.
Week 8	**Chapter 5(cont):** Use Cases and Domain Classes: Events and use cases, problem domain classes, The UML class diagram, Use cases, the domain model and iteration planning.
Week9	**Chapter 6:** Use Case Modelling and Detailed Requirements: Detailed Object Oriented
Week 10	**Chapter 6 (cont):** Requirements definitions, SRS Document, System Processes
Week 11	**Chapter 7:** Design Activities and environments: Moving from Business modeling to requirements to design, understanding the elements of design, design discipline activities, Project management-coordinating the project, deployment environment, software architecture, network design.

Week 12	**Chapter 7:** Design Activities and environments: Moving from Business modeling to requirements to design, understanding the elements of design, design discipline activities, Project management-coordinating the project, deployment environment, software architecture, network design.
Week 13	**Chapter 8:** Use Case Realization: The design discipline within UP iterations: The bridge between requirements and implementation, design classes and design class diagram, interaction diagram, designing with sequence diagram, designing with communication diagram, updating the design class diagram, package diagram, implementation issues for three layer design
Week 14-15	**Chapter 9:** Advanced topics in object oriented design: Modelling system behavior and method logic with design state charts, design principles and design patterns, designing enterprise level systems. Case studies.
Week 16	**Chapter 10:** Designing the data access layer: Databases and database management systems, object oriented databases, relational databases, object relational interaction, distributed databases, database design within the UP.

Requirements
• MAKE-UP EXAMINATION POLICY • Make-up Examination will be offered to those students who missed out a quiz or Final Examination providing that: a) Student has a genuine reason approved by the Instructor (i.e. A Medical Report submitted within 3 working days or other reasons within the prior knowledge and approval of the Instructor); • Quiz Make-up Examination will cover the quiz content only • Final Make-up Examination will cover entire final exam content only • Make-up Examination date, time and place will be announced on the course website Announcements page

Method of Assessment				
Evaluation and Grading	**Project**	**Lab work**	**Midterm Exam**	**Final Exam**
Percentage	25 %	15%	%20	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY

FACULTY OF COMPUTER AND INFORMATION SCIENCES

INFORMATION TECHNOLOGY

COURSE POLICY SHEET

Course Code	ITEC316	**Course Title**	Software Engineering
Semester	Fall/Spring	**Language**	English
Category	Area Core (AC)	**Level**	Third Year
Workload	180 Hours	**Teaching Format**	3 Hours Lecture, 1 Hour Interactive Session
EMU Credit	(3,0,1) 3	**ECTS Credit**	6
Prerequisite(s)	ITEC315	**Course Web**	https://lms.emu.edu.tr/

Instructors(s)	Dr. Sima Kacmaz		
e-mail(s)	Sima.rahimi@emu.edu.tr	**Office No:**	CT123E

Course Description

The aim of this course is to introduce some fundamental principles of the software engineering discipline and illustrate the application of those principles in the context of the graduation project. The main topics covered are software process models, rapid software development and prototyping, software metrics, risk analysis and management, testing and quality assurance, software estimation techniques, and software quality and configuration management.

General Learning Outcomes

On successful completion of this course students should be able to:

- Describe principles, concepts and practice of software engineering.
- List software engineering metrics
- List and explain different testing strategies (Blackbox/Whitebox, inspection, etc.)
- Apply appropriate testing strategy (statement coverage, branch, coverage, etc.)
- List and describe the components of a configuration management system
- Explain the software risk management process.
- Describe the software quality management process.
- Design a small-scale project: requirements document etc.

Teaching Methodology / Classroom Procedures

- Each week there are three lecture sessions and one interactive session.
- E-learning Meeting attendance is compulsory.
- Students work on a case project as part of a small team.
- Each team submits deliverables and presents their work according to the schedule announced on the LMS.
- Students are encouraged to use the internet to search for various related topics.
- Students are required to submit the assigned tasks on time.

Course Materials / Main References

Text Book:

Pressman, Roger S., and Maxim, Bruce R., Software Engineering: A Practitioner's Approach. 8th ed., McGraw-Hill Education, 2015. ISBN: 978-0-07-802212-8

Lecture Notes:
Lecture notes, assignments, any course related materials and announcements will be posted on the LMS.

Weekly Schedule / Summary of Topics	
Week 1	Chapter 1 - The Nature of Software and Engineering
Week 2	Chapter 2 - Software Process Structure & Process Models
Week 3-4	Chapter 3 - Agile Development & Human Aspects of Software Engineering
Week 5	Chapter 4 - Quality Concepts & Review Techniques
Week 6-7	Chapter 5 - Software Quality Assurance & Testing Strategies
Week 8-9	**Midterm Examinations Period**
Week 10	Chapter 6 - Testing Conventional & Object-Oriented Applications
Weeks 11	Chapter 7 - Testing Web & Mobile Applications
Weeks 12	Chapter 8 - Security Engineering and Software Configuration Management
Week 13	Chapter 9 - Product Metrics & Estimation for Software Projects
Week 14	Project Presentation
	Final Examinations Period

Requirements

- Each student can have only one make-up exam. One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. The make-up exam will be done at the end of the term and will cover all the topics. No make-up exam will be given for the quizzes.
- Students who fail to attend the lectures regularly may be given NG grade.
- Instructions for the submission of projects or assignments will be posted on the LMS. It is each student's responsibility to read and follow the instructions. Failure to follow the submission instructions may result in the assignment/project receiving a mark of zero.

Method of Assessment				
Evaluation and Grading	**Quizzes**	**Term Project**	**Midterm Exam**	**Final Exam**
Percentage	20 %	25 %	25%	30 %

Grading Criteria											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 – 52	40 - 49	0 - 39

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INFORMATION TECHNOLOGY

COURSE POLICY SHEET

Course Title	Visual Programming
Course Code	ITEC318
Type	Full Time
Semester	Fall / Spring
Category	AE (Area Elective)
Workload	180 Hours
EMU Credit	(3,1,0) 3
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	3 Hours Lecture, 1 Hour Laboratory per week
ECTS Credit	6

Instructor(s)	Asst. Prof. Dr. Akile Oday	**Office Tel**	+90 392 6301183
E-mail	akile.oday@emu.edu.tr	**Office No**	CT114

Course Description

This course has been designed for programmers wishing to acquire the capability to write sophisticated event driven applications, or those requiring an understanding of the capabilities of VB.Net. This course allows the programmer to develop applications that run under Windows and/or Web browser. It also provides an opportunity to study more on controls, Database applications on VB.NET. No assumed knowledge is required for this course.

General Learning Outcomes

On successful completion of this course students should able to:

- Explain the difference between event-driven programming and command-line programming.
- Design, code, test, and debug simple event-driven programs that respond to user events.
- Develop code that responds to exception conditions raised during execution.

Teaching Methodology / Classroom Procedures

- The students are expected to be active learners in this course. The teaching methodology of this course is based on a lecture based discussion of concepts followed by supervised as well as unsupervised applications of these concepts in Lab. At the end of every major topic discussion, the students will have to work on corresponding Lab assignments where they have to apply the knowledge and skills they learned in class.
- The student will be provided before coming each Lab Session to read Lab Assignments.
- Every week the student has to follow the following :
  - ✓ Three hours of Lectures to learn the basic skills and theoretical information needed.
  - ✓ One hours of supervised Lab applications to apply the information/knowledge given during the lectures
  - ✓ Students are required to attend all classes and all Lab sessions.
  - ✓ Students are expected to carry out the assigned readings, attend quizzes.
- Students are responsible to know and use all the course material placed on the web and for timely attendance to all quizzes.

- There are 3 case studies as follows:
  - ✓ Case Study#1 (%3)– Chapter2 and Chapter3
  - ✓ Case Study#2 (%4)– Chapter4 and Chapter5
  - ✓ Case Study#3 (%3)– Chapter6
- There are three written quizzes as follows: (Duration of each quiz is 40 minutes)
  - ✓ Quiz#1 (%4)– Chapter2 and Chapter3
  - ✓ Quiz#2 (%6)– Chapter4, Chapter5 and Chapter6
- There is a practical open-book (on computer) midterm exam which covers Chapter1, Chapter2, Chapter3 and Chapter4
- There is a practical open-book (on computer) final exam which covers all topics

Course Materials / Main References
Text Book:
Programming in Visual Basic 2010 / Julia Case Bradley, Anita C. Millspaugh. – International Edition, 2011, ISBN 978-007-132676-6
Lecture Notes:
All course materials are also available online.

Weekly Schedule / Summary of Topics	
Week 1	Each chapter begins with identifiable objectives and a brief overview. Numerous coding examples as well as hands-on projects with guidance for the planning and coding appear throughout. Thought-provoking feedback questions give students time to reflect on the current topic and to evaluate their understanding of the details. The end-of-chapter items include a chapter review, questions, programming exercises, and four case studies.
Week 2	***Chapter 1, "Introduction to Visual Basic .NET 2010,"*** introduces Microsoft's Visual Studio integrated development environment (IDE). The single environment is used for multiple programming languages. A step-by-step program gets students into programming very quickly (quicker than most books). The chapter introduces the OOP concepts of objects, properties, methods, and events. The elements of debugging and using the Help system are also introduced.
Week 3 - 4	***Chapter 2, "User Interface Design,"*** demonstrates techniques for good program design, including making the interface easy for users as well as guidelines for designing maintainable programs. Several controls are introduced, including text boxes, group boxes, check boxes, radio buttons, and picture boxes.
Week 5 - 6	***Chapter 3, "Variables, Constants, and Calculations,"*** presents the concepts of using data and declaring the data type. Students learn to follow standards to indicate the data type and scope of variables and constants and always to use Option Strict, which forces adherence to strong data typing. Error handling is accomplished using structured exception handling. The Try/Catch/Finally structure is introduced in this chapter along with calculations. The student learns to display error messages using the MessageBox class and also learns about the OOP concept of overloaded constructors.
Week 7 - 8	***Chapter 4, "Decisions and Conditions,"*** introduces taking alternate actions based on conditions formed with the relational and logical operators. This chapter uses the If statement to validate input data. Multiple decisions are handled with both nested If statements and the Select Case structure. The debugging features of the IDE are covered, including a step-by-step exercise covering stepping through program statements and checking intermediate values during execution.
Week 9 -10	**Midterm Exams**
Week 11 -12	***Chapter 5, "Menus, Common Dialog Boxes, Sub Procedures, and Function Procedures,"*** covers the concepts of writing and calling general sub procedures and function procedures. Students learn to include both menus and context menus in projects, display the Windows common dialog boxes, and use the input provided by the user.
Week 13	***Chapter 6, "Multiform Projects,"*** adds splash forms and About forms to a project. Summary data are presented on a separate form. The Friend keyword is introduced.
Week 14	***Chapter 9, "Web Applications,"*** *introduces Web applications using WebForms. Students learn to deisgn and develop simple Web applications that consist of Web pages that execute in a browser application. Multiple-page Web sites are covered along with validator controls.*
Week 15	***Chapter 10, " Database Applications,"*** introduces ADO.NET, which is Microsoft's latest technology for accessing data in a database. This chapter shows how to create binding sources, table adapters, and datasets. Programs include accessing data from Windows Forms . Students learn to bind data tables to a data grid and bind individual data fields to controls such as labels and text boxes.
Week 16 - 18	**Final Exams**

Requirements
▪ Each student can have only one make-up exam. One who misses an exam should provide a medical report within 3 days after the missed exam. The make-up exam will be organized at the end of the term after the finals and will cover all the topics.
▪ No make-up exam will be given for the quizzes.

- Students should follow the announcement in the course web site.

Method of Assessment					
Evaluation and Grading	**Quizzes**	**Assignments**	**Lab**	**Midterm Exam**	**Final Exam**
Percentage	10 %	10 %	10 %	30 %	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

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INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Python for Web Applications
Course Code	ITEC320
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
Workload	180 Hours
EMU Credit	(3,0,1) 3
Prerequisite	-
Teaching Language	English
Level	Fourth Year
Teaching Format	3 Hours Lecture and 1 Hour Laboratory per week
ECTS Credit	6
Course Web	http://lms.emu.edu.tr

Instructor(s)	Assoc. Prof. Dr. Emre ÖZEN	**Office Tel**	+90 392 6301447
E-mail	emre.ozen@emu.edu.tr	**Office No**	CT200

Course Description

This elective course provides a comprehensive introduction to web application development using a framework. Students will gain hands-on experience in building robust and scalable web applications by following industry best practices. The course covers fundamental concepts such as URL routing, views, templates, database models, user authentication, and session management.

Through practical exercises and projects, students will learn how to develop secure and efficient web applications while mastering Framework's built-in features for handling static files, user permissions, and custom form management. By the end of the course, students will be able to design, implement, and deploy full-stack web applications using the framework.

General Learning Outcomes

By the end of this course, students will be able to:

- Understand the core principles of Django and its application in web development.
- Develop dynamic web applications using Django's Model-View-Template (MVT) architecture.
- Manage databases and interact with models effectively.
- Implement user authentication, authorization, and custom user models.
- Handle forms, static files, and session management in web applications.
- Apply best practices for securing and optimizing Django applications.
- Apply core program control structures
- Design, implement, test, and debug a program
- Test applications with sample data
- Write database driven Web applications that relate to a specific task

Teaching Methodology

At the end of each course block, students are asked to practice in lab what they learned in class. At the end of the semester, each student should complete and submit the individual term project that is assigned at the beginning of the semester. There will be a final exam.

Each student is required to comply with the following:

- The course has three hours of lectures in a week mainly held in the form of a seminar.
- There is one hour of laboratory per week which is organized for practicing the commands learned (lab assignment) and related to lectures and encourages students to voice their difficulties about solving these questions. There will be a deduction from laboratory mark in case of attending late for more than 15 minutes.
- Lecture notes are posted on the course web site.
- Term project/assignment will be assigned at the third week of classes.
- Final Exam regarding the overall content will take place
- Class attendance is compulsory.
- The student is responsible to check the course web site regularly and view the latest announcements.

Course Materials / Main References
Text Book: ***Aditya Gurnam Singh, Mastering Django 4: Projects for Beginners, Aditya DHandi, 2024*** ***ISBN-13 : 979-8224964772***

Weekly Schedule / Summary of Topics	
Week 1	**Introduction to Django**
Week 2	**URL's,Views & Templates**
Week 3	**Admin,Models and databases**.
Week 4	**Static Files**
Week 5	**Forms & User Input**
Week 6	**User Accounts**
Week 7-8	**Midterm Exams**
Week 9-10	**Custom User Model**
Week 11	**User Authentication**
Week 12	**Password Change & Reset**
Week 13	**Permissions & Authorisation**
Week 14	**Custom Forms**
Week 15	**Session Variables**
Week 16-18	**Final Exams**

Requirements
Each student can have only one make-up exam. One who misses an exam should provide a medical report within 3 days after the missed exam. The make-up exam will be organized at the end of the term after the finals and will cover all the topics. No make-up exam will be given for the quizzes.

Faculty Board Decision about NG Grade
If a student has attended less than 60% of the lecture/lab/tutorial hours for the relevant course, has not taken any exams (midterms, final exams), and has not completed any of the graded course activities (quizzes, homework, projects, lab works, etc.), they will not be able to take make-up exams and will be assigned NG letter grade. If a course is repeated, attendance will not be required for that course, but the student will be required to fulfill all course requirements beyond the attendance requirement.

Değerlendirme Yöntemi/Method of Assessment			
Evaluation and Grading	**Laboratory**	**Assigments/Project**	**Final**
Percentage	20%	30%	50%

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

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INFORMATION TECHNOLOGY

COURSE POLICY SHEET

Course Code	ITEC321	**Course Title**	Administering Web-based Content Management System
Semester	Fall/Spring	**Language**	English
Category	Area Elective (AE)	**Level**	Third Year
Workload	180 Hours	**Teaching Format**	3 Hours Lecture, 1 Hour Interactive Session
EMU Credit	(3,0,1) 3	**ECTS Credit**	6
Prerequisite(s)	-	**Course Web**	https://lms.emu.edu.tr/

Instructors(s)	Dr. Sima Kacmaz		
e-mail(s)	Sima.rahimi@emu.edu.tr	**Office No:**	CT123E

Course Description

Today, many web publishers use Web-based content management systems (WCMS) to allow them to instantly and dynamically update web pages and properties as new content become available so that every visit to a site is engaging, informative, and meaningful. This course explores the uses of the most popular open-source web-based content management systems. Participants explore the fundamentals of planning dynamic websites, CMS database management, developing CSS-controlled site templates, and creating database-driven websites through the planning and creation of their own topic-based sites.

General Learning Outcomes

On successful completion of this course students will be able to:

- Understand the difference between a CMS website, a static website, and websites using other server-side technologies.
- Understand the benefits of working with a server-side database and the power it brings to creating and managing websites.
- Create and deploy websites using CMS, including creating and editing content, adding functionality, and creating custom templates and themes.
- Understand ongoing maintenance considerations with CMS websites.

Teaching Methodology / Classroom Procedures

- The course has three hours of lectures a week.
- There are two hours of laboratory per week which is organized for practicing the commands learned (lab assignment) and related to lectures and encourages students to voice their difficulties about solving these questions.
- Lecture notes and laboratory questions are posted on the course website.
- There is a written midterm and a final project.
- The term project will be assigned individually in the third week of classes.
- Class attendance is compulsory.
- The student is responsible to check the course website regularly and view the latest announcements.

Course Materials / Main References

Text Book:

Reference book

Lecture Notes:

Lecture notes, assignments, any course-related materials, and announcements will be posted on the LMS and prepared by the instructor.

Weekly Schedule / Summary of Topics	
Week 1	**Getting started** Installing WordPress Custom installation One-click installation Logging in to WordPress
Week 2-3	**Pages in WordPress** Adding, editing, and deleting pages Page attributes Parent pages Templates Ordering pages
Week 4-5	**Writing settings** Changing the post box size Using emoticons Changing the default post and links Post to your site via email Remote publishing **Reading settings** Changing default page behaviors **Privacy** settings Permalink settings Photo Album configuration **Media settings** Image sizing Embedding media Changing the default folder for uploaded files
Week 6	**The WordPress dashboard** Screen options Customizing your dashboard Editing your profile Logging out Must have WordPress plugins
Week 7	**Comments** Enabling and disabling comments Setting default behaviors for comments Viewing comment Comment approval process Dealing with spam Deleting comments
Week 8-9	**Midterm Examinations Period**
Week 10	**Posts in WordPress** Difference between posts and pages Creating a new post Visual and HTML editor Adding media Inserting a gallery Full-screen editing AutoSaves Categories and tags Using custom fields Previewing, publishing, and saving Editing an existing post Quick edit

	Deleting and viewing a post Changing post status and visibility Permalinks and short links
Weeks 11	**WordPress Plugins** What are plugins? Finding plugins Installing plugins Activating and deactivating plugins Editing plugin settings Deleting plugins
Weeks 12	**WordPress Users** Adding, editing, and deleting users User roles and permissions **WordPress tools** Importing content from another site Exporting your WordPress data **WordPress Settings** General settings Changing the site title and tagline Changing your URL Using a different homepage Updating the admin email address Changing time zones Date/Time formats
Week 13	**Media in WordPress** The Library Scaling and cropping images Media metadata Uploading media
Week 14	**Adding Links in WordPress** Adding links Link Categories
	Final Examinations Period

Requirements
▪ Each student can have only one make-up exam. ▪ One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. ▪ The make-up exam is done at the end of the term and covers all the topics. ▪ Students who fail to attend the lectures regularly may be given an NG grade. ▪ Once the grades are announced, the students have only one week to objections to their grades. ▪ It is the student's responsibility to follow the announcement on the course website. ▪ Students who arrive after the first 20 minutes of laboratory sessions will not be accepted to the Laboratory.

Method of Assessment				
Evaluation and Grading	**Quizzes**	**Laboratory**	**Participation**	**Final Project**
Percentage	30 %	20%	10%	40 %

Grading Criteria											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

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INFORMATION TECHNOLOGY

COURSE POLICY SHEET

Ders Adı / Course Title	Üretken Yapay Zeka Hizmetleri ile Mesajlaşmanın Temelleri / Fundamentals of Texting with Generative Artificial Intelligence Services
Ders Kodu / Course Code	ITEC328
Tipi /Type	Tam Zamanlı / Full Time
Yarıyıl /Semester	Güz/Fall – Bahar/Spring
Türü / Category	AS (Alan seçmeli) / AE (Area Elective)
İş Yükü / Workload	180 Hours
DAÜ Kredi Değeri /EMU Credit	(3,1,0) 3
Ön Koşul / Prerequisite	
Dil / Language	İngilizce / English
Seviye / Level	Üçüncü Yıl / Third Year
Öğretim Formatı / Teaching Format	Haftalık 3 saat Ders, 1 Saat Uygulama / 3 Hours Lecture and 1 Hour Lab per week
ECTS Değeri / ECTS Credit	6
Ders WEB Sitesi / Course Web Sites	lms.emu.edu.tr

Öğretim Elemanı / Instructor	Cem Yağlı	**Ofis Tel / Office Tel**	+90 392 6301137
E-posta / E-mail	Cem.yagli@emu.edu.tr	**Ofis No /Office No**	CT109

Ders İçeriği / Course Description

Turkish:

Bilgi istemi mühendisliği (BİM), makine öğrenimi modellerinde, özellikle doğal dil işleme (NLP) görevlerinde kullanılan bir "metin yazma" işlemidir. BİM'in amacı, modelden istenen çıktıyı üretecek kadar spesifik ve net olan istemleri tasarlamak ve optimize etmek, aynı zamanda tüm ilgili bilgileri yakalayacak kadar genel olmaktır. BİM, büyük dil modellerinin (LLM'ler) yeteneklerini ve sınırlamalarını daha iyi anlamaya yardımcı olan nispeten yeni bir disiplindir. Bu yöndeki uygulamalar NLP'nin kritik bir yönü haline geldi ve çeşitli yapay zeka modellerinin performansını iyileştirmede önemli bir rol oynadı.

Bu ders, öğrencilere büyük dil modelleri için etkili bilgi istemleri yazmaya yönelik kalıpları ve yaklaşımları tanıtır. Bu dersi herkes alabilir ve tek gereksinim, WEB tarayıcılarını kullanabilme ve ChatGPT, Bing AI, Bard AI, Midjourney, Dall-e, Leonardo AI gibi yapay zeka hizmet sunucularına erişim gibi temel bilgisayar kullanım becerileridir. Öncelikle temel istemlerle yukarda belirtilen yapay zeka hizmetlerinden nasıl yararlanılabileceği deneyimi kazanılacak ve ardından herhangi bir alandaki sorunları çözmeye yönelik daha karmaşık bilgi istemlerinin oluşturulmasına doğru ilerlenecektir.

Dönemin sonunda, öğrenciler BİM kullanım becerilerine sahip olacak; iş hayatında, kişisel yaşamlarında, sanat üretimi çalışmalarında (metinden resme, metinden müziğe), eğitimlerinde çok çeşitli görevler için büyük dil modellerini kullanma becerisine sahip olacaklardır (sunum hazırlama, makale yazma, özetleme, gorsel-işitsel-metinsel içerik oluşturma, planlama, simülasyon ve programlama gibi).

English:

Prompt engineering is a "texting" process used in machine learning models, particularly in natural language processing (NLP) tasks. The goal of prompt engineering is to design and optimize prompts that are specific and clear enough to elicit the desired output from the model, while also being general enough to capture the full range of relevant information. Prompt engineering is a relatively new discipline that helps to better understand the capabilities and limitations of large language models (LLMs). It has become a critical aspect of NLP and has played a significant role in improving the performance of various AI models.

This course introduces students to the patterns and approaches for writing effective prompts for large language models. Anyone can take the course and the only required knowledge is basic computer usage skills, such as using a browser and accessing ChatGPT, Bing AI, Bard AI, Midjourney, Dall-e, Leonardo AI, etc. Students will start with basic prompts and build towards writing sophisticated prompts to solve problems in any domain. By the end of the course, students will have

strong prompt engineering skills and be capable of using large language models for a wide range of tasks in their job, business, personal life, generating art (text-to-image, text-to-music) and education, such as writing, summarization, content creation, planning, simulation, and programming.

Öğrenme Çıktıları / General Learning Outcomes

Türkçe:

Bu dersi başarıyla tamamlayan öğrenciler:

- Yapay Zeka, Makine Öğrenme, Geniş Dil Modelleri, Üretken Yapay Zeka Modelleri gibi alanlarla ilgili temel kavramları açıklayabilecek, ilgili alanlardaki gelişmeleri takip edebilecek.
- Üretken Yapay Zeka sistemlerini kullanabilmek amacıyla gereksinim duyulan istemsel metinleri başlangıç düzeyinde yazabilme yeteneğine sahip olacaktır.
- Metinsel, görsel, işitsel içerik üretiminde endüstride yaygın olarak kullanılan üretken yapay zeka servislerinin neler olduğunu, nasıl kullanıldığını, bu servislerin artı ve eksilerini bilecek, bir projede bu servislerin bir veya daha fazlasını aynı anda kullanabilecek.

English:

After completing this course successfully, students will be able to:

• Explain fundamental ideas in disciplines like machine learning, artificial intelligence, large language models, and generative AI models; and keep up with advancements in related subjects.

• Will possess the writing skills necessary to create the prompt texts required for novice users of productive AI systems.

• Be able to employ one or more of these services simultaneously in a project and be aware of the generative artificial intelligence services that are frequently used in the industry, how they are used, and their advantages and disadvantages.

Teaching Methodology / Classroom Procedures

Türkçe:

- Her hafta üç saat ders ve bir saat lab uygulaması olacak şekilde dersler verilmektedir.
- Lab uygulamaları derslerde anlatılan konulara parallel olarak verilmektedir.
- Öğrencilerin dönem içerisindeki performansları aşağıdaki kıstaslara göre ölçülmektedir:
    - Ara Sınav (%20)
    - Dönem Sonu Sınavı (%30)
    - Ödevler (%30)
    - Dönem Projesi (20%)

Dersle ilgili tüm material, ara ve final sınavları, ödevler, dönem projesi üniversitemizin online eğitim portal üzerinde (https://lms.emu.edu.tr) paylaşılacaktır.

English:

- Each week there are three lecture hours, and one lab hour.
- Laboratory works are organized to go as parallel with the theory, given in lecture hours in the classroom.
- Students' performance evaluated by:
    - First Midterm Exam. (20%)
    - Final exam (30%)
    - Home works (30%)
    - Term Project (20%)
- The sharing of all courses related material, midterm and final exams, home works, term project will be on the online education system of our university (https://lms.emu.edu.tr).

Ders Materyalleri / Referanslar -Course Materials / Main References

Ders Kitabı / Text Book:

Phoenix, James; Taylor, Mike; " Prompt Engineering for Generative AI: Future-Proof Inputs for Reliable AI Outputs at Scale", First Edition, O'Reilly Media, May 2024

Ek kaynaklar / Resource Books:

1. Khan, Ian; "The Quick Guide to Prompt Engineering"; WILEY; 2024, ISBN 9781394243327 (paperback), ISBN 9781394243341 (adobe pdf), ISBN 9781394243334 (epub)

Haftalık Ders Programı / Konu Özeti - Weekly Schedule / Summary of Topics	
Hafta / week 1	**Türkçe:** **Ders**: Yapay Zeka (YZ) İle Tanışma. **Laboratuar**: - **English:** **Lecture**: Introduction to Artificial Intelligence (AI) **Lab**: -
Hafta / week 2	**Türkçe:** **Ders**: Üretken YZ ile Tanışma **Laboratuar**: - **English:** **Lecture**: Introduction to Generative AI **Lab**: -
Hafta / week 3	**Türkçe:** **Ders**: Prompt (Bilgi İstemleri) Mühendisliği ile Tanışma **Laboratuar**: - **English:** **Lecture**: Introduction to Prompt Engineering **Lab**: -
Hafta / week 4	**Türkçe:** **Ders**: Etkili Prompt Oluşturma Teknikleri **Laboratuar**: Prompt Oluşturma - 1 **English:** **Lecture**: Crafting Effective Prompts **Lab**: Generating Prompts - 1
Hafta / week 5	**Türkçe:** **Ders**: Kişiselleştirilmiş Üretken YZ kullanım tecrübesi **Laboratuar**: Prompt Oluşturma - 2. **English:** **Lecture**: Personalising Generative AI Chat Experiences **Lab**: Generating Prompts - 2.
Hafta / week 6	**Türkçe:** **Ders**: Metinsel içerik oluşturmak için Prompt kullanımı **Laboratuar**: Prompt Oluşturma - 3. **English:** **Lecture**: Prompting for Text Generation. **Lab**: Generating Prompts - 3.
Hafta / week 7	**Türkçe:** **Ders**: Imaj üretimi için Prompt kullanımı **Laboratuar**: Prompt Oluşturma - 4.

	English: **Lecture**: Prompting for Image Generation. **Lab**: Generating Prompts - 3.
Hafta / week 8	**Türkçe:** **Ders**: DALL-E'ye Giriş 2: DALL-E Nedir 2. DALL-E 2'ye nasıl komut verilir. Yetenekler ve Sınırlamalar. **Laboratuar**: Bir TTI'ye Yönelik Bilgi İstemi Modelleri II. **English:** **Lecture**: Introduction to DALL-E 2: What is DALL-E 2. How to prompt to DALL-E 2. Capabilities and Limitations. **Lab**: Prompt Patterns II to a TTI.
Hafta / week 9	**Türkçe:** Ders: Stable Duffusion'e Giriş: Stable Duffusion Nedir? Stable Duffusion a nasıl yönlendirme yapılır? Yetenekler ve Sınırlamalar. Laboratuar: Bir TTI'ye Yönelik Bilgi İstemi Modelleri III. **English:** **Lecture**: Introduction to Stable Diffusion: What is Stable Diffusion. How to prompt to Stable Diffusion. Capabilities and Limitations. **Lab**: Prompt Patterns III to a TTI.
Hafta / week 10	**Türkçe:** **Ders**: Diğer TTI Modelleri: Adobe Firefly'a Giriş, MS Bing image Creator, Canva AI, SoulGEN, PicSO, Craiyon. **Laboratuar**: Bir TTI'ye Yönelik Bilgi İstemi Modelleri IV. **English:** **Lecture**: Other TTI Models: Introduction to Adobe Firefly, MS Bing image Creator, Canva AI, SoulGEN, PicSO, Craiyon. **Lab**: Prompt Patterns IV to a TTI.
Hafta / week 11	**Türkçe** **Ders**: Metinden müzik (ttm) modellerine giriş: Bir ttm'ye nasıl komut verilir? Yetenekler ve Sınırlamalar. **Laboratuar**: Öğrenciler MusicLM AI hesaplarına resmi std-no@emu.edu.tr e-posta adreslerini kullanarak başvuracaklardır. MusicLM AI ücretsiz bir ttm hizmetidir. **English:** **Lecture**: Introduction to text to music (ttm) models: How to prompt to a ttm? Capabilities and Limitations. **Lab**: Students will apply for MusicLM AI accounts using their official std-no@emu.edu.tr emails. MusicLM AI is a free ttm services.
Hafta / week 12	**Türkçe:** **Ders**: MusicLM'e Giriş TTM: MusicLM Nedir? MusicLM'e nasıl yönlendirme yapılır? Yetenekler ve Sınırlamalar. **Laboratuar**: Bir TTM'ye Yönelik Bilgi İstemi Modelleri. **English:** **Lecture**: Introduction to MusicLM TTM: What is MusicLM. How to prompt to MusicLM. Capabilities and Limitations. **Lab**: Prompt Patterns to a TTM.

Gereksinimler / Requirements

Türkçe

- Dönem sonu sınavına giremeyen öğrenci, sınav tarihinden en geç 3 gün içerisinde yasal ve sınava girmeme gerekçesini açıklayan doctor raporunu idareye ibraz etmek mecburiyetindedir.
- Notlar açıklandıktan sonraki yedi gün içerisinde öğrenci notuna itiraz edebilir.
- Dersin WEB sitesindeki (https://lms.emu.edu.tr) tüm duyuruları takip etmek öğrencinin sorumluluğundadır.
- Ara sınavların ve dönem sonu sınavı sonucları da aynı WEB sitesinde açıklanacaktır.

English:

- One who misses final exam should provide a medical report or a valid excuse within 3 days after the missed exam.
- Students who fail to attend the lectures regularly may be given NG grade.
- Once the grades are announced, the students have only one week to do objection about their grades.
- It is the students' responsibility to follow the announcement in the course web site (https://lms.emu.edu.tr).
- Midterms exams and final exam scores will be announced at the same WEB site

Değerlendirme Yöntemi / Method of Assessment			
Değerlendirme ve Harf Notu / Evaluation and Grading	**İki Arasınav / Two Midterm**	**Dönem Sonu SInavı / Final Exam**	**Ödevler / Home works**
Yüzdelikler / Percentage	50%	25%	25%

Grading Criteria * / Değerlendirme Kriterleri											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 – 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

Değerlendirme Kriterleri / Grading Criteria :

Turkish:

Harf notları dönem sonunda hesaplanan ortalamalara göre belirlenir. Ortalamalarının dağılımı harf notlarının değerlendirilmesinde önemli bir rol oynayacaktır.

English:

Letter grades will be decided upon after calculating the averages at the end of the semester. Distribution of the averages will play a significant role in the evaluation of the Letter Grades.

EASTERN MEDITERRANEAN UNIVERSITY

FACULTY OF COMPUTER AND INFORMATION SCIENCES

INFORMATION TECHNOLOGY

COURSE POLICY SHEET

Ders Adı / Course Title	Veri Bilimi ve Yapay Zeka için Programlama Dilleri/ Programming Languages for Data science and Artificial Intelligence
Ders Kodu / Course Code	ITEC329
Tipi /Type	Tam Zamanlı / Full Time
Yarıyıl /Semester	Fall/Güz- Bahar/Spring
Türü / Category	AS (Alan Seçmeli) / AE (Area Elective)
İş Yükü / Workload	180 Hours
DAÜ Kredi Değeri /EMU Credit	(3,1,0) 3
Ön Koşul / Prerequisite	
Dil / Language	İngilizce / English
Seviye / Level	Üçüncü Yıl / Third Year
Öğretim Formatı / Teaching Format	Haftalık 3 saat Ders, 1 Saat Uygulama / 3 Hours Lecture and 1 Hour Lab per week
ECTS Değeri / ECTS Credit	6
Ders WEB Sitesi / Course Web Sites	lms.emu.edu.tr

Öğretim Elemanı / Instructor	Asst. Prof. Dr. Cem Yağlı	**Ofis Tel / Office Tel**	+90 392 6301137
E-posta / E-mail	Cem.yagli@emu.edu.tr	**Ofis No /Office No**	CT109

Ders İçeriği / Course Description

Turkish:

Fonksiyonel programlamaya giriş, isimsiz (lambda) fonksiyonlar, map/reduce/filter, liste/sözlük ve küme kavramları, yinelenebilirler, yineleyiciler, oluşturucular. Birinci sınıf ve yüksek dereceli fonksiyonlar. Dekoratör fonksiyonlar ve kullanım alanları. Kısmi yürütme için fonksiyon argümanlarının dondurulması. Kapsülleme, çoklu miras, soyutlama, metasınıflar ve öznitelik yönetimi kullanarak modüler, yeniden kullanılabilir ve ölçeklenebilir yazılım geliştirme. Kullanıcı tanımlı nesneler için operatör aşırı yükleme. Çoklu iş parçacığı kullanarak hafif eşzamanlı yürütme. Paralel pogramlama kullanarak çok çekirdekli işleme. GPU hesaplama kullanarak devasa paralellik. İstisna işleme yoluyla sağlam programlama.

English:

Introduction to functional programming, anonymous (lambda) functions, map/reduce/filter, list/dictionary and set comprehensions, iterators, generators. First class and higher-order functions. Decorator functions and their use-cases. Freezing function arguments for partial execution. Modular, reusable and scalable software development using encapsulation, multiple inheritance, abstraction, metaclasses and attribute management. Operator overloading for user-defined objects. Lightweight concurrent execution using multi-threading. Multi-core processing using parallel programming. Massive parallelism using GPU computing. Robust programming through exception-handling.

Öğrenme Çıktıları / General Learning Outcomes

Türkçe:

Bu dersi başarıyla tamamlayan öğrenciler:

- Yapay Zeka, Makine Öğrenme, Veri Bilimi, bu alandaki çözümlerin geliştirilmesinde kullanılan programlama dilleri, ilgili kütüphaneler ve çerçevelerle ilgili temel kavramları açıklayabilecek, ilgili alanlardaki gelişmeleri takip edebilecek.
- Yapay Zeka uygulamalarının geliştirilmesinde gerekli olan temel Teknik unsurları (indeksleme, diziler, sayısal işlemler, vektör işlemleri, nesne-tabanlı kodlama, …) başlangıç düzeyinde kullanabilme yeteneğine sahip olacaktır.

- Yapay Zeka çözümlerinin geliştirilmesinde kullanılabilen Fonksiyonel Programlama, Mantıksal Programlama gibi kavramları ve teknikleri kavrayabilecekler.

English:

After completing this course successfully, students will be able to:

• Explain fundamental ideas in machine learning, artificial intelligence, data science, the programming languages, related libraries, and frameworks in the development of the solutions in those fields of studies; and keep up with advancements in related subjects.

• Will possess the skills with necessary coding components (including arrays, indexing, numerical operations, data frames, series, vector computation, object-oriented programming, merging, and joining processes, …) to develop AI solutions.

• Be able to understand the Functional Programming, Logic Programming like techniques especial designed to be used in developing AI solutions.

Teaching Methodology / Classroom Procedures

Türkçe:

- Her hafta üç saat ders ve bir saat lab uygulaması olacak şekilde dersler verilmektedir.
- Lab uygulamaları derslerde anlatılan konulara parallel olarak verilmektedir.
- Öğrencilerin dönem içerisindeki performansları aşağıdaki kıstaslara göre ölçülmektedir:
    - Ara Sınav (%20)
    - Dönem Sonu Sınavı (%30)
    - Ödevler (%30)
    - Dönem Projesi (20%)

Dersle ilgili tüm material, ara ve final sınavları, ödevler, dönem projesi üniversitemizin online eğitim portal üzerinde (https://lms.emu.edu.tr) paylaşılacaktır.

English:

- Each week there are three lecture hours, and one lab hour.
- Laboratory works are organized to go as parallel with the theory, given in lecture hours in the classroom.
- Students' performance evaluated by:
    - First Midterm Exam. (20%)
    - Final exam (30%)
    - Home works (30%)
    - Term Project (20%)
- The sharing of all courses related material, midterm and final exams, home works, term project will be on the online education system of our university (https://lms.emu.edu.tr).

Ders Materyalleri / Referanslar -Course Materials / Main References

Ders Kitabı / Text Book:

Emmert-Streib F., Moutari S., Dehmer M.;" Elements of Data Science, Machine Learning, and Artificial Intelligence Using R", First Edition, Springer, 2023

Haftalık Ders Programı / Konu Özeti - Weekly Schedule / Summary of Topics	
Hafta / week 1	**Türkçe:** **Ders**: Fonksiyonel Programlamaya Giriş. • Fonksiyonel Programlama Prensiplerine genel bir bakış • Emirsel Programlama ile karşılaştırması • Fonksiyonel Programlamanın faydaları **English:** **Lecture**: Introduction to Functional Programming • Overview of functional programming principles • Comparison with imperative programming

	• Benefits of functional programming
Hafta / week 2	**Türkçe:** **Ders**: Anonim (Lambda) Fonksiyonları • Lambda fonksiyonlarına giriş • Lambda fonksiyonlarının sözdizimi ve kullanım durumları • Normal fonksiyonlarla karşılaştırılması **English:** **Lecture**: Anonymous (Lambda) Functions • Introduction to lambda functions • Syntax and use-cases of lambda functions • Comparison with regular functions
Hafta / week 3	**Türkçe:** **Ders**: Haritalama, Azaltma ve Filtreleme Fonksiyonlarıi • Haritalama, azaltma ve filtreleme fonksiyonlarını anlama • Her fonksiyonun sözdizimi ve örnekleri • • Kullanım durumları ve performans hususları **English:** **Lecture**: Map, Reduce, and Filter Functions • Understanding map, reduce, and filter functions. • Syntax and examples of each function • Use-cases and performance considerations
Hafta / week 4	**Türkçe:** **Ders**: Liste, Sözlük ve Anlamaları Ayarlama • Python'daki kavramalara giriş • Liste, sözlük ve küme anlamalarının sözdizimi ve örnekleri. • Avantajlar ve performans hususları **English:** **Lecture**: List, Dictionary, and Set Comprehensions • Introduction to comprehensions in Python • Syntax and examples of list, dictionary, and set comprehensions. • Benefits and performance considerations
Hafta / week 5	**Türkçe:** **Ders**: Yinelenebilirler, Yineleyiciler ve Jeneratörler • Yinelenebilirlere ve yineleyicilere derinlemesine bakış • Jeneratörlerin oluşturulması ve kullanılması • Jeneratörlerin performans avantajları **English:** **Lecture**: Iterables, Iterators, and Generators • Deep dive into iterables and iterators • Creating and using generators • Performance benefits of generators
Hafta / week 6	**Türkçe:** **Ders**: Birinci Sınıf ve Daha Yüksek Dereceden Fonksiyonlar • Birinci sınıf fonksiyon kavramları • Üst düzey fonksiyonları anlama • Örnekler ve kullanım durumları **English:** **Lecture**: First-Class and Higher-Order Functions • Concepts of first-class functions • Understanding higher-order functions • Examples and use-cases

Hafta / week 7	**Türkçe:** **Ders**: Dekoratör İşlevleri ve Kullanım Durumları • Dekoratörleri anlamak • Dekoratör fonksiyonlarının sözdizimi ve örnekleri • Yaygın kullanım örnekleri ve en iyi uygulamalar **English:** **Lecture**: Decorator Functions and Their Use-Cases • Understanding decorators • Syntax and examples of decorator functions • Common use-cases and best practices
Hafta / week 8	**Türkçe:** **Ders**: Kısmi Yürütme için Fonksiyon Argümanlarının Dondurulması • Kısmi fonksiyon uygulamasına giriş • functools.partial'in kullanıldığı sözdizimi ve örnekler • Kullanım durumları ve performans hususları **English:** **Lecture**: Freezing Function Arguments for Partial Execution • Introduction to partial function application • Syntax and examples using functools.*partial* • Use-cases and performance considerations
Hafta / week 9	**Türkçe:** Ders: Modüler, Yeniden Kullanılabilir ve Ölçeklenebilir Yazılım Geliştirme • Modüler yazılım geliştirmenin ilkeleri • Kapsülleme, çoklu kalıtım ve soyutlama • Metasınıflar ve nitelik yönetimi **English:** **Lecture**: Modular, Reusable, and Scalable Software Development • Principles of modular software development • Encapsulation, multiple inheritance, and abstraction • Metaclasses and attribute management
Hafta / week 10	**Türkçe:** **Ders**: Kullanıcı Tanımlı Nesneler için Operatör Aşırı Yüklemesi • Operatör aşırı yüklemesi kavramları • Aşırı yükleme operatörlerinin sözdizimi ve örnekleri • Kullanım örnekleri ve en iyi uygulamalar **English:** **Lecture**: Operator Overloading for User-Defined Objects • Concepts of operator overloading • Syntax and examples of overloading operators • Use-cases and best practices
Hafta / week 11	**Türkçe:** **Ders**: Hafif Eşzamanlı Yürütme • Python'da çoklu iş parçacığına giriş • İş parçacığı oluşturmanın sözdizimi ve örnekleri • Kullanım durumları ve performans hususları **English:** **Lecture**: Lightweight Concurrent Execution • Introduction to multi-threading in Python • Syntax and examples of threading • Use-cases and performance considerations
Hafta / week 12	**Türkçe:**

	Ders: Paralel Programlama ve GPU Hesaplama • Çok çekirdekli işlemeye giriş • GPU hesaplamanın temelleri • Paralel programlamanın sözdizimi ve örnekleri **English:** **Lecture** Parallel Programming and GPU Computing • Introduction to multi-core processing • Basics of GPU computing • Syntax and examples of parallel programming
Hafta / week 13	**Türkçe:** **Ders**: İstisna İşleme Sayesinde Güçlü Programlama • Python'da istisna işleme mekanizmaları • Try-hariç blokların sözdizimi ve örnekleri. • Sağlam kod yazmaya yönelik en iyi uygulamalar **English:** **Lecture** Robust Programming Through Exception-Handling • Exception-handling mechanisms in Python • Syntax and examples of try-except blocks. • Best practices for writing robust code

Gereksinimler / Requirements

Türkçe

- Dönem sonu sınavına giremeyen öğrenci, sınav tarihinden en geç 3 gün içerisinde yasal ve sınava girmeme gerekçesini açıklayan doctor raporunu idareye ibraz etmek mecburiyetindedir.
- Notlar açıklandıktan sonraki yedi gün içerisinde öğrenci notuna itiraz edebilir.
- Dersin WEB sitesindeki (https://lms.emu.edu.tr) tüm duyuruları takip etmek öğrencinin sorumluluğundadır.
- Ara sınavların ve dönem sonu sınavı sonucları da aynı WEB sitesinde açıklanacaktır.

English:

- One who misses final exam should provide a medical report or a valid excuse within 3 days after the missed exam.
- Students who fail to attend the lectures regularly may be given NG grade.
- Once the grades are announced, the students have only one week to do objection about their grades.
- It is the students' responsibility to follow the announcement in the course web site (https://lms.emu.edu.tr).
- Midterms exams and final exam scores will be announced at the same WEB site

Değerlendirme Yöntemi / Method of Assessment				
Değerlendirme ve Harf Notu / Evaluation and Grading	**Arasınav / Midterm**	**Dönem Sonu SInavı / Final Exam**	**Ödevler / Home works**	**Dönem Projesi / Term Project**
Yüzdelikler / Percentage	20%	30%	30%	20%

Grading Criteria * / Değerlendirme Kriterleri											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

Değerlendirme Kriterleri / Grading Criteria :

Turkish:

Harf notları dönem sonunda hesaplanan ortalamalara göre belirlenir. Ortalamalarının dağılımı harf notlarının değerlendirilmesinde önemli bir rol oynayacaktır.

English:

Letter grades will be decided upon after calculating the averages at the end of the semester. Distribution of the averages will play a significant role in the evaluation of the Letter Grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Code	ITEC347	**Course Title**	Analysis of Algorithms
Semester	Fall/Spring	**Language**	English
Category	AC (Area Core Course)	**Level**	Third Year
Workload	150 Hours	**Teaching Format**	3 Hours Lecture, 1 Hour Tutorial / week
EMU Credit	(3,0,1) 3	**ECTS Credit**	5
Prerequisite(s)	-	**Course Web**	https://lms.emu.edu.tr

Instructors(s)	Asst. Prof. Dr. Hasan Oylum	**Office Tel:**	+90 392 630 1671
e-mail(s)	hasan.oylum@emu.edu.tr	**Office No:**	CT118

Course Description

The main aim of this course is to introduce the students to the analysis and the design of algorithms for improving students' analytical thinking skills. The course focuses on algorithms and problem solving techniques. Major concepts include; runtime analysis, complexity analysis of sorting, searching, divide and conquer algorithms, dynamic programming, greedy algorithms, graph algorithms, cryptographic algorithms, and string matching algorithms.

General Learning Outcomes

On successful completion of this course students should be able to:

- Possess the mathematical knowledge and programming skills necessary to analyse the common algorithms.
- Gain insight into algorithmic design and how it is affected by algorithmic logic, structure, and performance.
- Proof techniques and mathematical concepts to demonstrate the correctness and assess the performance of standard algorithms.
- Demonstrate their ability to carry out a complete algorithmic process involving, algorithmic design, analysis, and implementation.
- Analyze certain classes of algorithms, along with models for future algorithmic work.

Teaching Methodology / Classroom Procedures

- Home works will be mostly in the form of programming assignments. A midterm exam and a comprehensive final exam will be held during the exam periods announced in the University's Academic Calendar.
- Attendance is essential for the learning process. Class lectures will not exactly follow the text, so you are expected to attend all classes. While I will not mandate attendance, your regular attendance will be required in order to participate in class. You are accountable for all material covered, all announcements made, and all handouts given out during class.
- Course grades will be a function of your performance in exams as well as of your participation in class.
- Laboratory sessions should also be followed for understanding the real mechanisms of the focused algorithms in the class.

Course Materials / Main References

Text Book:

Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, "Introduction to ALGORITHMS", MIT Press. ISBN: 0-262-03141-8 (MIT Press). ISBN: 0-07-013143-0 (McGraw-Hill), sixteenth printing, 1996.

Note: All Lecture notes and lab applications will be published through the internet as *.rar or *.doc or *.ppt formats in the course web site.

Weekly Schedule / Summary of Topics	
Week 1	**Introduction:** Definition and properties of Algorithms. Design, analysis, and representation of Algorithms. Data abstraction. Pseudo code conventions.
Week 2-3	Growth of functions, NP Completeness.
Week 4	The use of incremental approach, analyses of insertion sort algorithm.
Week 5	The divide and conquer approach, analyses of merge sort algorithm, Towers of hanoi problems and their growing functions.
Week 6	Heaps, maintaining the heap property, build a heap, and heap-sort algorithm.
Week 7	Heaps, maintaining the heap property, build a heap, and heap-sort algorithm, priority queues.
Week 8-9	**Midterm Examinations Week**
Week 10	Description of quick sort, performance of quick sort algorithm.
Week 11	Randomized versions of quick sort, analysis of quick sort.
Week 12	Analyses of binary search tree, querying a binary search tree, minimum and maximum, successor and predecessor, insertion and deleting.
Week 13	Advance design and analyses techniques. Dynamic programming, Greedy algorithms. NP Completeness
Week 14-15	Graph algorithms, breadth-first tree. Breadth-first search, shortest paths, and depth-first search algorithms. Approximation algorithms (TSP, MST, SP)
Week 16-18	**Final Examinations Week**

Requirements

- Each student can have only one make-up exam. One who misses an exam should provide a medical report within 3 days after the missed exam. The make-up exam will be done at the end of the term and will cover all the topics. No make-up exam will be given for the quizzes.
- Students who do not pass the course and fail to attend the lectures regularly may be given NG grade.
- Students are responsible from every subject that will be covered in the class and lab.
- Students have to be ready for the quizzes.
- Students should attend to the labs and quizzes just on time regularly and submit their assignments.
- Instructor Home Page, http://sct.emu.edu.tr/oylum must frequently be visited for the course announcements, the exam/quiz results, labs etc.
- Tutorials will also be organized on the selected algorithms.

Method of Assessment				
Evaluation and Grading	**Assignments**	**Quizzes**	**Midterm Exam**	**Final Exam**
Percentage	20 %	15 %	25 %	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY

FACULTY OF COMPUTER AND INFORMATION SCIENCES

INFORMATION TECHNOLOGY

COURSE POLICY SHEET

Course Title	Macro Coding
Course Code	ITEC397
Type	Area Elective
Semester	Spring
Category	AE (Area Elective)
EMU Credit	(3,0,1) 3
Prerequisite	-
Language	English
Level	Third Year
Teaching Format	3 Hours Lecture and 1 Hour Tutorial per week
ECTS Credit	6 What is ECTS? Why ECTS is needed? How does it work?
Workload of a student	180 Hours
Course Web Site	https://lms.emu.edu.tr

Instructor	Assist. Prof. Dr. Cem Yağlı	**Office Tel**	+90 392 6301137
E-mail	cem.yagli@emu.edu.tr	**Office No**	CT109

Course Description

The computational requirements of many individuals and organizations are tending to be fulfilled by costly and complex application development solutions which are overcoming their budgets. Hence, many boring repeated tasks are still operated manually, and they are not solved in automation yet. This gap of the IT sector can be closed with macro coding facility of the office software that are exists almost on every office-personal computer. This course is aiming to introduce students to macro coding techniques and let them to earn experience in possibly the cheapest and simplest application development area of the IT sector.

General Learning Outcomes

On successful completion of this course students should be able to:

- Explain what kind of tasks are not suitable to be automated in traditional development techniques.
- Use all Office application fluently and efficiently using short-cuts and hot keys.
- Code in VBS and use office applications' objects to developed interactive solutions.

Teaching Methodology / Classroom Procedures

- Each week there are three lecture hours, and one lab hours.
- Class attendance is compulsory.
- All course related material (reading texts, tutorials, previously asked exam questions with their solutions, and announcements can be reached by students through the course WEB site (https://lms.emu.edu.tr).
- The student is responsible to check the course web site regularly and view the latest announcements.
- There is only one final exam, three home works and a term project.
- Students must complete and submit their home works and term project before the deadline.

Course Materials / Main References

Textbook:

- Mansfield R., "Mastering VBA for Microsoft Office 2016", Sybex, John Wiley & Sons, Inc. (2016),

ISBN: 978-1-119-22538-6

Weekly Schedule / Summary of Topics	
Week 1	▪ What is Macro coding, what is VBA. How can you implement a spreadsheet application. VBA examples, discussing the security issues about macro coding.
Week 2	▪ Starting VBA -Recording and executing Macros. Manipulating the documents
Week 3	▪ VB – Editor, security issues. Variables, Data types, Constants
Week 4	▪ VB – Conditional Statements and VB – Loops.
Week 5	▪ VB – Subroutines and VB – Functions.
Week 6	▪ VB – Arrays, Strings
Week 7	▪ Hot-keys and Short-cuts in Excel, Word, Outlook, PowerPoint
Week 8-9	**Midterm Examinations**
Week 10	▪ Excel Objects. Charts, Shapes.
Week 11	▪ User Forms and controls Error handling techniques
Week 12	▪ Interacting with the other office applications. Developing mail merging applications.
Week 13	▪ Working with text files. Conditional Doc generator applications.
Week 14	▪ **Developing Excel Application, Add-ins. Work with Ribbon**
Week 15	▪ Using Class modules.
Week 16-17	**Final Examinations**

Requirements
▪ Each student can have only one make-up exam. ▪ One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. ▪ The make-up exam is done at the end of the term and covers all the topics. ▪ Students who fail to attend the lectures regularly may be given NG grade. ▪ Once the grades are announced, the students have only one week to do objection about their grades. ▪ It is the students' responsibility to follow the announcement in the course web site. ▪ Exam scores are announced on student portal.

Method of Assessment			
Evaluation and Grading	**HWs**	**Term Project**	**Final Exam**
Percentage	30 %	30 %	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 – 52	40 - 49	0 - 39

* Letter grades will be decided after calculating the class average at the end of the semester and distribution of the grades will play a significant role in the evaluation.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Summer Training
Course Code	ITEC400
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(0,0,0) 0
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	-
ECTS Credit	6
Workload of a student	180 Hours
Course Web Site	https://lms.emu.edu.tr

Instructor	Asst. Prof. Dr. Hasan Oylum	**Office Tel**	+90 392 630 1671
E-mail	hasan.oylum@emu.edu.tr	**Office No**	CT118

Course Description

As a part of the fulfilment of the graduation requirements, all students must complete 25 work days of summer training after the second and/or third year, during summer vacations. The summer training should be carried out in accordance with the rules and regulations set by the department.

General Learning Outcomes

On successful completion of this course students should be able to:

- Apply knowledge of data collection, interpretation, and solution,
- Apply industrial information technology tools to real problems,
- Write a report and make an effective presentation.

Teaching Methodology / Classroom Procedures

- There are no predefined lectures for this course.
- The student must submit the report to his/her instructor not later than the end the 9th week of the semester. If there are any modifications required, complete these and re-submit to your instructor.
- The student is responsible to check the course web site regularly and view the latest announcements.

Course Materials / Main References

Textbook:

- -

Reference Books:

- -

Weekly Schedule / Summary of Topics	
Week 1	Meeting: Explaining the Course Content
Week 2	-
Week 3	-
Week 4	-
Week 5	-
Week 6	-
Week 7	-
Week 8-9	**Midterm Examinations**
Week 10	-
Week 11	-
Week 12	-
Week 13	-
Week 14	-
Week 15	-
Week 16-17	**Final Examinations**

Requirements

- Summer training Log Book should be filled either in English or in Turkish and submitted in a sealed and closed envelope.
- The student must register in Summer Training Course (ITEC400) during the first Course Registration Period after the completion of training.
- The student must submit the report to ITEC400 coordinator not later than the announced date (check announcements page). If there are any modifications required, complete these and re-submit to your instructor. Summer Training Report should include original experience gained by the student at the site/office rather than theoretical knowledge obtained from books or lecture notes.
- At the end of “Add and Drop” period of the semester, the Department announces the name of the instructor who will supervise you. The Student must contact his/her instructor as soon as possible to obtain his/her instruction on how to write the report.
- Evaluations (Oral Exam or/and Presentation) will take place starting from the announced date (check announcements page) via taking appointment from contact instructor.

Method of Assessment

This is a pass or fail grade course. A committee is formed for each student to examine him/her on the summer training experience and the work content performed by the student.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Graduation Project Orientation
Course Code	ITEC402
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(0,0,0) 0
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	1-hour weekly meetings
ECTS Credit	2 What is ECTS? Why ECTS is needed? How does it work?
Workload of a student	60 Hours
Course Web Site	https://lms.emu.edu.tr

Committee Members	**E-mail**	**Office No**	**Office Tel**
Asst. Prof. Dr. Cem Yağlı (Chair)	cem.yagli@emu.edu.tr	CT 109	+90 392 630 1137
Dr. Şebnem Çoban	sebnem.coban@emu.edu.tr	CT 117	+90 392 630 1677
Dr. Yeşim Kapsıl Çırak	yesim.kapsil@emu.edu.tr	CT 216	+90 392 630 2310
Sr. Instr. Halide Sarıçizmeli	halide.saricizmeli@emu.edu.tr	CT 111	+90 392 630 1661

Course Description

This course is the first stage of the two-semester long team-based graduation project (capstone project) of the IT program. The main aim of this course is to help the students to use their knowledge and skills to perform the analysis of the assigned project topic. Students should explore the needs and requirements of their project, carry out systems design and develop a prototype, if possible, of their project. The analysis will be used for the implementation of the project, which is the of the second stage of study.

General Learning Outcomes

On successful completion of this course students should be able to:

- Apply problem solving skills to real life problems
- Participate in an IT team
- Gather requirements for a real-life project
- Apply appropriate analysis and design techniques
- Perform research for finding solutions
- Compare existing systems
- Interact with customers

Teaching Methodology / Classroom Procedures

- The course has one-hour meetings per week.
- Course materials are posted on the course web site.
- The student is responsible to check the course web site regularly and view the latest announcements.
- List of instructions for graduation project orientation studies is as shown below:
  1. Create a team of 4-5 students, fill project study agreement form and submit it to the committee.
  2. Write a project proposal about the assigned project topic and submit it to the committee. The instructions for preparing the proposal are posted on the web site. Project proposals should include some

enhancements/additional features over the announced minimum project requirements. This will encourage and motivate the students to use their knowledge and imagination to customize their projects. However, failing to implement the suggested features will lead to reduction of points.
3. Prepare intermediate report(s) and submit it to the committee. The requirements about the intermediate reports and the schedule are posted on the web site.
4. The graduation project committee may organize seminars and meetings to provide guidance and technical support to the students as needed.

Course Materials / Main References
None

Weekly Schedule / Summary of Topics	
Week 1	First meeting and announcement of the project topic
Week 2	Forming Teams
Week 3	Preparing Proposal
Week 4	Proposal Submission
Week 5	Proposal Evaluation
Week 6	Feedback on Proposals
Week 7	Explore the needs and requirements of the project
Week 8-9	**Midterm Examinations Week**
Week 10	Explore the needs and requirements of the project and carry out systems design
Week 11	Intermediate Report Submission
Week 12	Carry out systems design
Week 13	Report Writing
Week 14	Final Report Submission
Week 15	Presentations
Week 16-17	**Final Examinations**

Requirements

1. Create a team of 4-5 students.
2. Fill the project study agreement form and submit it to the chair of the committee before the deadline announced on the course web site.
3. For those who cannot find team members, the committee will arrange the team.
4. Write a project proposal about the assigned project topic and submit it to the chair of the committee before the deadline announced on the course web site.
5. The instructions for preparing the proposal will be announced on the course web site.
6. Project proposals should include some enhancements/additional features over the announced minimum project requirements. You should use your knowledge and imagination to customize your graduation projects. However, failing to implement the suggested features in the proposal will lead to reduction of points in ITEC404 evaluation.
7. An intermediate report should be submitted to the committee within the semester. The deadline for submitting the intermediate reports will be posted on the course web site. The main aim of collecting the intermediate reports is to provide feedbacks on the initial designs of the project groups and avoid any designing problems from the beginning.
8. Final reports should be submitted to the committee before the deadline announced on the course web site.
9. Presentations will be held after the submission on the final reports.
10. Each project group will have about 10-12 minutes for the presentation.
11. The outcome of the analysis and design of the project study should be presented in front of a jury.
12. Each team member should talk about his/her responsibility within the team and completed activities during the semester.

13. The detailed schedule for the presentations will be announced on the course web site.

Method of Assessment								
Evaluation and Grading	**UML Design**	**Database Design**	**Presentation**		**Proposal**	**Intermediate Report**	**Peer Evaluation**	**Final Report**
			Project Evaluation	**Student Evaluation**				
Percentage	25 %	15 %	5 %	15 %	8 %	7 %	5 %	20 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 – 52	40 - 49	0 - 39

* Letter grades will be decided after calculating the class average at the end of the semester and distribution of the grades will play a significant role in the evaluation.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Graduation Project
Course Code	ITEC404
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	300 Hours
EMU Credit	(3, 0, 0) 3
Prerequisite	ITEC402
Language	English
Level	Fourth Year
Teaching Format	Weekly meetings with the Graduation Project Committee Members
ECTS Credit	10
Course Web Site	http://lms.emu.edu.tr/

Committee Members	**E-mail**	**Office No**	**Office Tel**
Asst. Prof. Dr. Cem Yağlı (Chair)	cem.yagli@emu.edu.tr	CT 109	+90 392 630 1137
Dr. Şebnem Çoban	sebnem.coban@emu.edu.tr	CT 117	+90 392 630 1677
Dr. Yeşim Kapsıl Çırak	yesim.kapsil@emu.edu.tr	CT 216	+90 392 630 2310
Sr. Instr. Halide Sarıçizmeli	halide.saricizmeli@emu.edu.tr	CT 111	+90 392 630 1661

Course Description

This course is the final phase of a two semester long graduation project of the IT program. The students are required to implement their projects and present to a jury which consists of some of the Graduation Project Committee members. The final submission includes functional software package, user and system reference manuals, and a report which includes all the details of the procedures, performance checks, and testing results.

General Learning Outcomes

On successful completion of this course students should be able to:

- Carry out the project interacting with the customers/supervisors
- Prepare appropriate analysis and design techniques' based on the requirements of the project
- Select appropriate programming techniques' based on the requirements of the project
- Perform research for finding solutions
- Use appropriate maintenance tools and prepare test pages
- Complete and submit a project report in a timely and organized manner
- Give an oral presentation using appropriate tools

Teaching Methodology / Classroom Procedures

There are no predefined lectures for this course. The Graduation Project Committee members advise and guide the students to achieve the project requirements. The Graduation Project Committee may organize seminars and meetings to provide guidance and technical support to the students as needed.

Course Materials / Main References

The seminar notes, useful links, and announcements are available on the course web site.

Requirements

- Students should frequently visit the course web site for downloading the course materials, and observing the deadlines of important events.

Method of Assessment							
UML Design	**UML Design**	**Database Design**	**Graphical User Interface**	**Coding**	**Report**	**Peer Evaluation**	**Presentation**
Percentage	15%	15%	15%	15%	15%	5 %	20 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 - 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Framework Based Internet Application
Course Code	ITEC420
Type	Full Time
Semester	Fall/Güz – Spring/Bahar
Category	AE (Area Elective)
Workload	180 Hours
EMU Credit	(3,1,0) 3
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	3 Hours Lecture and 1 Hour Lab per week
ECTS Credit	6
Course Web Site	https://lms22-23fall.emu.edu.tr/course/view.php?id=1382

Instructor(s)	Şeyda Namk	**Office Tel**	+90 392 6301582
E-mail	seyda.namk@emu.edu.tr	**Office No**	CT123D

Course Description/Ders İçeriği

This course covers the analysis, design, and development processes of internet-based applications. Within the scope of the course, fundamental topics such as the design of websites and web pages, the development of database-supported internet applications, user interface design, database connectivity, and application architecture are addressed. In order to accelerate the software development process and reduce repetitive coding, package-based development systems and modern development tools are utilized. Throughout the course, relational database management systems compatible with the developed applications are used, and database design, data management, and application integration are examined through practical implementation. In addition, e-commerce-based web applications are developed during the semester in order to help students gain both theoretical knowledge and practical skills.

Türkçe :

Bu ders, internet tabanlı uygulamaların analiz, tasarım ve geliştirme süreçlerini kapsamaktadır. Ders kapsamında web siteleri ve web sayfalarının tasarımı, veri tabanı destekli internet uygulamalarının geliştirilmesi, kullanıcı arayüzü oluşturma, veri tabanı bağlantıları ve uygulama mimarisi gibi temel konular ele alınmaktadır. Yazılım geliştirme sürecini hızlandırmak ve tekrar eden kodlamayı azaltmak amacıyla paket tabanlı geliştirme sistemleri ve modern geliştirme araçları kullanılmaktadır. Ders süresince, geliştirilen uygulamalarla uyumlu ilişkisel veri tabanı yönetim sistemlerinden yararlanılarak veri tabanı tasarımı, veri yönetimi ve uygulama entegrasyonu uygulamalı olarak incelenmektedir. Ayrıca dönem boyunca e-ticaret tabanlı web uygulamaları geliştirilerek öğrencilerin hem teorik bilgi hem de uygulama becerisi kazanmaları hedeflenmektedir.

General Learning Outcomes/Öğrenme Çıktıları

On successful completion of this course students should be able to:

- Design web applications using ASP.NET
- Use ASP.NET controls in web applications
- Debug and deploy ASP.NET web applications
- Develop database-driven, component-based web applications
- Work with controls and the .NET Framework
- Design user interfaces using visual programming languages
- Easily adapt to any fourth-generation programming language (4GL)

Bu dersi başarıyla tamamlayan öğrenciler şunları yapabilecektir:

- ASP.NET kullanarak web uygulamaları tasarlama
- Web uygulamalarında ASP.NET denetimlerini kullanMA
- ASP.NET web uygulamalarının hatalarını ayıklama ve dağıtma
- Veritabanı bileşen tabanlı web uygulamaları geliştirme
- Denetimler ve .NET çerçevesiyle çalışma
- Görsel programlama dillerini kullanarak UI tasarlama
- Herhangi bir 4. nesil programlama diline kolayca uyum sağlama

Teaching Methodology / Classroom Procedures

- Students are expected to be active learners in this course. The teaching methodology of the course is based on classroom discussion of concepts followed by supervised and independent practice of these concepts in the laboratory. At the end of each major topic, students will work on related laboratory exercises and assignments in which they are required to apply the knowledge and skills gained in class. Relevant laboratory tasks will be provided to students at the beginning of each lab session in printed or electronic form.
- Each week, students are expected to follow the activities below:
- Three hours of lectures to gain the required theoretical knowledge and basic skills
- One hour of supervised laboratory practice to apply the knowledge presented in lectures
- Regular attendance in all lectures and laboratory sessions
- Completion of assigned readings, participation in laboratory work, and timely submission of assignments
- Students are responsible for following and using all course materials available on the course website, as well as keeping track of assignment deadlines and examination dates.
- Within the scope of the course:
- There will be one written midterm examination covering the first four chapters.
- There will be one written final examination covering all chapters.
- There will be one practical application project related to web page development and aligned with the laboratory activities.
- Application Project:
- The project will be directly related to the topics covered in the laboratory sessions throughout the semester.
- Students will develop a functional web application by applying the knowledge and skills gained in both lectures and labs.
- The project may be carried out individually or in groups, depending on the number of students.
- The project topic will be selected or approved by the instructor.
- Students will be required to present their work at the end of the semester.
- Attendance is compulsory.

Türkçe :

- Bu derste öğrencilerin aktif öğrenenler olmaları beklenmektedir. Dersin öğretim yöntemi, kavramların ders ortamında tartışılması ve ardından bu kavramların laboratuvar ortamında denetimli ve bağımsız uygulamalarla pekiştirilmesine dayanmaktadır. Her ana konu anlatımının ardından öğrenciler, derste edindikleri bilgi ve becerileri uygulamak amacıyla ilgili laboratuvar çalışmaları ve ödevleri üzerinde çalışacaktır. Laboratuvar etkinlikleri, her oturumun başında öğrencilere basılı veya elektronik ortamda sağlanacaktır.
- Her hafta öğrencilerin aşağıdaki faaliyetleri takip etmeleri beklenmektedir:
- Gerekli teorik bilgi ve temel becerileri kazanmak amacıyla üç saatlik ders oturumu
- Derste öğrenilen konuların uygulanmasına yönelik bir saatlik denetimli laboratuvar çalışması
- Tüm ders ve laboratuvar oturumlarına düzenli katılım
- Verilen okumaların tamamlanması, laboratuvar çalışmalarının yürütülmesi ve ödevlerin zamanında teslim edilmesi
- Öğrenciler, dersin web sayfasında yer alan tüm materyalleri takip etmek, kullanmak ve ödev teslim tarihleri ile sınav tarihlerine uygun şekilde hareket etmekle yükümlüdür.
- Ders kapsamında:
- İlk 4 bölümü kapsayan yazılı bir ara sınav yapılacaktır.
- Tüm bölümleri kapsayan yazılı bir final sınavı yapılacaktır.
- Web sayfası geliştirme ile ilgili, laboratuvar uygulamalarıyla bağlantılı bir uygulama projesi gerçekleştirilecektir.
- Uygulama Projesi:
- Proje, dönem boyunca laboratuvar çalışmalarında öğrenilen konularla doğrudan ilişkili olacaktır.
- Öğrenciler, ders ve laboratuvar oturumlarında geliştirdikleri bilgi ve becerileri kullanarak işlevsel bir web uygulaması geliştireceklerdir.
- Proje bireysel veya grup çalışması şeklinde yürütülebilir; bu durum öğrenci sayısına göre belirlenecektir.

- Proje konusu öğretim elemanı tarafından belirlenecek veya onaylanacaktır.
- Öğrenciler dönem sonunda geliştirdikleri uygulamayı sunmakla yükümlü olacaktır.
- Derse devam zorunludur.
-

Course Materials / Main References
Text Book: Text Book: Imar Spaanjaars, "Beginning ASP.NET 4 in C# and VB, Wiley Publishing, 2010. ISBN: 978-0-470-50221-1 Resource Books: B. Evjen, S. Hanselman, D. Rader, "Professional ASP.NET 4 in C# and VB, Wiley Publishing, 2010. ***Ders Kitabı;*** Ders Kitabı: Imar Spaanjaars, "Beginning ASP.NET 4 in C# and VB, Wiley Publishing, 2010. ISBN: 978-0-470-50221-1 Yardımcı Kitap: B. Evjen, S. Hanselman, D. Rader, "Professional ASP.NET 4 in C# and VB, Wiley Publishing, 2010. Ders Notları: Ders , Lab ve alıştırma notları web linki: Daha sonra duyurulacak (LMS üzerinden paylaşılacak)

Weekly Schedule / Summary of Topics	
Week 1	Introduction to ASP.NET environment: .NET Framework, Visual Studio Development Environment,ASP.NET.
Week 2-3	The C# Language: Variables and data types, conditional logic, loops, methods and basics of classes.
Week 4-5	Visual Studio and Web Form Fundamentals: Adding web controls, web forms, solution files, hidden files, web form markup, directives, essentials of XHTML, adding event-handlers, debugging, anatomy of an ASP.NET application, the page class, application events, web.config file.
Week 6	Web Controls & State Management: Web control classes, web control events and AutoPostBack, Viewvstate collection, transferring information between pages, cookies, session tracking.
Week 7-8	**Midterm Examinations Week**
Week 9-10	Error Handling & Tracing and Deploying ASP.NET Applications: Common errors, Exception handling, error modes and page tracing, deploying a simple site.
Week 11-12	Validation and Rich Controls: Server side validation, client side validation, validation controls, calendar, Ad Rotator Pages with multiple views.
Week 13	Styles, Themes & Master Pages and WebSite Navigation: Creating Style sheets, applying simple theme, handling theme conflicts, site maps, SiteMapPath control, menu control.
Week 14	ADO.NET Fundamentals, Data Binding and Data Controls: Understanding data management, sql basics, direct data access, disconnected data access, single-value data binding, repeated-value data binding, data source controls, gridview and detailsview.
Week 15-16	Website Security: Form authentication, windows authentication, SSL.
Week 17-18	**Final Examinations Week**

Requirements
▪ Each student can have only one make-up exam. ▪ One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. ▪ The make-up exam is done at the end of the term and covers all the topics. ▪ Students who fail to attend the lectures regularly may be given NG grade. ▪ Once the grades are announced, the students have only one week to do objection about their grades.

- It is the students' responsibility to follow the announcement in the course web site.

Türkçe:

- Her öğrencinin bir telafi sınavı alma hakkı vardır.
- Öğrenci bir sınava katılamadığı durumda sınav tarihinden itibaren en geç üç iş günü içerisinde sağlık raporu sunmakla yükümlüdür.
- Telafi sınavı, tüm konuları içerecek şekilde ve final sınav haftasından sonra yapılacaktır.
- Derslere düzenli katılamayan öğrencilere NG harf notu verilebilir.

Method of Assessment/ Değerlendirme Yöntemi			
Evaluation and Grading/ Değerlendirme Yöntemi	**Project/Proje**	**Midterm Exam/Ara Sınav**	**Final Exam/Final Sınavı**
Percentage/Yüzdelikler	30 %	30 %	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	E-COMMERCE APPLICATIONS
Course Code	ITEC438
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
Workload	180 Hours
EMU Credit	(3,0,1) 3
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	3 Hours Lecture and 1 Hour Tutorial per week
ECTS Credit	6
Course Web Site	http://lms.emu.edu.tr

Instructor(s)	Dr. Şensev Payan İLKAN	**Office Tel**	+90 392 6301665
E-mail	sensev.alicik@emu.edu.tr	**Office No**	CT110

Course Description

This course covers emerging online technologies and trends and their influence on the electronic commerce marketplace. Students will learn various revenue models and how to market on the Web. Next, the course covers online auctions and various legal and ethical issues. Students will learn about important security issues, such as spam and phishing, their role in organized crime and terrorism, identity theft, and online payment fraud. Finally, students learn how to plan for electronic commerce applications.

General Learning Outcomes

On successful completion of this course, all students will have developed **knowledge** and **understanding** of:

- the e-business technology basics
- technology Infrastructure: the internet and the World Wide Web
- selling on the web: revenue models and building a web presence, marketing on the web
- business-to-business activities
- virtual communities, and web portals
- web server hardware and software, electronic commerce software
- electronic commerce security and payment systems

On successful completion of this course, all students will have developed **their skills in**:

- Analysing and creating SWOT analysis on sample sites
- Knowledge on planning and implementing effective electronic commerce sites
- Choosing and planning the appropriate security and payment system for a site

On successful completion of this course, all students will have developed their **appreciation** of, and respect for **values and attitudes** to:

- Effective research using different tools
- Good planning and control of the System implementation activities

Teaching Methodology/Classroom Procedures

- The course has three hours of lectures in a week mainly held in the form of a seminar.
- There is one hour tutorial session per week which is organized for researching and solving case studies related to lectures and encourages students to work individually to voice their difficulties about solving these questions. Each weekly research or assignment has 2% weight.
- Lecture notes and research topics are posted on the course web site.
- There are two written midterm examinations.
    - Midterm 1 includes chapters 1, 2 and 3.
    - Midterm 2 includes chapters 4, 5 and 6.
    - Final Exam includes remaining chapters 7, 9 and 10.
    - The exam durations usually vary between 60-90 minutes.
- There is no term project.
- Class attendance is compulsory.

The student is responsible to check the course web site regularly and view the latest announcements.

Main References/ Course Materials

Text Book(s):

E-Business, 10th Editions
Course Technology, Cengage Learning, 2013
Authors:- Gary P. Schneider
ISBN-13: 978-1-123-52684-1
ISBN-10: 1-133-52684-5

+ online lecture notes will be provided on the course website → **http://lms.emu.edu.tr**

Weekly Schedule/Summary of Topics

WEEK 1	Introduction to e-commerce applications, course outlining, course specifications, review of the basic e-commerce terminology
WEEK 2	Chapter 1 – The Second Wave Of Global E-Business. Categories of E-Commerce. The Dot-Com Boom, Bust and Rebirth. The third wave of E-Business. The opportunities, cautions and concerns. The international nature of E-Commerce.
WEEK 3	Chapter 2 – E-Business Technology Basics. Internet and the World Wide Web. Internet protocols, markup languages and internet connection options. Internet 2 and the semantic web.
WEEK 4	Chapter 3 – Web Server And E-Mail Technologies. The basics and software's used by web server. Electronic mails, web site utility programs and web server hardware.
WEEK 5	Chapter 4 – E-Business Revenue Models. Revenue model for online businesses, changing strategies of revenue models. Creating an effective business presence online. Web site usability.
WEEK 6	Chapter 5 – Selling to consumers online. Web marketing strategies, communicating with different market segments. Identify customer behavior and relationship intensity.
WEEK 7	Chapter 5 – Advertising on the web and applying different advertisement strategies. Search engine positioning and domain name issues. Solving case studies and extra review questions for Chapters 1-2-3-4 and 5.

WEEKS 8-9	MIDTERM EXAMINATION WEEK
WEEK 10	Chapter 6 - Selling To Businesses Online. Purchasing, logistics and business support activities. Electronic Data Interchange.
WEEK 11	Chapter 6 – Continue Electronic Data Interchange. Supply Chain Management using internet technologies.
WEEK 12	Chapter 7 – Virtual Communities. The transfer from virtual communities to social networks. Mobile commerce.
WEEK 13	Chapter 9 – Web Hosting alternatives and E-Business Software. How E-Business software works with other software. E-Business Software for small, medium and large corporations.
WEEK 14	Chapter 10 – Online Security issues, security for client computers, communication channel security, security for server computers.
WEEKS 15	Chapter 11 – Online Payment Systems. Basic functions of online payment systems. Electronic cash, digital wallets, stored-value cards.
WEEKS 16	Solving case studies and extra review questions for Chapters 6-7-9-10 and 11.
WEEKS 17-18	FINAL EXAMINATION WEEK

Requirements
▪ Each student can have only one make-up exam. ▪ One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. ▪ The make-up exam is conducted at the end of the term and covers all the topics. ▪ Once the grades are announced, the students have only one week to do objection about their grades. ▪ It is the students' responsibility to follow the announcement in the course web site.

Method of Assessment				
Evaluation and Grading	**Weekly Assignments**	**Midterm1 Exam**	**Midterm2 Exam**	**Final Exam**
Percentage	20 %	25 %	25%	30 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
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INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Nesnelerin İnterneti ve Siber Güvenlik/IoT and Cybersecurity
Course Code	ITEC442
Type	Tam Zamanlı / Full Time
Semester	Güz/Bahar - Fall/Spring
Category	Alan Seçmeli /Area Elective
Workload	180 Saat /180 Hours
EMU Credit	(3,1,0) 3
Prerequisite	-
Language	Türkçe / Turkish
Level	Dördüncü Yıl/Fourth Year
Teaching Format	3 Hours Lecture and 1 Hour Lab per week
ECTS Credit	6
Course Web Site	https://lms.emu.edu.tr

Instructor(s)	Dr. Özlem Görkan Evre	**Office Tel**	+90 392 6302521
E-mail	Ozlem.gorkan@emu.edu.tr	**Office No**	

Ders İçeriği / Course Description

Türkçe:

Bu ders, IoT kavramını ve bunun günlük yaşamlarımız üzerindeki etkisini tanıtmayı, IoT'nin mimarisini ve bileşenlerini anlamayı ve IoT'yi gerçekte dağıtmanın zorluklarını ve çözümlerini ele almayı amaçlamaktadır. Öğrenciler, ek olarak, IoT'nin gündeme getirdiği siber güvenlik konularının farkına varacak ve ilgili güvenlik teknikleri hakkında bilgi sahibi olacaklardır. Öğrenciler ayrıca IoT cihazları oluşturma, yazılım geliştirme ve ekip projelerinde çalışma konusunda bilgi sahibi olacaklardır.

English:

This course aims to introduce the concept of IoT and its impact on our daily lives, understand the architecture and components of IoT, and address the challenges and solutions of actually deploying the IoT. In addition, students will become aware of the cyber security issues raised by the IoT and will have knowledge of the relevant security techniques. Students will also learn about building IoT devices, developing software, and working on team projects.

Öğrenme Çıktıları / General Learning Outcomes

Türkçe:

Dersi başarı ile tamamlamış öğrenciler:

- Iot nedir, tarihi gelişimi ve bileşenlerini öğrenme;
- Uygulama alanları üzerinde çalışma ve örnekleri tanıma;
- IoT ve Endüstri 4.0 bağlantısını öğrenme;
- IoT'nin zorluklarını öğrenme ve nasıl giderileceğini tartışma;
- IoT sistemlerde kullanılan donanım tanıma;
- IoT ve bulut teknolojisini ve platformlarını tanıma, nasıl tercih edileceğine karar verme yetisine sahip olma.
- En popüler IoT protokolleri, standartları ve iletişim teknolojileri tanıma;
- IoT mimarilerini tanıma;
- IoT ile büyük veri tanımı ve zorluklarını anlama;

- IoT'de güvenlik zorlukları ve koruma yöntemlerini tanıma ve tartışma

English:

On successful completion of this course students should be able to:

- Learning what is Iot, its historical development and its components;
- Working on application areas and recognizing examples;
- Learning IoT and Industry 4.0 connectivity;
- Learn about the challenges of IoT and discuss how to address them;
- Hardware recognition used in IoT systems;
- Having the ability to know IoT and cloud technology and platforms and decide how to choose.
- Recognition of the most popular IoT protocols, standards and communication technologies;
- Recognition of IoT architectures;
- Understanding big data definition and challenges with IoT;
- Recognize and discuss security challenges and protection methods in IoT

Öğrenim Yöntem ve Teknikleri / Teaching Methodology / Classroom Procedures

Türkçe:

Her dersin başında konunun önemi hakkında kısa bir ders verilecektir. Öğrenciler takımlar oluşturacak ve belirtilen konulardan sınıfta sunulmak üzere bir proje seçeceklerdir. Vaka Çalışmaları, drama ve diyalog, BT öğrencilerinin mesleki uygulamalarında etiğin rolünü belirlemelerine, tartışmalarına ve anlamalarına yardımcı olacak güçlü araçlar olarak kullanılacaktır. Öğrenciler, bir ekip çalışmasında çeşitli ilgili konuları araştırmak ve sunmak için interneti kullanmaya teşvik edilir. Ders notları ve duyurular web sitesinde yayınlanacaktır.

Öğrenciler, web'de (lms.emu.edu.tr) yer alan tüm ders materyallerini bilmekten ve kullanmaktan ve ödevin zamanında teslim edilmesi ve tüm kısa sınavlara zamanında katılım için belirlenen tarihleri takip etmekten sorumludur.

Aşağıdaki gibi bir proje ödevi vardır:

- ✓ Öğrencilerle ilgili konulardan seçilecek bir proje.

Haftalık laboratuvar çalışmaları vardır.

Bir ara sınav ve tüm konuları kapsayan yazılı bir final sınavı vardır.

English:

In the beginning of each class there will be a short lecture about the importance of the topic.
Students will form teams and choose a project from the specified topics to be presented in class.
Case Studies, drama and dialogue will be used as powerful tools to help IT students to identify, discuss and understand the role of ethics in their professional practice.
Students are encouraged to use internet to research and present various related topics in a team work.
Lecture notes and announcements will be posted on the web site.
Students are responsible to know and use all the course material placed on the web (lms.emu.edu.tr) and track the designated dates for timely submission of the assignment and for timely attendance to all quizzes.

There is a project assignments as follows:

- ✓ A project that will be select from students related topic.

There are weekly laboratory exercises.

There is written one midterm exam. There is a written final exam which covers all topics.

Ders Materyalleri / Referanslar -Course Materials / Main References

***Ders Kitabı/*Text Book:**

Michael J. Quinn, *Ethics in the Information Age,* Sixth Edition, Pearson Prentice-Hall, 2015.

Ders Notları /Lecture Notes:

Ders ve Lab Notları dersin web sayfasında mevcuttur./ Lecture and lab notes on web link :http://lms.emu.edu.tr

Weekly Schedule / Summary of Topics	
Week 1-2	**Değişim için Katalizörler/Catalysts for Change**
Week 3	**Etiğe Giriş/Introduction to Ethics**
Week 4-5	**Ağa Bağlı İletişim/Networked Communications**
Week 6-7	**Fikri Mülkiyet/Intellectual Property**
Week 8-9	**Ara Sınavlar/Midterm Exams**
Week 10-11	**Bilgi Gizliliği/Information Privacy**
Week 12	**Gizlilik ve Devlet/Privacy and the Government**
Week 13	**Bilgisayar ve Network Güvenliği/Computer and Network Security**
Week 14-15	**Profesyonel Etik/Professional Ethics**
Week 16	**İş ve Varlık/Work and Wealth**
Week 17-18	**Dönem Sonu Sınavları/Final Exams**

Gereksinimler / Requirements

Türkçe:

- Her öğrenci sadece bir telafi sınavına sahip olabilir. Sınavı kaçıran kişi, sınavdan sonraki 3 gün içinde bir sağlık raporu sunmalıdır. Telafi sınavı, finallerin ardından dönem sonunda düzenlenecek ve tüm konuları kapsayacaktır.
- Dersten başarısız olan ve derslere düzenli olarak gelmeyen öğrencilere NG notu verilebilir.

English:

- Each student can have only one make-up exam. One who misses an exam should provide a medical report within 3 days after the missed exam. The make-up exam will be organized at the end of the term after the finals and will cover all the topics.
- Students who do not pass the course and fail to attend the lectures regularly may be given NG grade.

Değerlendirme Yöntemi / Method of Assessment

Değerlendirme ve Harf Notu /Evaluation and Grading	**Proje Project**	**Lab**	**Kısa Sınav Quiz**	**Ara sınav Midterm Exam**	**Dönem Sonu Sınavı Final Exam**
Yüzdelik/Percentage	15%	10 %	15%	25 %	35 %

Değerlendirme Kriterleri /Grading Criteria *

A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
85 -100	80 - 84	75 - 83	70 - 74	66 - 73	63 - 65	60 - 63	57 - 59	54 - 56	50 - 53	45 - 49	0 – 44

Değerlendirme Kriterleri / Grading Criteria :

Türkçe:

Harf notları dönem sonunda hesaplanan ortalamalara göre belirlenir. Ortalamalarının dağılımı Harf Notlarının değerlendirilmesinde önemli bir rol oynayacaktır.

English:

Letter grades will be decided upon after calculating the averages at the end of the semester. Distribution of the averages will play a significant role in the evaluation of the Letter Grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Cryptography and Network Security
Course Code	ITEC443
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
Workload	180 Hours
EMU Credit	(3,1,0) 3
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	3 Hours Lecture and 1 Hour Laboratory per week
ECTS Credit	6

Instructors(s)	Asst. Prof. Dr. Mustafa T. Babagil		
e-mail(s)	mustafa.babagil@emu.edu.tr	**Office No:**	CT116

Course Description

This course focuses on basic concepts, principles and practice of “cryptography and network security”. Course topics include: Classical systems, classical encryption techniques, symmetric and asymmetric encryption, public-key cryptography (RSA, discrete logarithms), cryptographic protocols, hash functions, authentication, key management, key exchange, signature schemes, ip security, electronic mail security, web security and recent research topics in security.

General Learning Outcomes

On successful completion of this course students should be able to:

- Comprehend the principles and practices of cryptographic techniques;
- Comprehend a variety of generic security threats and vulnerabilities. Know, identify and analyze particular security problems for a given application;
- Comprehend the design of security protocols and mechanisms for the provision of security services needed for secure networked applications;
- Realize the application of security techniques and technologies in solving real-life security problems in practical systems;
- Design a security methods to solve security problems;
- Be aware with current research issues of cryptography and network security.

Teaching Methodology / Classroom Procedures

- Each week there are three lecture sessions and one practical/laboratory session.
- Students are encouraged to use internet to search for various related topics. Lecture notes, assignments, and announcements will be posted on the course's web site.

Course Materials / Main References
Text Book:
W. Stallings, Cryptography and Network Security, 4th/e, ISBN: 0-13-187316-4, Pearson Education, 2006.
Lecture Notes:
All course materials are also available online in Adobe PDF (Portable Document Format).

Weekly Schedule / Summary of Topics	
1 week	Introduction. Classical Encryption Techniques
1 week	Classical Encryption Techniques
1 week	Introduction to Number Theory
1 week	Public-Key Cryptography and RSA
1 week	Key Management
1 week	Other Public-Key Cryptosystems
1 week	Message Authentication and Hash Functions
1 week	Hash and MAC Algorithms
2 weeks	**Midterm exam period**
1 week	Digital Signatures and Authentication Protocols
1 week	Authentication Applications
1 week	Electronic Mail Security
1 week	IP Security
1 week	Web Security
3 weeks	**Final exam period**

Requirements
▪ Each student can have only one make-up exam. One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. The make-up exam will be done at the end of the term and will cover all the topics. No make-up exam will be given for the quizzes.
▪ Students who do not pass the course and fail to attend the lectures regularly may be given NG grade.
▪ Instructions for the submission of assignments will be posted on the course website. It is each student's responsibility to read and follow the instructions. Failure to follow the submission instructions may result in the assignment receiving a mark of zero.

Method of Assessment				
Evaluation and Grading	**Home Work and Presentation**	**Quizes, POP Quizes (Best 5) and/or Activities**	**Midterm Exam**	**Final Exam**
Percentage	10 %	25 %	30 %	35 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 - 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Enterprise Project Development
Course Code	ITEC445
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
Workload	180 Hours
EMU Credit	(3,0,1) 3
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	3 Hours Lectures and 1 Hour Laboratory Work per week
ECTS Credit	6 What is ECTS? Why ECTS is needed? How does it work?
Workload of a student	180 Hours
Course Web Site	lms.emu.edu.tr

Instructor(s)	Eralp Görkan	**Office Tel**	630 - 2511
E-mail	eralp.gorkan@emu.edu.tr	**Office No**	BTM 203

Course Description

Full Stack C# .NET course takes student from coding novice to programming powerhouse. The .NET programming framework is popular for enterprise development and heavily integrated with C#. In this bootcamp, we pair .NET and C# with Angular, a popular platform for developing user interfaces. By the end of this course, students will be ready for an entry-level position as a full stack developer. Along the way, students build connections with encouraging instructors, alumni mentors, and affinity groups.

General Learning Outcomes

On successful completion of this course, students will have a portfolio project that can be shared with hiring managers and the skills to describe the work. Following an Agile software development process, students will work in a group to create a web application using the skills developed. During the project, students get real world experience not only with the technical aspects of building an application but with the career skills required to collaborate with a team.

Teaching Methodology / Classroom Procedures

- The students are expected to be active learners in this course.
- There are two written exams (midterm and final)

Course Materials / Main References

Textbook:

Adam Freeman, Pro ASP.NETCore MVC, Sixth Edition,2016. ISBN: 978-1-4842-0398-9

Lecture Notes:

All course materials are available at lms.

Weekly Schedule / Summary of Topics	
Week 1	**Understanding project requirements**
Week 2	**Creating Entity Layer**
Week 3	**Creating Data Access Layer**
Week 4	**Creating Business Layer**
Week 5	**Creating Framework Layer**
Week 6	**Dependency Injection**
Week 7	**Clean Code Principles**
Weeks 8-9	**Midterm Examinations**
Week 10	**Writing Business Code**
Week 11	**Introduction to Angular**
Week 12	**Components**
Week 13	**Pipes**
Week 14	**Services**
Week 15	**Dependency Injection in angular**
Weeks 16-18	**Final Examinations**

Requirements

- Each student can have only one make-up exam.
- One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam.
- The make-up exam is done at the end of the term and covers all the topics.
- If a student has attended less than 60% of the lecture/lab/tutorial hours for the relevant course, has not taken any exams (midterms, final exams), and has not completed any of the graded course activities (quizzes, homework, projects, lab works, etc.), they will not be able to take make-up exams and will be assigned NG letter grade.
- If a course is repeated, attendance will not be required for that course, but the student will be required to fulfill all course requirements beyond the attendance requirement.
- Once the grades are announced, the students have only one week to do objection about their grades. It is the students' responsibility to follow the announcement on the course web site.

Method of Assessment			
Evaluation and Grading	**Project**	**Midterm Exam**	**Final Exam**
Percentage	50 %	20 %	30 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 - 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Web Projects
Course Code	ITEC447
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
Workload	180 Hours
EMU Credit	(3,1,0) 3
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	3 Hours Lecture, 1 Hour Lab Per Week
ECTS Credit	6
Course Web Site	lms.emu.edu.tr

Instructor(s)	Cihan Ünal	**Office Tel**	+90 392 630 1663
E-mail	cihan.unal@emu.edu.tr	**Office No**	CT123F

Course Description

This course aims to encourage students to improve their team-working skills in web-based projects. The course focuses on designing, developing and presenting real life web projects. Students who take this course will use one or more web development tools in order to design and develop web sites. They will also learn how to deal with HTML, CSS, JavaScript, PHP, MySQL, web templates, web forms, JQuery and Flash-based contents. The importance of the web programming languages is discussed on a real life project.

General Learning Outcomes

On successful completion of this course students should be able to:

- Understand the significance of the Markup language,
- Understand the significance of the Style sheet language,
- Understand the significance of the Script languages,
- Understand the significance of the database,
- Comprehend and use efficiently web development tools,
- Understand the importance of working in a group and improve working skills in a web-based project,
- Comprehend real life projects in Computer Science field,
- Understand and overcome the problems related with web-based projects,
- Understand the needs of Industry,
- Be aware with current research issues and projects in IT sector.

Teaching Methodology / Classroom Procedures

- The course has three lecture sessions and one laboratory session.
- Lecture notes and the lab materials are available on the course web site.
- Participation in the lab session is graded.
- There is no midterm exam.
- There is a final exam which includes all the chapters.
- The final exam is practical.
- There is a group-based term project.
- The project should be submitted as a soft and hard copy.

- The project is assigned to the students in the second week of the semester and submitted at the end of the semester in the presentation day.
- There are four assignments.
- The assignments should be submitted as hard copy.
- There is no need to take plagiarism test for both assignments and the project.
- Class attendance is compulsory.
- The student is responsible to check the course web site regularly and view the latest announcements.

Course Materials / Main References
Text Book:
Rand-Hendriksen, Morten. *Sams Teach Yourself Microsoft® Expression™ Web 4 in 24 Hours*, Second Edition. ISBN-10: 0-672-33590-5, Pearson Education, Inc - 2012
Chris Leeds. *Microsoft® Expression® Web 4 Step by Step*. ISBN: 978-0-7356-3902-7, MediaCarbon, Inc.- 2010

Weekly Schedule / Summary of Topics	
Week 1	Introduction: Installation, Screen Overview, Basic functions, Pages, Sites, Editing, Previewing
Week 2	A Simple Website: Creating, Opening, Importing, Structure of a page, Structure of a site
Week 3	Links and Images: In-page links, Links to other pages, Links to other sites, New tab, Types of images, Images as links, External links
Week 4	HTML: Tags, Tables, DIV- P-H, Properties, Lists
Week 5	CSS I: Inline, Header, External, Quick tags, CSS properties, Applying & managing styles
Week 6	CSS II: Classes, DIVs, Stylesheets, Box model, Positioning
Week 7	CSS II: Classes, DIVs, Stylesheets, Box model, Positioning (Cont.)
Week 8-9	**Midterm Examinations**
Week 10	Client-side scripts – JavaScript: Buttons, Swap images, Sounds
Week 11	Dynamic Web Templates & Menus: Creating Web Templates and Applying them to the Web pages
Week 12	Forms: Creating Web Forms
Week 13	Flash & Silverlight: Adding and Editing Interactive Content
Week 14	Server-side scripts – PHP: Sending and Receiving Data and Accessing to the Database
Week 15	Project Presentations
Week 16-18	**Final Examinations**

Requirements
▪ One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. ▪ The make-up exam is done at the end of the term and covers all the topics. ▪ Students who fail to attend the lectures regularly may be given NG grade. ▪ Once the grades are announced, the students have only one week to do objection about their grades. ▪ It is the students' responsibility to follow the announcement in the course web site.

Method of Assessment				
Evaluation and Grading	**Term Project**	**Activities**	**Assignments**	**Final Exam**
Percentage	45%	10 %	10 %	35 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	3D Modeling and Animation
Course Code	ITEC450
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
EMU Credit	(3,1,0) 3
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	3 Hours Lecture and 1 Hour Laboratory per week
ECTS Credit	6 What is ECTS? Why ECTS is needed? How does it work?
Workload of a student	180 Hours
Course Web Site	https://lms.emu.edu.tr

Instructor	Birol Özkaya	**Office Tel**	+90 392 630 1660
E-mail	birol.ozkaya@emu.edu.tr	**Office No**	CT115

Course Description

This course is designed to teach students the basic principles of 3-dimensional (3D) modeling and animation. With the aid of a commercial 3D graphics application, the students will gain necessary knowledge and skills to create 3D objects, environment and atmospheric effects, different types of lights and cameras in a scene; learn how to create and apply realistic textures on objects; and also how to render an animation video by using the basic keyframe and procedural animation techniques.

General Learning Outcomes

On successful completion of this course students should be able to:

- Create and edit 3D models.
- Create and apply realistic materials on objects.
- Employ different types of lights and cameras in a scene.
- Apply basic keyframe and procedural animation techniques.
- Produce quality pictures and animation videos of 3D objects.

Teaching Methodology / Classroom Procedures

- 3 hours of lecture and 1 hour of laboratory per week are conducted for this course.
- Lecture and Laboratory attendances affect the Class Participation (5% of Grading), and may have a positive effect on the student's final letter grade.
- There are two practical exams namely Midterm Exam, and Final exam. Each exam consists of 2 practical type questions.
    - Midterm Exam includes Lectures 1, 2, 3, and 4.
    - Final Exam includes Lectures 5, 6, 7, 8, 9 and 10.
- There are two practical assignments namely Assignment 1, and Assignment 2. The assignments are to be done using the 3DS MAX software package, and should be submitted to the instructor by e-mail, or on a USB.

Course Materials / Main References
Textbook: Ami Chopine, ***3D Art Essentials The Fundamentals of 3D Modeling and Animation***, Focal Press, 2011. ISBN: 978-0-240-81471-1 ***Course Materials:*** The lecture notes, laboratory exercises, assignments, and announcements are available on the course web site.

Weekly Schedule / Summary of Topics	
Week 1	Introduction of the course
Week 2	Creating 3D Objects (Standard Primitives); Boolean/Proboolean Operations
Week 3	Creating 3D Objects from 2D Shapes: Extrude, Bevel, Bevel Profile, Lathe, Loft methods
Week 4	Spline Modeling
Week 5	Polygon Modeling
Week 6	Polygon Modeling
Week 7	Materials
Week 8-9	**Midterm Examinations**
Week 10	Lighting, Cameras
Week 11	Basic Keyframe Animation
Week 12	Procedural Animation
Week 13	Animating lights, and materials
Week 14	Gizmos
Week 15	Particle Systems
Week 16-17	**Final Examinations**

Requirements
▪ A student may be granted only ONE Make-Up Exam for the missed exam/s at the end of the semester provided that the instructor is given a valid excuse (e.g. a written medical report) within 3 days after the date of the missed exam. The make-up exam includes all the topics, and is held on the date announced by the department. ▪ There is no make-up assignment for the missed assignment/s. ▪ A student who fails to attend the lectures/labs more than 60%, or fails to submit at least one assignment and fails to take at least one exam, may get a NG grade. ▪ Students should frequently visit the course web site for downloading the course materials, and observing the deadlines of important events. ▪ Students are expected to attend the lectures/laboratory sessions on time (within the first 10 minutes).

Method of Assessment					
Evaluation and Grading	**Assignment1**	**Assignment2**	**Lab Participation**	**Midterm Exam**	**Final Exam**
Percentage	10 %	15 %	5 %	35 %	35 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 – 52	40 - 49	0 - 39

* Letter grades will be decided after calculating the class average at the end of the semester and distribution of the grades will play a significant role in the evaluation.

EASTERN MEDITERRANEAN UNIVERSITY
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COURSE POLICY SHEET

Course Code	ITEC456	**Course Title**	Applied Animation Techniques
Semester	Fall / Spring	**Language**	English
Category	AE (Area Elective)	**Level**	Fourth Year
Workload	180 Hours	**Teaching Format**	3 Hours Lecture, 1 Hour Laboratory
EMU Credit	(3,1,0) 3	**ECTS Credit**	6
Prerequisite(s)	-	**Course Web**	http://lms.emu.edu.tr

Instructors(s)	Asst. Prof. Dr. Hasan Oylum	Office Tel: 0090 392 630 1671	
e-mail(s)	hasan.oylum@emu.edu.tr	**Office No:**	CT 118

Course Description

Creating Mouse Tools. Animated GUI Design and implementations and their applications. Multimedia Profiles in Windowing Graphics. Creating pop-up windows. Interactive Drawing Tools. A CAD Program. (Two, Three)-Dimensional Graphics. Solid Modeling. Use of Ready Graphics Tools to develop animations. The use of Advanced scripting languages for; animation, game development and other applications. Current and future trends in animations.

General Learning Outcomes

On successful completion of this course students should be able to:

- Use movie essentials such as “Authoring environment, Timeline, Frames, Layers and Scenes”.
- Standardized on the use of toolbox to design a model for animating the designed objects.
- Analyse how to create movie symbols and the use of built-in library symbols.
- Do and managing the content on the stage, such as transforming objects, stacking orders etc..
- Practiced on the use of colors to manipulating objects and essentials of importing and using bitmaps.
- Analyse the use of animation techniques, such as: Motion tweening, shape tweening, masking
- Expert on, the use of ActionScript on animations.
- Capable of how to integrate sounds on animations.
- Standardized on animations and their Internet applications.
- Practiced and using their knowledge on a project, such as game development or a multimedia profile for a company etc.

Teaching Methodology / Classroom Procedures

- Course will be given to the student interactively in the lab hour
- This course has highly practical applications
- All the lectures, labs, quizzes, etc. will be in front of the computer
- Students should attend to the labs just on time and regularly, 60 % absenteeism will automatically failed the student
- Students are responsible to develop a term project and present it at the end of the semester
- During the exam surfing through the internet or cheating with your friend (talking, sharing files, documents, etc. are strictly forbidden)
- Instructor Home Page, http://sct.emu.edu.tr/oylum must frequently be visited for the course announcements, the exam/quiz results, etc.

Course Materials / Main References

Text Book:

Jim Shuman, Adobe® Flash® CS5 Revealed, DELMAR CENGAGE Learning, International Edition, ISBN-13: 978-1-111-13057-2. ISBN-10: 1-111-13057-4, 2011.

Resource Books:

1. Jim Shuman, *Macromedia Flash 8 Revealed,* Thomson Course Technology, 2006.
2. Sham Bhangal, *ActionScript for Flash MX 2004*, an Apress Company., 2004.
3. E-book: *Flash 8 Projects for Learning Animation and Interactivity*.
4. James D. Foley, Andries van Dam, Steven K. Feiner, John F. Huges, *Computer Graphics: Principles and Practice,* Addison-Wesley Publishing Company Inc., 1990.
5. Sham Bhangal, Amanda Farr, Patrick Rey, *Foundation Flash 5*, Friends of ED, 2000.

Lecture Notes:

All lab applications will be published through the internet as an *.fla files (Use **winrar** to get flash samples).

Weekly Schedule / Summary of Topics	
Week 1	**Introduction:** Graphics environment, movie essentials and animation techniques
Week 2	**Introduction to graphics environment and movie essentials:** Keyframe, Motion Tween, Timeline, Frames, Layers, Scenes
Week 3	**The use of symbols:** Graphic, button, movie clip symbols and libraries
Week 4	**Managing content on the stage:** Grouping and transforming objects
Week 5	**Animation Techniques on:** Fonts, Colors and Text processing
Week 6-7	**Basic Animations:** Motion tweening and motion guide techniques, Shape tweening techniques, Masking with text and bitmaps
Week 7-8	**Midterm Examinations Week**
Week 9	**Actions and interactions:** Creating animated buttons and ActionScripts
Week 10	**Applications on Action Scripts:** Intelligent actions
Week 11	The use of sounds and videos on the stages of animation
Week 12	Flash and the Internet, Web page Preparation & Publishing a movie
Week 13	The use of advanced ActionScripts for; animation, game development and other applications.
Week 14-15	Intermediate ActionScript and future scape Term Project Presentation and Submission
Week 16-18	**Final Examinations Week**

Requirements

- Each student can have only one make-up exam. One who misses an exam should provide a medical report within 3 days after the missed exam. The make-up exam will be done at the end of the term and will cover all the topics. No make-up exam will be given for the quizzes.
- Students who do not pass the course and fail to attend the lectures regularly may be given NG grade.
- Students are responsible from every subject that will be covered in the lab.
- Students have to be ready for the practical quizzes; no make up will be given to the practical quizzes. But one of the worst quizzes will be eliminated.
- Students should attend to the labs and quizzes just on time regularly and submit their quiz results and projects.
- Within the first two weeks each students are expected to choose a term project topics from the published list and register their topic through the assistant
- Students are responsible to develop a term project and present it at the end of the semester
- During the exam surfing through the internet or cheating with your friend (talking, sharing files, documents, etc.) are strictly forbidden.
- Instructor Home Page, http://sct.emu.edu.tr/oylum must frequently be visited for the course announcements, the exam/quiz results, etc.
- Tutorials will be organized on animation techniques by using Adobe Flash CS6.

Method of Assessment				
Evaluation and Grading	**Project**	**Quizzes (Practical)**	**Midterm Exam**	**Final Exam**

Percentage	20 %	20 %	20 %	40 %

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Code	ITEC457	**Course Title**	Advanced Animation Techniques and Project Development
Semester	Fall/Spring	**Language**	English
Category	AE (Area Elective)	**Level**	Fourth Year
Workload	180 Hours	**Teaching Format**	3 Hours Lecture, 1 Hour Laboratory per week
EMU Credit	(3,1,0) 3	**ECTS Credit**	6
Prerequisite(s)	-	**Course Web**	http://lms.emu.edu.tr

Instructors(s)	Asst. Prof. Dr. Hasan Oylum	**Office Tel:**	630 1447
E-mail(s)	hasan.oylum@emu.edu.tr	**Office No:**	CT 204

Course Description

This course covers advanced topics in animation such as the use of components for advanced project development. Some selected topics are real time applications for game development, web sites, advertisement, multimedia profile for a project (the use of sound, video, text and main animation effects on selected application), CD preparation techniques, use of advanced ActionScripts on animations.

General Learning Outcomes

On successful completion of this course students should be able to:

- Strengthen on more advanced movie essentials: “Authoring environment, Timeline, Frames, Layers and Scenes”.
- Use movies and built-in library symbols on real time applications.
- Use bitmap images and their applications with ActionScripts.
- Developed more advanced animation techniques, such as: motion tweening, shape tweening, masking on the selected project topics.
- Analyse and use the advanced ActionScript on animations.
- Integrate sounds on animations and their manipulations on any project.
- Developed the advanced animations with their Internet applications.
- Use their knowledge on a project, such as game development or a multimedia profile for a company.

Teaching Methodology / Classroom Procedures

- Course will be given to the student interactively in the lab hour
- This course has highly practical applications
- For the lectures selected tutorials will be published for the student. Students are responsible to check the web site and during the class should perform the tutorials.
- Students should attend to the labs just on time and regularly, 60 % absenteeism will automatically failed the student
- Students are responsible to submit the given assignments on date and time announced.
- Every students are responsible to participate a team project and submit its’ CD.
- An individual personal project will be assigned for each student, so students are responsible to take and submit their project.
- At least two lab works will be organized for the students. Lab work topic will be announced within the lab hour and collected at the en d of the lab session to be evaluated.
- The topic of the exam will be announced before the exam. Students are responsible to develop an interface for the announced topic and bring to the lab on the exam date and time. During the exam period small modifications will be added into their previously prepared interface.
- Instructor Home Page, http://lms.emu.edu.tr/ITEC457 must frequently be visited for the course announcements, exams, tutorials, etc.

Course Materials / Main References
Text Book: Jim Shuman, Adobe® Flash® CS5 Revealed, DELMAR CENGAGE Learning, International Edition, ISBN-13: 978-1-111-13057-2. ISBN-10: 1-111-13057-4, 2011. ***Resource Books:*** 1. Jim Shuman, *Macromedia Flash 8 Revealed,* Thomson Course Technology, 2006. 2. Sham Bhangal, *ActionScript for Flash MX 2004*, an Apress Company., 2004. 3. E-book: *Flash 8 Projects for Learning Animation and Interactivity*. 4. James D. Foley, Andries van Dam, Steven K. Feiner, John F. Huges, *Computer Graphics: Principles and Practice,* Addison-Wesley Publishing Company Inc., 1990. 5. Sham Bhangal, Amanda Farr, Patrick Rey, *Foundation Flash 5*, Friends of ED, 2000. ***Lecture Notes:*** After the lecture all of the tutorials will be published through the internet as a *.zip or *.rar format.

Weekly Schedule / Summary of Topics	
Week 1	Revision for the use of main animation techniques and their applications by using Adobe Animate.
Week 2	Announcement the rules of assignments and clarify the requirements for the first assignments.
Week 3	Control of the animations by using advanced ActionScripts. The use of components such as combobox.
Week 4	More on advanced ActionScripts and their applications.
Week 5	Advanced ActionScripts and their applications on game development.
Week 6	Advanced ActionScripts and their applications on advertisement.
Week 7-8	**Midterm Examinations Week**
Week 9	Advanced ActionScripts and their applications on web site development.
Week 10	Multimedia profile on a project and CD preparations.
Week 11	Producing prototypes and demonstrating interactive animations with their ActionScripts.
Week 12	Developing an individual and team work applications; usability, testing and evaluation. (1 week)
Week 13	Term project and team project control; usability, testing and evaluation.
Week 14	Changing designs in response to testing and evaluation outcomes on term project.
Week 15	Evaluation and feedback for students' projects. Revision for Final Exam.
Week 16-18	**Final Examinations Week**

Requirements
▪ Each student can have only one make-up exam. One who misses an exam should provide a medical report within 3 days after the missed exam. The make-up exam will be done at the end of the term and will cover all the topics. No make-up exam will be given for the quizzes. ▪ Students who do not pass the course and fail to attend the lectures regularly may be given NG grade. ▪ Students are responsible from every subject that will be covered in the lab. ▪ Students have to be ready for the lab works. ▪ Students should submit their assignments, projects and lab works just on time. ▪ Students are responsible to develop a team and personal project and present it at the end of the semester. ▪ Tutorials will be organized on animation techniques by using Adobe Animate 2022.

	Method of Assessment				
Evaluation and Grading	**Exam Projects**	**Assignments**	**Personal Project**	**Team Project**	**Lab Work**
Percentage	40 %	25 %	15 %	10 %	10 %

Grading Criteria *										
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Introduction to Neural Networks
Course Code	ITEC460
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
EMU Credit	(3,1,0) 3
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	3 Hours Lecture and 1 Hour Laboratory per week
ECTS Credit	6 What is ECTS? Why ECTS is needed? How does it work?
Workload of a student	180 Hours
Course Web Site	https://lms.emu.edu.tr

Instructor	Prof. Dr. Ahmet Rizaner	**Office Tel**	+90 392 6301245
E-mail	ahmet.rizaner@emu.edu.tr	**Office No**	CT112

Course Description

This course is an introduction to neural networks, with both theoretical and practical issues considered. Upon completion of this course, the student should understand the main neural network architectures and learning algorithms and be able to apply neural networks to real classification problems. Topics covered include single-layer perceptron, multi-layer perceptron, associative memory networks, discrete Hopfield networks, radial basis function networks, and self-organizing networks.

General Learning Outcomes

On successful completion of this course students should be able to:

- Describe what a neural network is.
- Describe the relationship between real brains and simple artificial neural network models.
- Discuss the main factors involved in achieving good learning and generalization performance in neural network systems.
- Identify the main implementational issues for common neural network systems.
- Evaluate the practical considerations in applying neural networks to real classification problems.

Teaching Methodology / Classroom Procedures

- Each week, there are three lecture sessions and one tutorial/lab session.
- Group projects are organized in parallel with theoretical study given in classrooms. A report should be submitted for evaluation of each project.
- Students should form project groups of 3–5 students.
- Students are encouraged to use the internet to search for various related topics. Lecture notes, projects, related programs, assignments, and announcements will be posted on the course's website.

Course Materials / Main References

Text Book:

Robert Callan, The Essence of Neural Networks, First Edition, Pearson Prentice Hall, 1999.

Resource Books:

1. Laurene V. Fausett, Fundamentals of Neural Networks: Architecture, Algorithms and Applications, First Edition, Prentice Hall, 1993.
2. Phil Picton, Neural Networks, Second Edition, Palgrave, 2000.
3. Simon Haykin, Neural Networks: A Comprehensive Foundation, Second Edition, Prentice-Hall, 1998.

Lecture Notes:

Most course materials are also available online in PDF (Portable Document Format).

Weekly Schedule / Summary of Topics	
Week 1	**Introduction** Introducing the basic elements of neural network
Week 2-3	**Single Layer Perceptron** Single-layer perceptron, delta rule, pattern classification task, supervised learning, basic concepts of how feedforward networks.
Week 4-6	**Multi-Layer Perceptron** Multi-layer Perceptron, structure of multi-layer perceptron, feedforward backpropogation network and backpropogation learning rule.
Week 6-7	**Midterm Examinations Week**
Week 8-9	**Associative Memory Neural Network** Autoassociative networks, heteroassociative networks, pattern association, pattern storing and capacity.
Week 10-12	**Discrete Hopfield Network** Fundamental memory, storing, error-correcting capability and common problems arising with the Hopfield networks.
Week 13-14	**Radial Basis Function Networks** Radial basis functions, learning algorithms used in RBF networks and function approximation.
Week 15-17	**Final Examinations Week**

Requirements

- Each student can have only one make-up exam. If a student misses an exam, he/she must provide a medical report or a valid excuse within three days of the missed exam. The make-up exam will be given at the end of the term and will cover all topics. No make-up exams will be given for quizzes.
- Students who do not pass the course and fail to attend lectures regularly may receive an NG grade.
- Instructions for the submission of projects will be posted on the course website. It is each student's responsibility to read and follow the instructions. Failure to follow the submission instructions may result in the project receiving a mark of zero.

Method of Assessment				
Evaluation and Grading	**Projects**	**Quizzes**	**Midterm Exam**	**Final Exam**
Percentage	20 %	15 %	25 %	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 – 52	40 - 49	0 - 39

* Letter grades will be decided after calculating the class average at the end of the semester and distribution of the grades will play a significant role in the evaluation.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Data analysis for quantitative research & simple forecasting
Course Code	ITEC462
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
EMU Credit	(3,0,1) 3
Prerequisite	-
Language	English
Level	Third/Fourth Year
Teaching Format	3 Hours Lecture and 1 Hour Tutorial per week
ECTS Credit	6
Workload of a student	180 Hours
Course Web Site	lms.emu.edu.tr

Instructor(s)	Asst. Prof. Dr. Mustafa T. Babagil	**Office Tel**	+90 392 6302885
E-mail	mustafa.babagil@emu.edu.tr	**Office No**	CT116

Course Description

In academic fields, data analysis is often important to verify that any collected data is biased or not. There are simple mathematical techniques to be applied easily on the collected data before being used. On a set of collected quantitative data, some simple mathematical tests should be applied to decide if the set of data has a correlation or not. This could be done via mathematics or using application programs such as Excel or SPSS.

This course also includes simple forecasting techniques which can be used with any unbiased set of data. This course is important especially for those who need to prepare questionnaires in their research fields. It is important to test any set of data which will be used in a research done by computers and application programs.

General Learning Outcomes

On successful completion of this course students should be able to:

- Handle data for meaningful analysis.
- Analyze data to find out correlation coefficient to comment on gathered data.
- Analyze to understand if the data is biased or unbiased.
- Test and understand hypothesis. (What is Null hypothesis or how to accept or reject an hypothesis)
- Learn about regression analysis. (Linear Regression, Parabolic Regression (only definitions), Exponential Regression(only definitions))
- Use the results in analysis to make predictions about future on the analyzed data. Simple forecasting

Teaching Methodology / Classroom Procedures

- The course has three hours of lectures in a week mainly held in the form of a seminar.
- There is one hour tutorial session per week which is organized for solving questions related to lectures and encourages students to voice their difficulties about solving these questions.
- Lecture notes and tutorials are posted on the course web site.
- There are two written quizzes which are held one week before the midterm and final exam periods.
    - Quiz 1. (before first midterm)
    - Quiz 2. (before final exam)
    - The duration of the quizzes is 45 mins - 90 mins.
- There is a written midterm exam.
- There is a written final exam.

- There will be term project.
- Class attendance is compulsory.
- The student is responsible to check the course web site regularly and view the latest announcements.

Course Materials / Main References
Text Book: No Textbook. Lecture notes are prepared and will be refreshed every semester.

Weekly Schedule / Summary of Topics	
Week 1	Understanding data and how to use data as pairs.
Week 2	Correlation analysis of data (by using a software, Excel or SPSS)
Week 3	Correlation analysis of data (by using a software, Excel or SPSS), Use data to represent graphics (plot data pairs on coordinate axis)
Week 4	Analyzing correlation type by calculating a correlation coefficient (by using a software, Excel or SPSS), Table test to Correlation coefficient. t-test for Correlation Coefficient.
Week 5	t-test for Correlation Coefficient, Linear Regression via Excel, Understanding error in regression.
Week 6	Linear Regression via Excel, Residuals (errors), Using Regression Line (in Predictions, forecasting)
Week 7	Prediction Intervals, Total deviation, explained deviation, unexplained deviation. (via Excel or SPSS), ANOVA, Significance test
Week 8-9	**Midterm Examinations**
Week 10	Introduction to Multiple regressions. Some definitions and a simple application. Time Series analysis and predictions on a time series data set.
Week 11	Preparing a simple proposal for a research to apply learnt aspects.
Week 12	Presenting the collected data.
Week 13	Analyzing and documenting the research done.
Week 14	Preparing forecast on the research done and presentation of the work done.
Week 15	Brief summary
Week 16-18	**Final Examinations**

Requirements
▪ Each student can have only one make-up exam. ▪ One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. ▪ The make-up exam is done at the end of the term and covers all the topics. ▪ No make-up exam is given for the quizzes. ▪ Students who fail to attend the lectures regularly may be given NG grade. ▪ Once the grades are announced, the students have only one week to do objection about their grades. ▪ It is the students' responsibility to follow the announcement in the course web site.

Method of Assessment				
Evaluation and Grading	**Homework and Quiz(s)**	**Term Project**	**Presentation**	**Final Exam**
Percentage	10+10 = 20 %	%20	20 %	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 – 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title/Ders Adı	Cloud Computing Applications/ Bulut Bilişim Uygulamaları	
Course Code/Ders Kodu	ITEC498	
Type/Tür	Full Time/Tam Zamanlı	
Semester/Yarıyıl	Fall/Güz – Spring/Bahar	
Category/Kategori	AE (Area Elective)	
EMU Credit/DAÜ Kredi Değeri	(3,0,1) 3	
Prerequisite/Önkoşul	-	
Language/Öğretim Dili	English/İngilizce	
Level/Seviye	Second Year/İkinci Yıl	
Teaching Format/Öğretim Formatı	3 Hours Lectures and 1 Hour Laboratory per week/ Haftada 3 saat Ders ve 1 saat Lab Saati	
ECTS Credit/AKTS Değeri	6	What is ECTS? Why ECTS is needed? How does it work? AKTS değeri nedir? AKTS neden gereklidir? AKTS nasıl çalışır?
Workload of a Student/Öğrenci İş yükü	180 Hours/180 saat	
Course Web Site/Dersin Web Sitesi	https://lms.emu.edu.tr	

Instructor/Öğretim Elemanı	Öğr.Gör Şeyda Namk	**Office Tel/ Ofis Tel**	+90 392 6301582
E-mail/E-posta	seyda.namk@emu.edu.tr	**Office No/ Ofis No**	CT123D

Course Description/Ders İçeriği

This course focuses on the use of the most popular cloud computing applications and services that run on a distributed network using virtualized resources and are accessed through common Internet protocols and networking standards. Its architecture, abstraction, virtualization, infrastructures, scaling deployments, machine learning in the cloud, data management, security, and privacy in cloud environments will be discussed in detail. The course also introduces the fundamental service and deployment models of cloud computing, including public, private, and hybrid cloud solutions. In addition, students will examine how cloud platforms support modern software development, storage, collaboration, and intelligent data-driven applications. Practical and conceptual aspects of cloud technologies will be explored to help students understand the role of cloud computing in today's digital systems and business environments.

Türkçe:

Bu ders, sanallaştırılmış kaynaklar kullanılarak dağıtık bir ağ üzerinde çalışan ve yaygın İnternet protokolleri ile ağ standartları aracılığıyla erişilen en popüler bulut bilişim uygulamaları ve hizmetlerinin kullanımına odaklanmaktadır. Ders kapsamında bulut bilişimin mimarisi, soyutlama yapısı, sanallaştırma, altyapılar, ölçeklenebilir dağıtımlar, bulutta makine öğrenmesi, veri yönetimi, güvenlik ve gizlilik konuları ayrıntılı olarak ele alınacaktır. Ayrıca derste, genel, özel ve hibrit bulut çözümleri dâhil olmak üzere bulut bilişimin temel hizmet ve dağıtım modelleri tanıtılacaktır. Bunun yanında, bulut platformlarının modern yazılım geliştirme, depolama, iş birliği ve akıllı veri odaklı uygulamaları nasıl desteklediği incelenecektir. Bulut teknolojilerinin hem kuramsal hem de uygulamalı yönleri ele alınarak öğrencilerin, bulut bilişimin günümüz dijital sistemleri ve iş ortamlarındaki rolünü anlamaları amaçlanmaktadır.

General Learning Outcomes/Öğrenme Çıktıları

On successful completion of this course students should be able to:

- Explain cloud computing abstraction and virtualization.
- Describe cloud storage services, advantages, and disadvantages.
- Use different cloud storage services.

- Work with cloud APIs and SDKs.
- Explain cloud service models such as IaaS, PaaS, and SaaS.
- Describe cloud deployment models including public, private, and hybrid cloud.
- Describe machine learning in cloud.
- Manage and process data in cloud environments.
- Apply scaling and resource management in cloud systems.
- Secure data in cloud.
- Identify privacy and security challenges in cloud computing.
- Build own cloud with OpenStack..

Türkçe:
Bu kursu başarıyla tamamlayan öğrenciler aşağıdaki yeterliliklere sahip olacaktır:

- Bulut bilişimde soyutlama ve sanallaştırmayı açıklamak.
- Bulut depolama hizmetlerini, avantajlarını ve dezavantajlarını tanımlamak.
- Farklı bulut depolama hizmetlerini kullanmak.
- Bulut API'leri ve SDK'ları ile çalışmak.
- IaaS, PaaS ve SaaS gibi bulut hizmet modellerini açıklamak.
- Genel, özel ve hibrit bulut gibi bulut dağıtım modellerini tanımlamak.
- Bulutta makine öğrenmesini açıklamak.
- Bulut ortamlarında veriyi yönetmek ve işlemek.
- Bulut sistemlerinde ölçeklendirme ve kaynak yönetimini uygulamak.
- Bulutta veriyi güvence altına almak.
- Bulut bilişimde gizlilik ve güvenlik sorunlarını belirlemek.
- OpenStack kullanarak kendi bulut ortamını oluşturmak.

Teaching Methodology/Öğrenim Yöntem ve Teknikleri

- The course has two hours of lectures per week.
- There are two lab session per week which is Laboratory sessions are organized in parallel to lecture given in classrooms. During the lab sessions, students will be introducing to different cloud storage each week.
- Different cloud computing applications will be used during the lab sessions.
- Lecture notes and tutorials are posted on the course web site.
- There is a midterm, lab exercises and a final exam.
- Midterm exam includes Chapter 1, 2, 3, 4 and 5.
- Final exam includes Chapter 6, 7, 8 and 9.
- Class attendance is compulsory.
- The student is responsible to check the course web site regularly and view the latest announcements.

Türkçe:

- Ders haftada iki saat teorik ders olarak yapılmaktadır.
- Haftada iki saat laboratuvar oturumu bulunmaktadır ve bu laboratuvar çalışmaları sınıfta verilen derslerle paralel şekilde düzenlenmektedir. Laboratuvar oturumlarında öğrencilere her hafta farklı bulut depolama hizmetleri tanıtılacaktır.
- Laboratuvar oturumları sırasında farklı bulut bilişim uygulamaları kullanılacaktır.
- Ders notları ve eğitim materyalleri dersin web sitesinde paylaşılacaktır.
- Ders kapsamında bir ara sınav, laboratuvar uygulamaları ve bir final sınavı bulunmaktadır.
- Ara sınav, 1, 2, 3, 4 ve 5. bölümleri kapsamaktadır.
- Final sınavı, 6, 7, 8 ve 9. bölümleri kapsamaktadır.
- Derse devam zorunludur.
- Öğrenci, dersin web sitesini düzenli olarak kontrol etmek ve en güncel duyuruları takip etmekle sorumludur

Course Materials/Ders Materyalleri
Text Book: Hill R., Hirsch L., Lake P., Moshiri S., *Guide to Cloud Computing*, ISBN- 9781447146025, 2013, Springer-Verlag London. . ***Resource Books:*** 1. Cloud Computing for Science and Engineering (Scientific and Engineering Computation) 1st Edition by Ian Foster , Dennis B. Gannon ***Lecture Notes:*** All course materials are also available online in PowerPoint Slide. Türkçe: ***Ders Kitabı:*** Hill R., Hirsch L., Lake P., Moshiri S., *Guide to Cloud Computing*, ISBN- 9781447146025, 2013, Springer-Verlag London. . ***Yardımcı Kitaplar:*** 1. Cloud Computing for Science and Engineering (Scientific and Engineering Computation) 1st Edition by Ian Foster , Dennis B. Gannon

Weekly Schedule/Haftalık Ders Programı	
Week/Hafta 1	Introduction to Cloud Computing
Week/Hafta 2	Business Adoption Models and Legal Aspects of the Cloud
Week/Hafta 3	Social, economic and Political Aspects of the Cloud
Week/Hafta 4	Cloud Technology
Week/Hafta 5	Cloud Services
Week/Hafta 6	Data in the cloud
Week/Hafta 7	Intelligence in the cloud
Week/Hafta 8-9	**Midterm Examinations/Ara Sınavlar**
Week/Hafta 10	Cloud economics
Week/Hafta 11	Enterprise Cloud Computing
Week/Hafta 12	Cloud security and governance
Week/Hafta 13	Developing a cloud roadmap
Week/Hafta 14	Cloud computing challenges and the future
Week/Hafta 15	Cloud economics
Week/Hafta 16-17	**Final Examinations/Final Sınavları**

Requirements/ Gereksinimler
▪ Each student can have only one make-up exam. ▪ One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. ▪ The make-up exam is done at the end of the term and covers all the topics. ▪ Students who fail to attend the lectures regularly may be given NG grade. ▪ Once the grades are announced, the students have only one week to do objection about their grades. ▪ It is the students' responsibility to follow the announcement in the course web site. Türkçe: • Her öğrencinin bir telafi sınavı alma hakkı vardır. • Öğrenci bir sınava katılamadığı durumda sınav tarihinden itibaren en geç üç iş günü içerisinde sağlık raporu sunmakla yükümlüdür. • Telafi sınavı, tüm konuları içerecek şekilde ve final sınav haftasından sonra yapılacaktır. • Derslere düzenli katılamayan öğrencilere NG harf notu verilebilir.

- Sınav sonuçları açıklandıktan sonra bir hafta içerisinde aldığı nota itiraz etme hakkı vardır. Bu süre sonunda herhangi bir itiraz dikkate alınmayacaktır.
- Tüm öğrenciler, dersin sitesini ve bu sitede yapılacak olan duyuruları takip etmekle yükümlüdür. Site takip edilmediği takdirde yaşanacak kayıplar öğrencilerin sorumluluğundadır.

Method of Assessment/ Değerlendirme Yöntemi			
Evaluation and Grading/ Değerlendirme Yöntemi	**Laboratory/ Laboratuvar**	**Midterm Exam/ Ara Sınav**	**Final Exam/ Final Sınavı**
Percentage/Yüzdelikler	30 %	30 %	40 %

Grading Criteria/Harf Notu Aralıkları *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 – 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 – 52	40 - 49	0 - 39

* Letter grades will be decided after calculating the class average at the end of the semester and distribution of the grades will play a significant role in the evaluation.

Türkçe:

Harf notları dönem sonunda sınıf ortalaması hesaplandıktan sonra belirlenecek ve notların dağılımı değerlendirmede önemli rol oynayacaktır.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES
INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Ders Adı / Course Title	Mobil Uygulama Geliştirme
Ders Adı / Course Title	Mobile Application Development
Ders Kodu / Course Code	ITEC499
Tipi / Type	Tam Zamanlı / Full Time
Yarıyıl / Semester	Güz / Fall – Bahar / Spring
Türü / Category	Alan Seçmeli / Area Elective
İş Yükü / Workload	180 Saat / 180 Hours
DAU Kredi Değeri / EMU Credit	(3,0,1) 3
Ön Koşullar / Prerequisite	
Dil / Language	İngilizce / English
Seviye / Level	Dördüncü Yıl/ Forth Year
Öğretim Formatı / Teaching Format	3 Saat Ders, 1 saat tutorial / 3 Hours Lecture, 1 Hours Tutorial
ECTS Değeri / ECTS Credit	6
Ders Sitesi / Course Web	lms.emu.edu.tr

Öğretim Elemanı / Instructor	Atalay TALAYKURT	**Ofis Tel / Office**	
E-posta / E-mail	Atalay.talaykurt@emu.edu.tr	**Ofis No /Office No**	

Ders İçeriği / Course Description

Türkçe:
Proje odaklı olan dersimizde mobil uygulama tasarım ve geliştirme ilkeleri incelenecektir. Öğrencilere, Mobil platformlar üzerinde uygulamaların nasıl geliştirildiği öğretilecektir. Konular, bellek yönetimini, kullanıcı ara yüzü tasarımı, kullanıcı ara yüzü tasarlama yöntemleri, veri işleme, Ağ teknikleri ve URL yükleme, ve son olarak, GPS ve hareket algılama gibi özelliklerdir. Öğrencilerin, profesyonel kalitede mobil uygulama üreten, bir proje üzerinde çalışmaları hedeflenmiştir. Projeler gerçek ortamlarda çalıştırılacaktır. Ders çalışmaları olarak, proje tasarlama, dizayn etme, uygulama ve gerçek cihazlar üzerinde test etmekten oluşmaktadır.

English:
This project-oriented course, mobile application design and development principles will be examined. Students will be tlearn how to develop applications on mobile platforms. Topics will include memory management, user interface design, user interface design methods, data processing, network techniques and URL loading, and finally, features such as GPS and motion detection. It is aimed that students work on a project that produces a professional quality mobile application. Projects will be run in real environments. As coursework, the project consists of designing, implementing and testing on real devices.

Öğrenme Çıktıları / General Learning Outcomes

Türkçe

Bu dersin sonucunda öğrenciler:

• Mobil programlamanın diğer programlama platformlarından farklılıklarını öğrenecekler.

• Mobil uygulamaların dizaynındaki artı ve eksilerin kritiğini yapacaklar.

• Gelişmiş mobil ara yüzleri tasarlamak ve geliştirmek için hızlı prototiplere teknikleri kullanacaklar.

• Temel ve Gelişim telefon özellikleri kullanarak Mobil uygulamaları tasarlayacaklar.,

English:

By the conclusion of this course, students will be able to:

• They will learn the differences of mobile programming from other programming platforms.

• They will criticize the pros and cons of the design of mobile applications.

• They will use rapid prototyping techniques to design and develop advanced mobile interfaces.

• They will design Mobile applications using Basic and Developmental phone features,

Teaching Methodology / Classroom Procedures
Türkçe: Çoğu dersler iki bölümden oluşacaktır. Sınıfın ilk yarısında teknik bir kavram üzerinde bir anlatım soru ve cevap şeklinde olacaktır. Bunun akabinde kod tasarlama yöntemleri ve eleştirisi veya bir uygulamalı programlama ve hata ayıklama örnekleri takip edecektir. Her sınıfın ikinci yarısında öğrenciler, o günkü konu ile ilgili tasarım ya da geliştirme ile ilgili düşüncelerini sunacaklardır. Çoğu dersin son 20 dakika hızlı prototipleme tasarım çalışmalarına ayrılacaktır. Bazı derslerin tamamı, proje planlama ve / veya fikir sunum yada düşük seviyede prototip kullanılarak programların pilot testlerine ayrılacaktır . English: Most courses will consist of two parts. In the first half of the class, a lecture on a technical concept will be in the form of questions and answers. This will be followed by code design methods and critique, or an example of applied programming and debugging. In the second half of each class, students will present their thoughts on design or development on the topic of the day. The last 20 minutes of most classes will be devoted to rapid prototyping design work. Some courses will be devoted entirely to pilot testing of programs using project planning and/or idea presentation or low-level prototyping.

Haftalık Ders Programı / Konu Özeti - Weekly Schedule / Summary of Topics	
Hafta/Week 1	**Mobil programlama nedir ? / What is Mobile Programming**
Hafta/Week 2	**Platform ve gerekli programlama kurulumu / Installation of main platform and required tools**
Hafta/Week 3	**Ekran Nesneleri ve nesnelerin özellikleri/ Screen objects and their properties.**
Hafta/Week 4-5	**Layout-dosya,XML kodlama ve Ekran pozisyonunu ayarlama/ Layout-Folders, XML Coding and screen position adjustment**
Hafta/Week 5-6	**Layout Çeşitleri/Layout types**
Hafta /Week 7-8	**Ara Sınavlar / Midterm Examinations**
Hafta /Week 9	**Kod içerisinde view nesneleri ile çalışma/ Working with objects in code view.**

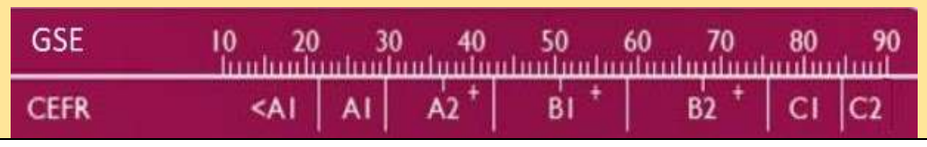
Hafta /Week 10	**Buton örnekleri ile programlama /Button programmimng with examples.**
Hafta /Week 11	**Basit menü oluşumları/crreating basic menus.**
Hafta /Week 12	**Menü, gruplar, sıralamalar ve XML menuleri oluşturma/Menus, groups, sort and XML menu creations.**
Hafta /Week 13	**Çalışan uygulamada view/nesnelerin oluşumu ve parametrelerimin değiştirme/Coding and changing of view/objects and their parameters in the running application.**
Hafta /Week 14-15	**Dönem Sonu Sınavları / Final Examinations**

Ders Materyalleri / Referanslar -Course Materials / Main References
Ders Kitabı / Text Book:
-
Ders Notları / Lecture Notes:
- Ders ve Lab notlarını Moodle üzerinden ulaşılabilir:/Lecture and lab notes on web link http://lms.emu.edu.tr

Gereksinimler / Requirements
Turkish:
• Her öğrencinin sadece bir tane telafi sınavı hakkı vardır. Sınava katılamayan bir öğrenci sınav tarihinden itibaren en geç 3 gün içerisinde ders hocasına rapor sunmakla yükümlüdür. Telafi sınavları tüm konuları kapsayacak şekilde Dönem sonu sınavlarından sonra olacaktır. Küçük sınavların telafisi yoktur.
• Derslere düzenli katılamayan bir öğrenciye NG harf notu ile değerlendirilir.
• Ders saatlerine katılmak mecburidir.
English:
• Each student can have only one make-up exam. One who misses an exam should provide a medical report within 3 days after the missed exam. The make-up exam will be organized at the end of the term after the finals and will cover all the topics. No make-up exam will be given for the quizzes.
• Students who do not pass the course and fail to attend the lectures regularly may be given NG grade.
• Attendance is compulsory for lecture sessions.

Değerlendirme Yöntemi / Method of Assessment				
Değerlendirme ve Harf Notu / Evaluation and Grading	**Yoklama/Quiz**	**LAB**	**Midterm**	**Final**
Yüzdelikler / Percentage	10 %	15%	30 %	45 %

ENGL 191 COURSE OUTLINE

WEEKS	DATES	RESOURCES	WEEKLY LEARNING OBJECTIVES / ENGL 191 (GSE:55-60 / CEFR: B1+)
			
1	3 – 7 October (Religious Day (Mawlid Oct.07 night)	**Orientation Week** • **Orientation Week** • Welcoming students • Introduction to the course **(Course Description & Course Outline / Skillful 3 Student's Book - Workbook / Moodle / Teams)**	
2	10 – 14 October (10 Oct._last day for late registration)	**Unit 1: Identity** • Discussion point (p. 8) • Video watching (p. 8-9) (**optional*) • **Reading 1**: ***Social identity*** • Tasks: A-E (p. 10-12)	**PRIMARY OBJECTIVES** • build schema by discussing the theme and studying key vocabulary before reading. • encounter, study and use high frequency vocabulary targeted in academic texts. • develop scanning and skimming skills. • think critically on the topics related to the reading texts • engage in pair and group discussions • get the gist of a simple academic discussion or an oral presentation.	**SUB OBJECTIVES** • infer meaning based on information in a text. • recognize contrasting ideas in a structured text when signalled by discourse markers. • identify different types of supporting details in a simple academic text, in order to answer specific questions. • distinguish between different viewpoints in a simple academic text. • identify key information in an extended text or article. • understand relationships between ideas in a simple academic text, if guided by questions. • recognize inferred meaning in a structured text, if guided by questions. • guess the meaning of an unfamiliar word from context. • use a monolingual dictionary to check the meaning of words without needing to refer to a bilingual dictionary. • give brief comments on the views of others. • justify and sustain views clearly by providing relevant explanations and arguments. • ask a question in a different way if misunderstood. • distinguish facts from opinions in a simple, straightforward presentation or lecture. • recognize generalizations and their supporting ideas.
		• **Reading 2: *How permanent is your personality?*** • Tasks: A-E (p. 14-17) • Vocabulary (p. 18 -19) • Critical Thinking (p. 20) • Review (p. 25)	**PRIMARY OBJECTIVES** • build schema by studying key vocabulary before reading. • encounter, study and use high frequency vocabulary targeted in academic texts. • develop scanning and skimming skills. • think critically on the topics related to the reading texts. • engage in pair and group discussions	**SUB OBJECTIVES** • see Unit 1 / R1 sub-objectives
3	17 – 21 October (17 Oct._last day for add/drop)	**Unit 1** • Group work on finding the similarities and differences between **Introverted vs Extroverted personalities**	**PRIMARY OBJECTIVES** • engage in pair and group discussions.	**SUB OBJECTIVES** • ask a question in a different way if misunderstood. • clarify points they are trying to make in an academic discussion, using simple language. • give brief comments on the views of others. • ask for confirmation of understanding during a live discussion or presentation. • paraphrase information taken from several simple academic texts. • give a simple presentation on an academic topic in their field. • justify a viewpoint on a simple topic by discussing some pros and cons of various options. • exchange information on a wide range of topics within their field with some confidence. • make an effective introduction and opening to a presentation. • justify and sustain views clearly by providing relevant explanations and arguments.
		Unit 1 • **Workbook Unit 1 Assignment (Reading and Vocabulary)** • **Supplementary material (Unit 1: Extra Reading practice)**	**PRIMARY OBJECTIVES** • encounter, study and use high frequency vocabulary targeted in academic texts. • act as autonomous learners through online tasks.	**SUB OBJECTIVES** • use a monolingual dictionary to check the meaning of words without needing to refer to a bilingual dictionary. • Practice & Revision (see Unit 1 R1&2 objectives)

4	24 – 28 October	• **Unit 2: Design** • Discussion point (p.26) • Video watching (p. 26-27) (****optional*) • **Reading 1: Beautifully broken** • Tasks: A-E (p. 28-30) • **Reading 2: Community development: A new business in town** • Tasks: A-E (p. 32-35) • Vocabulary (p. 36 -37) • Critical Thinking (p. 38) • Review (p. 43)	**PRIMARY OBJECTIVES** • build schema by discussing the theme and studying key vocabulary before reading. • encounter, study and use high frequency vocabulary targeted in academic texts. • develop scanning and skimming skills. • think critically on the topics related to the reading texts • engage in pair and group discussions • get the gist of a simple academic discussion or an oral presentation.	**SUB OBJECTIVES** • infer meaning based on information in a text. • recognize contrasting ideas in a structured text when signalled by discourse markers. • identify different types of supporting details in a simple academic text, in order to answer specific questions. • distinguish between different viewpoints in a simple academic text. • identify key information in an extended text or article. • understand relationships between ideas in a simple academic text, if guided by questions. • recognize inferred meaning in a structured text, if guided by questions. • guess the meaning of an unfamiliar word from context. • use a monolingual dictionary to check the meaning of words without needing to refer to a bilingual dictionary. • give brief comments on the views of others. • justify and sustain views clearly by providing relevant explanations and arguments. • ask a question in a different way if misunderstood. • distinguish facts from opinions in a simple, straightforward presentation or lecture. • recognize generalizations and their supporting ideas.
		Unit 2 • Group work on finding the similarities and differences between **Handmade vs Mass production** • **Workbook Unit 2 Assignment (Reading and Vocabulary)** • **Supplementary material (Unit 2: Extra Reading practice)**	**PRIMARY OBJECTIVES** • engage in pair and group discussions. • encounter, study and use high frequency vocabulary targeted in academic texts. • act as autonomous learners through online tasks.	**SUB OBJECTIVES** • ask a question in a different way if misunderstood. • clarify points they are trying to make in an academic discussion, using simple language. • give brief comments on the views of others. • ask for confirmation of understanding during a live discussion or presentation. • paraphrase information taken from several simple academic texts. • give a simple presentation on an academic topic in their field. • justify a viewpoint on a simple topic by discussing some pros and cons of various options. • exchange information on a wide range of topics within their field with some confidence. • make an effective introduction and opening to a presentation. • justify and sustain views clearly by providing relevant explanations and arguments. • use a monolingual dictionary to check the meaning of words without needing to refer to a bilingual dictionary. • Practice & Revision (see Unit 2 R1&2 objectives)
5	31 October – 4 November	• **Unit 3: Thought** • Discussion point (p.44) • Video watching (p. 44-45) (****optional*) • **Reading 1: The development of thought** • Tasks: A-E (p. 46-48) • **Reading 2: Emotional thinking** • Tasks: A-E (p. 50-53) • Vocabulary (p. 54 -55) • Critical Thinking (p. 56) • Review (p. 61)	**PRIMARY OBJECTIVES** • build schema by discussing the theme and studying key vocabulary before reading. • encounter, study and use high frequency vocabulary targeted in academic texts. • develop scanning and skimming skills. • think critically on the topics related to the reading texts • engage in pair and group discussions • get the gist of a simple academic discussion or an oral presentation.	**SUB OBJECTIVES** • infer meaning based on information in a text. • recognize contrasting ideas in a structured text when signalled by discourse markers. • identify different types of supporting details in a simple academic text, in order to answer specific questions. • distinguish between different viewpoints in a simple academic text. • identify key information in an extended text or article. • understand relationships between ideas in a simple academic text, if guided by questions. • recognize inferred meaning in a structured text, if guided by questions. • guess the meaning of an unfamiliar word from context. • use a monolingual dictionary to check the meaning of words without needing to refer to a bilingual dictionary. • give brief comments on the views of others. • justify and sustain views clearly by providing relevant explanations and arguments. • ask a question in a different way if misunderstood. • distinguish facts from opinions in a simple, straightforward presentation or lecture. • recognize generalizations and their supporting ideas.

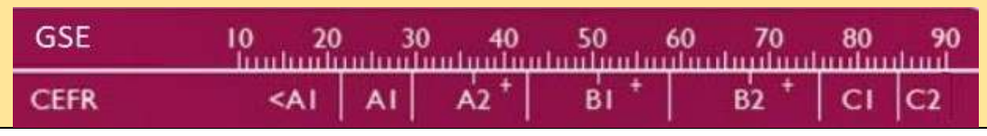
		Unit 3 • Group work on finding the similarities and differences between **Emotional and Intellectual Intelligence** • **Workbook Unit 3 Assignment (Reading and Vocabulary)** • **Supplementary material (Unit 3: Extra Reading practice)**	**PRIMARY OBJECTIVES** • engage in pair and group discussions. • encounter, study and use high frequency vocabulary targeted in academic texts. • act as autonomous learners through online tasks.	**SUB OBJECTIVES** • ask a question in a different way if misunderstood. • clarify points they are trying to make in an academic discussion, using simple language. • give brief comments on the views of others. • ask for confirmation of understanding during a live discussion or presentation. • paraphrase information taken from several simple academic texts. • give a simple presentation on an academic topic in their field. • justify a viewpoint on a simple topic by discussing some pros and cons of various options. • exchange information on a wide range of topics within their field with some confidence. • make an effective introduction and opening to a presentation. • justify and sustain views clearly by providing relevant explanations and arguments. • use a monolingual dictionary to check the meaning of words without needing to refer to a bilingual dictionary. • Practice & Revision (see Unit 3 R1&2 objectives)
6	**7 – 11 November (10 Nov. _Commemoration of Atatürk)**	• **Compare and Contrast Essay Writing** • Supplementary material: • Model Outline (1) & Essay (1) Model Outline (2) & Essay (2) • Outline Checklist for self-assessment • Topic selection	**PRIMARY OBJECTIVES** • produce well-structured academic essay types.	**SUB OBJECTIVES** • use appropriate outlines to organize ideas. • write a strong topic sentence within a clear paragraph. • write an introduction to a simple academic essay. • write a conclusion to a simple academic essay.
		• Outline writing practice • **Outline Assignment (10%)**	**PRIMARY OBJECTIVES** • produce well-structured academic essay types.	**SUB OBJECTIVES** • Use appropriate outlines to organize ideas. • write a strong topic sentence within a clear paragraph. • write an introduction to a simple academic essay. • write a conclusion to a simple academic essay.
7	**14 – 18 November (15 Nov. _ TRNC Republic Day - National Holiday)**	• **Outline Assignment Submission** • Extra reading and vocabulary practice	**PRIMARY OBJECTIVES** • act as autonomous learners through online tasks.	**SUB OBJECTIVES** • Practice & Revision
		• **Sample Mid-term Exam**	**PRIMARY OBJECTIVES** • act as autonomous learners through online tasks.	**SUB OBJECTIVES** • Practice & Revision
8 – 9	**21 November – 3 December**	**MIDTERM EXAMS (40%)**		
		• **Teacher's Outline Feedback Submission**	**PRIMARY OBJECTIVES** • act as autonomous learners through online tasks	**SUB OBJECTIVES** • edit and improve a simple text.
10	**05 – 09 December**	• Model essays / PPP on Compare and Contrast Essay • Essay (1) Essay (2) • Essay Checklist for self-assessment	**PRIMARY OBJECTIVES** • produce well-structured academic essay types.	**SUB OBJECTIVES** • write a strong topic sentence within a clear paragraph. • write an introduction to a simple academic essay. • write a conclusion to a simple academic essay. • support a main idea with explanations and examples in a structured paragraph on a familiar topic. • show a simple relationship between a main point and an example in a structured text. • write a simple discursive essay, if provided with a model. • support a main idea with examples and reasons. • support ideas with relevant examples.

11	12 – 16 December	• Essay writing practice • Introducing the essay assessment criteria • Peer Review Checklist (p. 189)	**PRIMARY OBJECTIVES** • produce well-structured academic essay types. • collaborate with classmates and also promote peer and self-evaluation of writing	**SUB OBJECTIVES** • write a strong topic sentence within a clear paragraph. • write an introduction to a simple academic essay. • write a conclusion to a simple academic essay. • support a main idea with explanations and examples in a structured paragraph on a familiar topic. • show a simple relationship between a main point and an example in a structured text. • write a simple discursive essay, if provided with a model. • support a main idea with examples and reasons. • support ideas with relevant examples.
		• **Essay Assignment (20%)**	**PRIMARY OBJECTIVES** • use computer for research and submission of their written academic work. • act as autonomous learners through online tasks	**SUB OBJECTIVES** • edit and improve a simple text.
		MIDTERM MAKE-UPS (13 December)		
12	19 – 23 December (23 Dec._Last Day for Course withdrawal)	• **Essay Assignment Submission** • Assigning presenters for weeks 12-13-14 (5-7 mins.) • Guidelines for Presentations • Functional language (p. 188)	**PRIMARY OBJECTIVES** • prepare and present an oral presentation using power-point and academic language. • self-evaluate an oral presentation performance • get the gist of a simple academic discussion or an oral presentation • take notes to ask relevant questions to a presenter and to do peer assessment of a short oral presentation	**SUB OBJECTIVES** • give a simple presentation on an academic topic in their field. • justify a viewpoint on a simple topic by discussing some pros and cons of various options. • justify and sustain views clearly by providing relevant explanations and arguments. • make an effective introduction and opening to a presentation. • ask a question in a different way if misunderstood. • follow most of a clearly structured presentation within their own field.
		• Guidelines for Peer/Self-assessment for presentations • Practice for Presentations • **Peer/Self-Assessment Assignment (5%)** • Presentations (15%) • Presentation Peer-Self Assessment (5%)	**PRIMARY OBJECTIVES** • prepare and present an oral presentation using power-point and academic language. • self-evaluate an oral presentation performance • get the gist of a simple academic discussion or an oral presentation • take notes to ask relevant questions to a presenter and to do peer assessment of a short oral presentation	**SUB OBJECTIVES** • give a simple presentation on an academic topic in their field. • justify a viewpoint on a simple topic by discussing some pros and cons of various options. • justify and sustain views clearly by providing relevant explanations and arguments. • make an effective introduction and opening to a presentation. • ask a question in a different way if misunderstood. • follow most of a clearly structured presentation within their own field.
13	26 – 30 December	• Presentations (15%)	**PRIMARY OBJECTIVES** • prepare and present an oral presentation using power-point and academic language. • self-evaluate an oral presentation performance • get the gist of a simple academic discussion or an oral presentation • take notes to ask relevant questions to a presenter and to do peer assessment of a short oral presentation	**SUB OBJECTIVES** • give a simple presentation on an academic topic in their field. • justify a viewpoint on a simple topic by discussing some pros and cons of various options. • justify and sustain views clearly by providing relevant explanations and arguments. • make an effective introduction and opening to a presentation. • ask a question in a different way if misunderstood. • follow most of a clearly structured presentation within their own field.

		• Presentation Peer-Self Assessment (5%)	**PRIMARY OBJECTIVES** • prepare and present an oral presentation using power-point and academic language. • self-evaluate an oral presentation performance • get the gist of a simple academic discussion or an oral presentation • take notes to ask relevant questions to a presenter and to do peer assessment of a short oral presentation	**SUB OBJECTIVES** • give a simple presentation on an academic topic in their field. • justify a viewpoint on a simple topic by discussing some pros and cons of various options. • justify and sustain views clearly by providing relevant explanations and arguments. • make an effective introduction and opening to a presentation. • ask a question in a different way if misunderstood. • follow most of a clearly structured presentation within their own field.
14	**2 – 6 anuary (01 Jan._ New Year' s Day) (5 Jan._ Last Day of Classes)**	• Presentations (15%) • Presentation Peer-Self Assessment (5%)	**PRIMARY OBJECTIVES** • prepare and present an oral presentation using power-point and academic language. • self-evaluate an oral presentation performance • get the gist of a simple academic discussion or an oral presentation • take notes to ask relevant questions to a presenter and to do peer assessment of a short oral presentation	**SUB OBJECTIVES** • give a simple presentation on an academic topic in their field. • justify a viewpoint on a simple topic by discussing some pros and cons of various options. • justify and sustain views clearly by providing relevant explanations and arguments. • make an effective introduction and opening to a presentation. • ask a question in a different way if misunderstood. • follow most of a clearly structured presentation within their own field.
		• **Peer/Self-Assessment Assignment Submission** • **Workbook Assignments Submission (Units 1/2/3) (5%)**	**PRIMARY OBJECTIVES** • act as autonomous learners through online tasks	**SUB OBJECTIVES** • See the workbook unit objectives in weeks 3-4-5
15-17	**9– 24 January**	**FINAL EXAMS - no final exam for ENGL 191**		
		FINAL EXAMS MAKE UPS (27 January) - no final exam makeup for ENGL 191		
	31 Jan. – 02 Feb.	**Online Application for Resit Examinations**		
	9-15 Februar y	**Fall Term Resit Examinations**		

This is a provisional schedule and is open to modification according to the rate of progress and instructor assessment of the particular needs of individual groups.

ENGL 192 COURSE OUTLINE

WEEKS	DATES	RESOURCES	WEEKLY LEARNING OBJECTIVES (GSE:59-66 CEFR: B2) 	
1	3 – 7 October (Religious Day (Mawlid Oct.07 night)	**Orientation Week** • Welcoming students • Introduction to the course **(Course Description & Course Outline / Skillful 3 Student's Book - Workbook / Moodle / Teams)**		
		Unit 6: Disease • Discussion point 1-2 • **Debate question:** "Should medicine to prevent diseases be given free to those who need it?'' • Video watching (p. 98-99) ❋(*optional*)	**PRIMARY OBJECTIVES** • build schema by discussing the theme • get the gist of a simple academic discussion • engage in pair and group discussions.	**SUB OBJECTIVES** • express ideas in a discussion using an appropriate tone and register. • provide an elaboration on a point made in an academic discussion. • signal concession of a point during a discussion, using common discourse markers. • emphasize a point in a conversation using rhetorical questions. • follow a natural group discussion, but may find it difficult to participate effectively. • understand the speaker's point of view on most topics delivered at natural speed and in standard language.
2	10 – 14 October (10 Oct._last day for late registration)	• **Reading 1**: ***Fighting cholera*** • Tasks: A-E (p. 100-102) • **Reading 2: *The Economic Impact of disease*** • Tasks: A-E (p. 104-107)	**PRIMARY OBJECTIVES** • build schema by studying key vocabulary before reading. • develop scanning and skimming skills. • think critically on the topics related to the reading texts • engage in pair and group discussions.	**SUB OBJECTIVES** • use a monolingual dictionary to check the meaning of words without needing to refer to a bilingual dictionary. • make predictions about the content of newspaper and magazine articles from headings, titles or headlines. • identify the main organizing themes of simple academic texts in their field of specialization. • identify the main conclusions in a text that presents and contrasts arguments in a clearly signaled way. • understand the author's purpose. • provide an elaboration on a point they have made in an academic discussion.
		• **Supplementary material** (Unit 6: Extra Reading practice) • **Supplementary material** (Tips for the Gapped Text Task)	**PRIMARY OBJECTIVES** • develop skimming, scanning and making inferences skills.	**SUB OBJECTIVES** • guess the meaning of unfamiliar words in texts on familiar topics or within a familiar subject area. • scan a long text or a set of related texts in order to find specific information. • identify the main conclusions in a text that presents and contrasts arguments in a clearly signaled way. • identify the main line of argument in an academic text. • distinguish supporting details from the main points in a text. • identify examples in an academic text to support an argument. • identify the use of paraphrasing in a simple academic text. • understand the author's purpose. • recognize inferred meaning in a structured text, if guided by questions. • recognize the use of cohesive devices to link ideas within and between paragraphs in a written text. • recognize the repetition of ideas expressed by substitution, paraphrasing, reference, etc.
3	17 – 21 October (17 Oct._last day for add/drop)	**Vocabulary (p. 108 -109)**	**PRIMARY OBJECTIVES** • encounter, study and use high frequency vocabulary targeted in academic texts.	**SUB OBJECTIVES** • use a monolingual dictionary to check the meaning of words without needing to refer to a bilingual dictionary.
		Workbook Unit 6 Assignment (Reading and Vocabulary)	**PRIMARY OBJECTIVES** • act as autonomous learners through online tasks.	**SUB OBJECTIVES** • Practice & Revision (see Unit 6 R1&2 objectives above)
		Unit 8: Law • Discussion point 1-2 • **Debate question:** "Whose responsibility is it to decide what is right and wrong?" • Video watching (p. 134-135) ❋ • **Reading 1: It's legal, but is it ethical?** Tasks: A-E (p. 136-138)	**PRIMARY OBJECTIVES** (See Unit 6 Discussion point objectives in Week 1) • build schema by studying key vocabulary before reading. • develop scanning and skimming skills. • think critically on the topics related to the reading texts	**SUB OBJECTIVES** • make inferences or predictions about the content of newspaper and magazine articles from headings, titles or headlines. • scan a long text or a set of related texts in order to find specific information. • distinguish supporting details from the main points in a text. • clarify points they are trying to make in an academic discussion, using simple language. • use a suitable phrase to intervene in a discussion on a familiar topic.
4	24 – 28 October	**Reading 2: Right or wrong at work** Tasks: A-E (p. 140-143)	**PRIMARY OBJECTIVES** (See Unit 8 R1&2 objectives above)	**SUB OBJECTIVES** (See Unit 8 R1objectives in Week 3)
		• **Supplementary material** (Unit 8: Extra Reading practice) • **Supplementary material** (Tips for the Gapped Text Task_ cont.)	**PRIMARY OBJECTIVES** (See Unit 6: Extra Reading practice & Tips for the Gapped Text Task objectives in Week 2)	**SUB OBJECTIVES** (See Unit 6: Extra Reading practice & Tips for the Gapped Text Task objectives in Week 2)
		Vocabulary (p. 144-145)	**PRIMARY OBJECTIVES** (See the vocabulary objective in Week 3)	**SUB OBJECTIVES** (See the vocabulary objective in Week 3)
		Workbook Unit 8 Assignment (Reading and Vocabulary)	**PRIMARY OBJECTIVES** • act as autonomous learners through online tasks.	**SUB OBJECTIVES** • Practice & Revision (see Unit 8 R1&2 objectives above)
		• **Unit 10: Tomorrow** • Discussion point 2-3 • **Debate question:** ''Which prediction about 2050 do you find the most interesting/exciting/worrying?'' Video watching (p. 170-171) ❋	**PRIMARY OBJECTIVES** (See Unit 6 Discussion point objectives in Week 1)	**SUB OBJECTIVES** (See Unit 6 Discussion point objectives in Week 1)
5	31 October – 4 November	• **Reading 1: Products of the future** • Tasks: A-E (p. 172-174) • **Reading 2: New technology: Is greater regulation needed?** • Tasks: A-E (p. 176-179)	**PRIMARY OBJECTIVES** • build schema by discussing the theme and studying key vocabulary before reading. • develop scanning skimming and making inferences skills. • think critically on the topics related to the reading texts	**SUB OBJECTIVES** • exchange information on a wide range of topics within their field with some confidence. • identify the main conclusions in a text that presents and contrasts arguments in a clearly signaled way. • distinguish supporting details from the main points in a text. • recognize inferred meaning in a structured text, if guided by questions. • clarify points they are trying to make in an academic discussion, using simple language. • use a suitable phrase to intervene in a discussion on a familiar topic.

		• **Supplementary material** (Unit 10: Extra Reading practice)	**PRIMARY OBJECTIVES** • develop skimming, scanning, and making inferences skills.	**SUB OBJECTIVES** • guess the meaning of unfamiliar words in texts on familiar topics or within a familiar subject area. • scan a long text or a set of related texts in order to find specific information. • identify the main conclusions in a text that presents and contrasts arguments in a clearly signaled way. • identify the main line of argument in an academic text. • distinguish supporting details from the main points in a text. • identify examples in an academic text to support an argument. • identify the use of paraphrasing in a simple academic text. • understand the author's purpose. • recognize inferred meaning in a structured text, if guided by questions. • recognize the repetition of ideas expressed by reference.
		Vocabulary (p. 180-181)	**PRIMARY OBJECTIVES** (See the objective in Week 3)	**SUB OBJECTIVES** (See the objective in Week 3)
		Workbook Unit 10 Assignment (Reading and Vocabulary)	**PRIMARY OBJECTIVES** • act as autonomous learners through online tasks.	**SUB OBJECTIVES** • Practice & Revision (See Unit 10 R1&2 objectives above)
6	**7 – 11 November (10 Nov._Commemoration of Atatürk)**	**Persuasive Essay Writing** • **Supplementary material (Writing Input PDF):** • Writing a persuasive essay • Model outline & essay 1 • Model Outline 2 • Outline Checklist for self-assessment • Writing skill: Expressing perspective and stance (p. 185) • Outline writing practice • Topic selection	**PRIMARY OBJECTIVES** • produce well-structured academic essay types. • use computer for research and submission of their written academic work.	**SUB OBJECTIVES** • use correct formatting in an academic essay. • systematically develop an argument giving the reasons for or against a point of view. • show the relationship between an opinion and a counterargument in a discursive text. • use descriptive language to support a main idea in written academic work. • make very few mistakes in punctuation and with only less familiar formats and in spelling of less familiar words. • understand detailed instructions well enough to be able to follow them without making mistakes.
7	**14 – 18 November (15 Nov._ TRNC Republic Day - National Holiday)**	**Outline Assignment (10%)**	**PRIMARY OBJECTIVES** (See the Supplementary material objectives in Week 6)	**SUB OBJECTIVES** (See the Supplementary material objectives in Week 6)
		Revision for the Midterm Exam • Extra reading and vocabulary practice • Extra Reading Practice_ Gapped Text/Text Completion • Sample Mid-term Exam	**PRIMARY OBJECTIVES** (See Reading and Vocabulary objectives in Weeks 2-5)	**SUB OBJECTIVES** Practice & Revision (See the Reading and Vocabulary objectives in Weeks 2-5)
		• **Outline Assignment Submission**	**PRIMARY OBJECTIVES** • act as autonomous learners through online tasks	**SUB OBJECTIVES** (See the Supplementary material objectives in Week 6)
8 – 9	**21 November – 3 December**	• **MIDTERM EXAMS (40%) -** Testing the Reading and Vocabulary objectives practiced in Weeks 2-5 **(Reading 30% + Vocabulary 10%)**		
10	**5 – 9 December**	**Teacher's Outline Feedback Submission**	**PRIMARY OBJECTIVES** • act as autonomous learners through online tasks.	**SUB OBJECTIVES** • correct errors in a piece of academic writing if helped to identify them first.
		Supplementary material (Writing Input PDF_ cont.): • Model essay 2 • Arguments/Counterarguments/Refutations • Grammar: Adverb clauses of concession • How to write a title & hooks for essays • Useful transition words and structures • Basics of direct quoting • Essay Checklist for self-assessment • Grammar: Future perfect simple for making predictions (p. 184)	**PRIMARY OBJECTIVES** • produce well-structured academic essay types. • use computer for research and submission of their written academic work. • act as autonomous learners through online tasks.	**SUB OBJECTIVES** • write engaging headlines or titles to capture a reader's attention • write a structured text clearly signaling main points and supporting details • structure longer texts in clear, logical paragraphs • signal that two ideas are similar when writing a simple academic text /contrast two ideas when writing a simple academic text/ signal cause and effect relationships when writing an academic text by using discourse markers • present additional ideas using a range of linking words and phrases • use a good range of vocabulary collocations and functions. • explain a term in a text using synonyms, definitions, or examples. • reformulate an idea in different words to emphasize or explain a point. • show the relationship between an opinion and a counterargument in a discursive text. • clearly signal the difference between fact and opinion in structured text. • use fact and opinion effectively in writing. • signal cause and effect relationships when writing an academic text by using discourse markers. • contrast two ideas when writing a simple academic text by using discourse markers. • systematically develop an argument giving the reasons for or against a point of view. • research a topic by reading a range of newspapers and magazines. • support a line of argument in an academic text using direct quotes. • embed quotations and paraphrases in written academic work, if provided with a model. • make very few mistakes in punctuation and with only less familiar formats and in spelling of less familiar words.
11	**12 – 16 December**	**Supplementary material (Writing Input PDF_ cont.):** • Essay writing practice • Introducing the essay assessment criteria • Peer Review Checklist (p. 189)	**PRIMARY OBJECTIVES** • produce well-structured academic essay types. • collaborate with classmates and also promote peer and self-evaluation of writing	**SUB OBJECTIVES** • correct errors in a piece of academic writing if helped to identify them first. • understand detailed instructions well enough to be able to follow them without making mistakes.
		Essay Assignment (20%)	**PRIMARY OBJECTIVES** (See the Supplementary material objectives in Weeks 10-11)	**SUB OBJECTIVES** (See the Supplementary material objectives in Weeks 10-11)
		MIDTERM MAKE-UPS (13 December)		
12	**19 – 23 December (23 Dec._Last Day for Course withdrawal**	**Essay Assignment Submission**	**PRIMARY OBJECTIVES** • act as autonomous learners through online tasks.	**SUB OBJECTIVES** (See the Supplementary material objectives in Weeks 10-11)

		• **Oral Presentation & Peer-Self-assessment input & practice** • Assigning presenters for weeks 12 - 14 (6-8 mins.) • Guidelines for Oral Presentations • Functional language (p. 188) • Guidelines for Peer/Self-assessment for presentations • Practice for Oral Presentations / Peer/Self-assessment for presentations	**PRIMARY OBJECTIVES** • prepare and present an oral presentation using power-point and academic language. • evaluate an oral presentation performance • get the gist of a simple academic discussion or an oral presentation • take notes to ask relevant questions to a presenter and to do peer assessment of a short oral presentation • collaborate with classmates and also promote peer and self-evaluation of writing and speaking	**SUB OBJECTIVES** • make an effective introduction and opening to a presentation. • express ideas in a discussion or presentation using an appropriate tone and register. • use a suitable phrase to intervene in a discussion on a familiar topic. • make an effective summary and conclusion to a presentation. • respond to clearly expressed questions on a presentation they have given. • exchange information on a wide range of topics within their field with some confidence. • speculate about the causes of an issue or problem. • emphasize a point in a conversation using rhetorical questions. • understand the speaker's point of view on most topics delivered at natural speed and in standard language. • understand scripted/unscripted speech delivered quickly, if the accent is familiar. • identify details that support a point of view in a presentation or lecture in their field of specialization. • critically evaluate the effectiveness of slides or other visual materials that accompany a simple presentation. • critically evaluate the main points of a straightforward presentation or lecture. • recognize when examples are being given in a structured presentation on an unfamiliar topic. • recognize the speaker's point of view in a structured presentation. • recognize emphasis through intonation and stress. • take notes on a presentation or lecture in their field of specialization • understand detailed instructions well enough to be able to follow them without making mistakes.
		• **Peer/Self-Assessment Assignment (5%)** • Presentations (15%) • Presentation Peer-Self Assessment (5%)	**PRIMARY OBJECTIVES** (See the Oral Presentation and Peer-Self Assessment input and practice objectives in Week 12)	**SUB OBJECTIVES** (See the Oral Presentation and Peer-Self Assessment input and practice objectives in Week 12)
13	**26 – 30 December** **25 Dec._ Christmas Day)**	• Presentations (15%) • Presentation Peer-Self Assessment (5%)	**PRIMARY OBJECTIVES** (See the Oral Presentation and Peer-Self Assessment input and practice objectives in Week 12)	**SUB OBJECTIVES** (See the Oral Presentation and Peer-Self Assessment input and practice objectives in Week 12)
14	**2 – 6 January** **(1 Jan._New Year' s Day)** **5 Jan._ Last Day of Classes)**	• Presentations (15%) • Presentation Peer-Self Assessment (5%) • **Peer/Self-Assessment Assignment Submission** • **Workbook Assignments Submission (Units 6/8/10) (5%)**	**PRIMARY OBJECTIVES** (See the Oral Presentation and Peer-Self Assessment input and practice objectives in Week 12) • act as autonomous learners through online tasks	**SUB OBJECTIVES** (See the Oral Presentation and Peer-Self Assessment input and practice objectives in Week 12 & the Workbook Unit 6/8/10 objective in Weeks 3/4/5)
15-17	**9– 24 January**	**FINAL EXAMS – no final exam for ENGL 192**		
		FINAL EXAMS MAKE UPS (27 January) – no final exam makeup for ENGL 192		
	31 Jan. – 02 Feb.	**Online Application for Resit Examinations**		
	9-15 February	**Fall Term Resit Examinations**		

This is a provisional schedule and is open to modification according to the rate of progress and instructor assessment of the particular needs of individual groups.

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF ARTS AND SCIENCES
DEPARTMENT OF MATHEMATICS
COURSE POLICY SHEET

Course Title	Basic Mathematics
Course Code	MATH133
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3,0,1) 3
Prerequisite	-
Language	English
Level	First Year
Teaching Format	3 Hours Lecture and 1 Hour Tutorial per week
ECTS Credit	6
Course Web Site	https://lms.emu.edu.tr

Instructors(s)	Dr. Nil Gürbüz	**Office Tel:**	+90 392 630 1010
e-mail(s)	nil.gurbuz@emu.edu.tr	**Office No:**	AS108

Course Description

Equations and inequalities; solving first degree equations in one variable, solving second degree equations in one variable, quadratic formula, inequalities and their solutions, absolute value relationship. Exponential and logarithmic functions and their properties, exponential and logarithmic functions with base e. Function, domain and range, types of functions; linear, quadratic, polynomial functions, graphs of linear and quadratic.. Differentiation: limits, limit properties, the derivative, rules of differentiation, first derivative test, increasing and decreasing functions, higher order derivatives, second derivative test, concavity, curve sketching. Integral calculus: rules of integration, substitution technique, definite integral, applications of definite integral.

General Learning Outcomes

On successful completion of this course, students should be able to:

- Describe the solution set of first and second degree equations and inequalities.
- Describe domain, range, inverse and composition of functions.
- Sketch graph of linear and quadratic functions.
- Define exponential and logarithmic functions with their properties and graphs.
- Describe solution set for exponential and logarithmic equations.
- Describe limit of a function and calculate some indeterminate limits.
- Define the meaning of derivative and the rules of differentiation for some basic functions.
- Describe how to use derivative for finding local maximum, local minimum and concavity of a function.
- Define the meaning of integration and use basic integration techniques.
- Define the define integral and use it for calculating areas.

Teaching Methodology / Classroom Procedures

- The course has three hours of lectures in a week. Lecture notes are written on the board.
- Exercises are regularly distributed to the students and they are encouraged to solve the questions in order to learn
- To use the techniques given in the class.
- There is one hour tutorial session per week which is organized for solving questions related to lectures and encourage students to voice their difficulties about solving these questions.

- There is a written midterm 1 exam which covers the topics :Equations, Inequalities, Functions, Exponential and Logarithmic functions
- There is a written midterm 2 exam which includes the topics: Limits and Derivatives.
- There is a written final exam which includes all the topics.
- Class attendance is compulsory. Lecture notes are written on the board and whenever needed, discussions and quizzes can be done to get feedbacks about the given subjects.

Course Materials / Main References
Text Book: Lecture notes are written on the board in every lecture by supporting with necessary exercises. ***Resource Books:*** 1. Michael Sullivan, *Precalculus, Graphing, Data and Analysis,* Prentice Hall, 3rd Edition, 2003, ISBN-13: 978-0536978370 2. F. S. Budnick, *Applied Mathematics for Business, Economics and Social Sciences,* McGraw Hill Higher Education, 4th Edition, 1993, ISBN-13: 978-0071125802 3. R. A. Adams, *Calculus, A Complete Course,* Addison-Wesley, 3rd Edition, 1994

Weekly Schedule / Summary of Topics	
Week 1	**Equations:** Solving first degree equations in one variable, solving second degree equations in one variable using factorization or quadratic formula.
Week 2	**Inequalities:** Linear and quadratic inequalities, sign tables.
Week 3	**Functions**: Domain and Range of a function, types of functions, graph of linear and quadratic functions, combination of functions.
Week 4	Composition of functions, finding inverse of a function.
Week 5	**Exponential Functions:** Definition of exponential functions and their graphs, properties of exponential functions, exponential functions with base-e.
Week 6	**Logarithmic Functions:** Logarithmic functions, natural logarithmic functions and their graphs.
Week 7	Properties of logarithmic functions, solving exponential and logarithmic equations.
Week 8-9	**MIDTERM EXAMS**
Week 10	**Limits:** Definition of limit, properties of limits, calculating limits from graph of a function. Evaluating some indeterminate limits.
Week 11	**Derivatives:** Derivative and its meaning, rules of differentiation, derivative of exponential and logarithmic functions, higher order derivatives.
Week 12	Increasing and decreasing functions, First derivative test, local maximum and local minimum. Concavity, curve sketching
Week 13	**Integral Calculus:** Rules of integration, substitution technique.
Week 14-15	Definite Integral, Applications of definite integral, Use of definite integrals for calculating areas
Week 16-17	**FINAL EXAMS**

Requirements
- Each student can have only one make-up exam. One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. Time and place of the make-up exams will be announced later. - Students who do not pass the course and fail to attend the lectures regularly may be given NG grade. - You must collect at least 50% of the total marks in order to pass the course. - It is compulsory to show student identification card, in order to be able to attend examinations. Those who will not be able to show identification card will not be allowed to attend the examination.

Method of Assessment			
Evaluation and Grading	**Midterm Exam 1**	**Midterm Exam 2**	**Final Exam**

Percentage	30 %	30 %	40 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 - 39

* Letter grades will be decided upon after calculating the averages at the end of the semester and distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY

FACULTY OF ARTS AND SCIENCES

DEPARTMENT OF MATHEMATICS

COURSE POLICY SHEET

Course Title	Discrete Mathematics for Information Technology
Course Code	MATH134
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3,0,1) 3
Prerequisite	MATH133
Language	English
Level	First Year
Teaching Format	3 Hours Lecture and 1 Hour Tutorial per week
ECTS Credit	6
Course Web Site	-

Instructors(s)	Dr. Hasan Temizkan	**Office Tel:**	+90 392 630 2345
e-mail(s)	hasan.temizkan@emu.edu.tr	**Office No:**	AS 146

Course Description

This course introduces the fundamental techniques in Discrete Mathematics for the application in information technologies. Topics include sets, relations, functions, Boolean algebra, mathematical induction, recursion, the principle of inclusion-exclusion, the multiplication and addition rules, the pigeonhole principle, the permutations and combinations, graphs, path and circuits, trees, minimum spanning tree algorithms.

General Learning Outcomes

On successful completion of this course students should be able to:

- apply the operations on sets;
- provide the basic concepts of binary relations;
- identify functions, the classes (types) of functions, inverses and compositions;
- demonstrate understanding of Boolean algebra, truth tables and logic gate functions;
- solve the problems of mathematical induction;
- demonstrate understanding of recurrence relation;
- understand and use such counting principles as the principle of inclusion-exclusion, the multiplication and addition rules, the pigeonhole principle; the permutations and combinations;
- use the basic properties of graphs;
- identify the properties of circuits, trees, and spanning trees;
- apply the algorithms for finding minimum spanning trees.

Teaching Methodology/Classroom Procedures

- Each week there are three lecture sessions and one tutorial session.
- Students' ideas will be enriched by explicit examples in tutorial sessions by the assistant.

Course Materials / Main References
Textbooks: • *R. Bashirov, Discrete Mathematics, 1st Edition, EMU Press, 2022.* • Goodaire E. G., Parmenter M. M., *Discrete Mathematics with Graph Theory*, Prentice Hall, 2006. • McEliece, R. J., Ash, R. B., Ash, C. *Introduction to Discrete Mathematics*, McGraw-Hill, 1989.

Weekly Schedule / Summary of Topics	
Week 1	Sets, operations on sets. Binary relations, equivalence relations.
Week 2	Partial orders, Hasse diagram, Functions, domain, target and range of the function.
Week 3	Injective, surjective, bijective and inverse functions, composition of the functions.
Week 4	The cardinality of a set. Propositions and well-formed propositions.
Week 5	Basic Boolean functions. Truth tables. Digital logic gates, minterm and maxterm expansions.
Week 6	The basic theorems of Boolean algebra. Simplifying Boolean functions with Karnaugh maps.
Week 7	Mathematical induction. Recursively defined sequences.
Week 8	**Midterm Exams**
Week 9	**Midterm Exams**
Week 10	Solving second-degree homogenous recurrence relations. The principle of Inclusion-Exclusion.
Week 11	The Addition and Multiplication rules. The Pigeonhole Principle.
Week 12	Permutations, combinations. Repetitions, derangements.
Week 13	The Binomial Theorem. Graphs and trees. Definitions and basic properties.
Week 14	Graph isomorphism. Eulerian circuits, Eulerian trails. Hamiltonian circuits. Adjacency matrix. Properties of trees, spanning trees. Minimal spanning trees. Kruskal's and Prim's algorithms.
Week 15-16	**Final Examinations**

Requirements
▪ One who misses an exam can be given a make-up exam. A medical report or a valid excuse within 3 days after the missed exam should be provided. The make-up exam will be done at the end of the semester. There will be no make-up quizzes. ▪ Students who miss all the quizzes and exams will be given NG grade.

Method of Assessment			
Evaluation and Grading	**Midterm exam 1**	**Midterm exam 2**	**Final Exam**
Percentage	30 %	30 %	40 %

Grading Criteria											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	40 - 49	0 - 39

EASTERN MEDITERRANEAN UNIVERSITY
FACULTY OF ARTS AND SCIENCES
DEPARTMENT OF MATHEMATICS
COURSE POLICY SHEET

Course Title	Introduction to Statistics
Course Code	MATH211
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(3,0,1) 3
Prerequisite	-
Language	English
Level	Second Year
Teaching Format	3 Hours Lecture and 1 Hour Tutorial per week
ECTS Credit	6
Workload of a student	180 Hours
Course Web Site	https://lms.emu.edu.tr

Instructor	Dr. Övgü Çıdar İyikal	**Office Tel**	+90 392 6302281
E-mail	ovgu.cidar@emu.edu.tr	**Office No**	AS118

Course Description

This course is designed to give the student a clear understanding of the basic statistical concepts. Frequency distribution, measures of central tendency and measures of dispersion, some elementary probability concepts and several important distribution functions, and the concept of regression will enable the student to gain a good statistical reasoning in dealing with practical problems in his/her career.

General Learning Outcomes

On successful completion of this course, all students will have developed knowledge and understanding of:

- Basic probability concepts,
- Conditional probability and independence of events
- Some important discrete and continuous probability distributions.
- Sample and population concepts, raw data, graphing data and drawing conclusions from processed data
- Some introductory concepts of estimation of population parameters using sample statistics

On successful completion of this course, all students will have developed their skills in:

- Probability related matters and their practical use,
- Essential statistical knowledge towards statistical decision making.
- On successful completion of this course, all students will have developed their appreciation of and respect for values and attitudes regarding the issues of:
- Probability's role in life,
- Decision making based on statistical knowledge,
- Application areas of probability and statistics in their professions.

Teaching Methodology / Classroom Procedures

- Each week there are two lecture sessions where the basic concepts and theory is taught.
- In the one tutorial session each week, where mainly application oriented problems are solved and explained.
  - Students are encouraged to study on daily basis by frequent assignments, enabling the understanding of main concepts of probability and statistics.

Course Materials / Main References
Text Book: Probability and Statistics for Engineers and Scientists, Ronald Walpole, Raymond and Sharon Myers. 6th Edition, ISBN: 0-13-095246. Prentice Hall 1998. ***Resource Books:*** 1. Probabaility and Statistics for Engineering and the Sciences, Jay L. Devore, 2012, ISBN: 978-0-8400-6827-9. 2. Statistics. Schaum's Outline Series. M. R. Spiegel, L. J. Stephens. 3rd Edition. ISBN: 007060281-6. McGraw Hill, 1999. ***Lecture Notes:*** Notes taken by students during lectures and tutorials.

Weekly Schedule / Summary of Topics	
Week 1	**INTRODUCTION, PROBABILITY:** Sample Space. Events, Mutually Exclusive events. Counting Sample Points. Multiplication Rule. Permutations and Combinations. Probability of Events. Additive and Multiplicative Rules.
Week 2	**RANDOM VARIABLES AND PROBABILITY DISTRIBUTIONS:** Probability of an event. Random variables and Probability Distribution. Discrete Probability Distribution. Cumulative Distribution. Continuous Distributions, Binomial Distribution, Multinomial Distribution, Hypergeometric, Poisson and Normal Distributions.
Week 3	**FREQUENCY DISTRIBUTIONS:** Raw data arrays. Class intervals, class limits, class boundaries, class interval size, class mark, frequency tables.
Week 4	**FREQUENCY DISTRIBUTIONS:** Frequency Distributions. Frequency and relative frequency histograms and frequency polygon.
Week 5	**FREQUENCY DISTRIBUTIONS:** Cumulative frequency and relative cumulative frequency histogram and ogive line.
Week 6	**THE MEASURES OF CENTRAL TENDENCY:** Index of subscripts notation. Summation notation. Measure of central tendency. Weighted arithmetic mean, properties of weighted arithmetic mean.
Week 7	**THE MEASURES OF CENTRAL TENDENCY:** The median and mode. Geometric mean, harmonic mean. Quartiles, deciles and percentiles.
Week 8-9	***MIDTERM EXAMINATION PERIOD***
Week 10	**MEASURES OF DISPERSION:** Dispersion. The range. Computing the variance and standard deviation.
Week 11	**MEASURES OF DISPERSION:** Standardized variable and standard scores.
Week 12	**CURVE FITTING AND METHOD OF LEAST SQUARES:** Relationship between variables. Curve Fitting. Equation of a curve.
Week 13	**CURVE FITTING AND METHOD OF LEAST SQUARES:** Method of least squares. The least square line. The least square parabola.
Week 14	**CORRELATION THEORY:** Correlation and Regression. Linear correlation. Measures of correlation.
Week 15	**CORRELATION THEORY:** Standard error of estimate. Explained and Unexplained variation. Coefficient of correlation.
Week 16-17	***FINAL EXAMINATION PERIOD***

Requirements
▪ It is compulsory to show student identification card, in order to be able to attend examinations. Those who will not be able to show identification card will not be allowed to attend the examination. ▪ Students are compulsory to attend the examinations in the scheduled rooms. They will not be allowed to attend the examination in a room which is not scheduled for them. ▪ Students may check their examination papers within a pre announced period of time. Information about this matter will be given in the instructions of each of the examinations. ▪ Time and place of the Midterms make-up exams will be announced later. ▪ **Students missing Final examination have to provide a valid excuse latest on 3 days after exam; otherwise their final score will be considered to be "zero". Makeup for Final examination will be the RESIT examination.** ▪ There will be No make-up exam for two exams. ▪ Students who do not pass the course and fail to attend the lectures regularly may be given NG grade. ▪ You must collect at least 50% of the total marks in order to pass the course.

Evaluation and Grading	Midterm Exam 1	Quizes	Final Exam
Percentage	35 %	20 %	45 %

Grading Criteria *											
A	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**C-**	**D+**	**D**	**D-**	**F**
85 -100	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	56 - 59	53 - 55	50 - 52	46 – 49	40 - 45	39 - 0

* Letter grades will be decided after calculating the class average at the end of the semester and distribution of the grades will play a significant role in the evaluation.

FACULTY OF BUSINESS AND ECONOMICS
DEPARTMENT OF BUSINESS ADMINISTRATION

SPRING 2026

COURSE CODE AND TITLE : MGMT 101 – Introduction to Business I

COURSE LEVEL : First Semester/First Year

COURSE TYPE : Area Core

LECTURERS

Group: 1 : Seldjan Timur Office: BE 285 (Business, 3rd floor)
Tel: 630 2434 e-mail: selcan.timur@emu.edu.tr

Groups: 2, 3, 6
: Dr. Bakiye Yalinc
Tel: 630 1206 e-mail: Bakiye.yalinc@emu.edu.tr

Dr. Mustafa Cangar Office: BE159
Groups: 4, 5 : +905338411994 mustafa.cangar@emu.edu.tr

CREDIT VALUE : 3 credits

ECTS VALUE : 6 credits

PREREQUISITES : None

COREQUISITES None

DURATION OF COURSE : One semester

COURSE COORDINATOR : Seldjan Timur (Office BE 285; Tel: 630 2434)

CLASS SCHEDULE : Check your own timetable

WEB LINK : http://lms.emu.edu.tr/

Course notes will be placed on-line. (**LMS**: MGMT101-**ALL**_2025-262)

More information will be provided by your instructor.

OFFICE HOURS : To be announced by each instructor

TEXTBOOK : *Ferrell et al. Business Foundations: A Changing World 13e, 2022*

CATALOG DESCRIPTION
This is the first part of a two-part series of introductory courses in essentials of business management. The course is comprised of two parts:
Part One deals with understanding of the contemporary business environment, in which topics covered include an understanding of the business system; the global context of business; conducting business ethically and responsibly; entrepreneurship and small businesses.
Part Two focuses mainly on helping the student to understand the business of managing. In this part topics such as managing the business enterprise, organizing the business enterprise and managing quality operations are covered.

AIMS AND OBJECTIVES
The aim of the course is to provide you with a basic understanding and appreciation of the functioning of a business enterprise on a national and international scale. As such, the course will emphasize basic concepts and issues peculiar to the effective organization and management of business enterprises.

GENERAL LEARNING OUTCOMES
On successful completion of this course, all students will have developed knowledge and understanding of:

- the nature of business and its environment
- the global nature and context of business
- organizing and managing a business

On successful completion of this course, all students will have developed their skills in:

- appreciation of the significance of businesses in the production of goods and services
- appreciation of the importance of business management in the welfare of economies and the people
- extracting relevant and useful information from reading material, both printed and digital

On successful completion of this course, all students will have developed their appreciation of and respect for values and attitudes regarding the issues of:

- entrepreneurship
- globalization
- ethics and responsibility in business
- successful organization and management of organizations

RELATIONSHIP WITH OTHER COURSES
This is the first part of a two-part series of introductory courses in essentials of business management. Students who sucessfuly complete this course will take MGMT 102 – Introduction to Business II.

LEARNING/TEACHING METHOD
Lectures, class discussions, reading material from textbook, lecture notes on the Web, quizzes, exams, assignments

ASSIGNMENTS
Assignments will be given to enhance the students' understanding of the topics covered and to hone their information mining and gathering skills.

INDICATIVE BASIC READING LIST
None

EXTENDED READING LIST
None

SEMESTER OFFERED
Fall and Spring Semesters

CONTENT AND SCHEDULE

Week	Date	Lecture topics	Chapter
1	February 23 - 27	Course introduction and overview	
2	March 2-6	The Dynamics of Business and Economics	1
3	March 9-13		1
4	March 16 – 19	Business Ethics and Social Responsibility	2
5	March 23 – 27		2
6	March 30 – April 3	Business in a Borderless World	3
7	April 6 – 9	Options for Organizing Business	4
MIDTERM EXAM PERIOD April 10– 25			
10	April 27 – May 1	Small Business, Entrepreneurship and Franchising	5
11	May 4 - 8	The Nature of Management	6
12	May 11 – 15	Organizing, Teamwork and Communication	7
13	May 18-22		
	May 26 – 30	Religious holiday	
14	June 1-5	Managing Operations and Supply Chains	
15	June 8-11		8
	June 11	LAST day of the Semester	
FINAL EXAM PERIOD June 15 - 27, 2026			

METHOD OF ASSESSMENT

Midterm Examination (Chapters 1, 2, 3 & 4)	40 %
Final Examination (Chapters 5, 6, 7 & 8)	40%
2 Quizzes (best one!)	20 %
Attendance is compulsory	
TOTAL	100 %

NOTE: COURSE GRADES ARE DETERMINED BY YOUR PERFORMANCE AND NOT BY INDIVIDUAL NEEDS OR PROBLEMS

Letter Grades

A	85-100%	C	60-62%
A-	80-84%	C-	57-59%
B+	75-79%	D+	54-56%
B	70-74%	D	50-53%
B-	67-69%	D-	45-49%
C+	63-65%	F	0-44%

COURSE POLICIES

1. Attendance is ***compulsory***. Regular class attendance is strictly required. You are also expected to be present in the classroom *on time*.
2. Exams will include assigned readings in your text as well as material covered during the class meetings.
3. During the course of the semester, there will be two *announced quizzes*; both before and after the midterm exam. Quizzes are intended to motivate the student to study and attend the classes regularly. There will be NO make-ups for quizzes. WHEN PROVIDING ANWERS TO QUIZZES YOU SHOULD USE YOUR OWN WORDS AND USE MATERIAL PROVIDED IN THE CHAPTERS AND SLIDES. ANSWERS BASED ON ARTIFICIAL INTELLIGENCE (E.G. CHATGPT) QUERIES WILL NOT BE GRADED.
4. *Make-up Policy for the EXAMS (Midterm and Final)*
   You are expected to take the exams on the days at which they are given. Therefore you should make every effort to take good care of yourselves in order not to get sick during the exam periods. Any student absent from an exam and able to provide a reasonable excuse within *three* days following the exam will be able to write the make-up exam.
5. Behavior befitting a mature university student is expected of you at all times.
6. Mobile phones should definitely be turned off during the class meetings, examinations, and quizzes.

Important note:

Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Penalties and/or disciplinary proceedings may be initiated against a student accused of academic dishonesty.

Academic dishonesty includes, but not limited to, **"plagiarism"** and "**cheating**" on a test.

"**Cheating**" on a test includes:

- Copying from another student's test paper.
- Working collaboratively in tests, which are supposed to be submitted individually.
- Using materials during a test that are not authorized by the person giving the test.
- Collaborating with another student during a test without authority.
- Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or in part the contents of an unadministered test.
- Bribing another person to obtain a test that is to be administered.
- Purchasing a test and submitting it.

"**Plagiarism**" is intentionally failing to give credit sources used in writing regardless of whether they are published or unpublished.

Academic dishonesty will not be tolerated under any circumstances. Cheating, plagiarism or etc is disciplinary offence and will be dealt with accordingly.

Please be informed that student attendance is monitored and assessed by the course instructor. As per Faculty Council Decision 2018-2019/11, students who fail to attend the minimum required number of classes will be considered unsuccessful in the course and may receive an **NG (Nil Grade) grade**. If you have any special circumstances or problems that affect your class attendance, inform your instructor. Your special circumstances or problems will be assessed by the course instructor.

MGMT 401 MANAGEMENT INFORMATION SYSTEMS

COURSE OUTLINE

Course Code	MGMT401	**Course Title**	Management Information Systems
Semester	Spring and Fall	**Language**	English
Category	AC (Area Core)	**Level**	Fourth Year
Workload		**Teaching Format**	3 hours of lectures and 1 hour of tutorial per week
EMU Credit	(3,0,1) 4	**ECTS Credit**	6
Prerequisite(s)		**Course Web**	

Instructors(s)	Res. Asst. Abolfazl Damankeshan		
e-mail(s)	Abolfazl.damankeshan@emu.edu.tr	**Office No:**	BE265

Course Description

This course demonstrates how information technology continually enhances our capabilities to observe, to relate, and to decide at various managerial positions in an enterprise and how it provides us with new models to organise economic activities within and across firms. In this respect, students are taught to observe how IT has been shaping the way we do business over the past decades and extrapolate such trends into the future in order to critically discuss the strengths and shortcomings of contemporary information systems so that as future managers they become more discerning about how they deploy IT in their enterprise. The main topics include strategic use of information systems, enterprise (ERP) systems (including various intranet and extranet applications regarding employees, suppliers, and customers), electronic commerce, knowledge management systems, and decision support systems. Issues regarding systems development, outsourcing, global IS systems, and financial evaluation of IS investments are also discussed in relation to the main topics.

General Learning Outcomes

On successful completion of this course students should be able to:

- Describe how advances in IT influenced evolution of the organisation of economic activity in and across the boundaries of the firm, and information, knowledge and decision related processes within it.
- Describe how information systems serve the various levels of management in an enterprise
- Describe how information systems support various business strategies.
- Explain how ERP and internet shape intra- and inter-organisational operations and customer relationships.
- Compare various business models for electronic and mobile commerce.
- Explain the impact of IT on knowledge management and organisational learning.
- Analyse how information systems facilitate managerial, group, and customer decision making.

Teaching Methodology/Classroom Procedures

- Each week there are three lecture sessions and one tutorial session.
- Tutorials are organized in parallel to the lectures and enable students to discuss lecture material and raise issues they want to clarify or further deliberate upon.
- Students are also provided with and asked to comment upon case studies and further investigation topics so that they broaden their vision beyond the lecture materials. Lecture notes and announcements will be posted on the course's web site.

Course Materials / Main References

Text Book:

Laudon and Laudon, Essentials of Management Information Systems, Global 10th Ed., Pearson, 2013.

Resource Books:

1. Valacich and Schneider*, Information Systems Today*, 5th Edition, Pearson, 2012.
2. McKeen and Smith, *IT Strategy*, 2nd Edition, Pearson, 2012.
3. Motiwalla and Thompson, *Enterprise Systems for Management*, 2nd Edition, Pearson, 2012.
4. Turba, Sharda, and Delen, *Decision Support and Business Intelligence*, 9th Edition, Prentice-Hall, 2000.

Lecture Notes:

Students are expected to attend lectures and to prepare their own lecture notes. Any additional reading materials (but not lecture notes) will be made available online.

Weekly Schedule / Summary of Topics	
2 weeks	**Information Systems in an Enterprise:** The role of information systems in business today, overview of various information systems in an enterprise, transaction processing systems, management information systems, decision support systems, executive support systems, intranets and extranets.
1 week	**Information Systems and Strategy:** Porter's Competitive Forces Model, using IS to achieve sustainable competitive advantage, aligning IT with business objectives.
2 weeks	**ERP Systems:** Using enterprise systems, supply chain management systems, and customer relationship management systems for operational excellence within the firm and for high levels of cooperation and intimacy with suppliers and customers.
2 weeks	**Electronic Commerce:** rising significance of electronic and mobile commerce channels, digitization of products and services, internet business models, web personalization, product customization, potential hot ecommerce areas and ecommerce challenges for future.
2 weeks	**Managing Knowledge and Collaboration:** Tacit-explicit spectrum of knowledge, knowledge as an asset, managing knowledge and fostering organizational learning, various knowledge related systems in the enterprise ranging from expert systems to case-based reasoning systems and intelligent agents.
2 weeks	**Enhancing Decision Making:** Types of decisions, decision support systems, geographic information systems, executive support systems, customer DSS, group decision support systems.
1 week	**Review**

Requirements
▪ Each student is expected to do required readings from the main textbook prior to the lectures. ▪ Those who miss midterm exam shall take midterm makeup, which takes place in the first or second week after the midterm exam week. Those who miss the final exam will take the final makeup exam. There is no makeup for quizzes.

Method of Assessment				
Evaluation and Grading		**Quizzes**	**Midterm Exam**	**Final Exam**
Percentage		30 %	30 %	40 %