EASTERN MEDITERRANEAN UNIVERSITY (EMU)

SCHOOL OF COMPUTING AND TECHNOLOGY (SCT)

DEPARTMENT OF INFORMATION TECHNOLOGY

Information Technology

Bachelor's Programs

MODULES HANDBOOK

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Web: English Program and Turkish Program

BS Degree in Information Technology (English)
4-Year Curriculum

FRESHMAN YEAR

First Year Fall Semester (16/139 Credits, 28/240 ECTS)

Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit (Le/La/T)	EMU	ECTS	Prerequisites
1	35711	ITEC103	Information Technology Fundamentals	AC	(2,2,0)	3	2	
1	35712	ITEC113	Algorithms and Programming Techniques	AC	(3,2,0)	4	9	
1	35713	ITEC161	Introduction to Business	AC	(3,0,0)	3	7	
1	35714	MATH133	Basic Mathematics	AC	(3,0,1)	3	6	
1	35715	ENGL191	Communication in English - I	UC	(3,0,1)	3	4	

First Year Spring Semester (18/139 Credits, 32/240 ECTS)

Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit (Le/La/T)	EMU	ECTS	Prerequisites
2	35721	ITEC114	Structured Programming	AC	(3,2,0)	4	9	ITEC113
2	35722	ITEC122	Introduction to Multimedia	AC	(2,2,0)	3	7	ITEC103
2	35723	MATH134	Discrete Mathematics for Information Technology	AC	(3,0,1)	3	6	MATH133
2	35724	ENGL192	Communication in English - II	UC	(3,0,1)	3	4	ENGL191
2	35725	TUSL181 HIST280	Turkish as a Foreign Language History of Turkish Reforms	UC	(2,0,0)	2	2	
2	35726	UE-01	University Elective - I	UE	(3,0,0)	3	4	

SOPHOMORE YEAR

Second Year Fall Semester (18/139 Credits, 30/240 ECTS)

Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit (Le/La/T)	EMU	ECTS	Prerequisites
3	35731	ITEC212	Database Management Systems	AC	(3,2,0)	4	6	
3	35732	ITEC213	Data Structures and Applications	AC	(3,2,0)	4	6	ITEC114
3	35733	ITEC215	Human Computer Interaction	AC	(3,0,1)	3	6	
3	35734	ITEC229	Client-Side Internet and Web Programming	AC	(3,2,0)	4	6	
3	35735	ITEC255	Computer Organization and Architecture	AC	(3,0,1)	3	6	

Second Year Spring Semester (20/139Credits, 30/240 ECTS)

Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit (Le/La/T)	EMU	ECTS	Prerequisites
4	35741	ITEC202	Operating Systems	AC	(3,2,0)	4	6	ITEC255
4	35742	ITEC224	Database Programming	AC	(3,2,0)	4	6	ITEC212
4	35743	ITEC230	Rich Internet Application (RIA) Development	AC	(3,2,0)	4	6	ITEC229
4	35744	ITEC243	Object Oriented Programming	AC	(3,2,0)	4	6	ITEC114
4	35745	ITEC259	Digital Logic Design	AC	(3,2,0)	4	6	

JUNIOR YEAR

Third Year Fall Semester (18/139 Credits, 31/240 ECTS)

Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit (Le/La/T)	EMU	ECTS	Prerequisites
5	35751	ITEC309	Computer Networks - I	AC	(4,0,0)	4	7	
5	35752	ITEC315	System Analysis and Design	AC	(3,2,0)	4	8	
5	35753	ITEC327	Server-Side Internet and Web Programming	AC	(3,2,0)	4	6	ITEC230, ITEC212
5	35754	MATH211	Introduction to Statistics	AC	(3,0,1)	3	6	
5	35755	UE-02	University Elective - II	UE	(3,0,0)	3	4	

Third Year Spring Semester (17/139 Credits, 29/240 ECTS)

Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit (Le/La/T)	EMU	ECTS	Prerequisites
6	35761	ITEC310	Computer Networks - II	AC	(3,2,0)	4	7	ITEC309
6	35762	ITEC314	Multi-Platform Programming	AC	(3,2,0)	4	6	ITEC243
6	35763	ITEC316	Software Engineering	AC	(3,0,1)	3	7	ITEC315
6	35764	ITEC317	Ethical and Social Issues in Information Systems	AC	(3,0,0)	3	3	
6	35765	AE-01	Area Elective I	AE	(3,0,0)	3	6	

SENIOR YEAR

Fourth Year Fall Semester (17/139 Credits, 32/240 ECTS)

Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit (Le/La/T)	EMU	ECTS	Prerequisites
7	35771	ITEC400	Summer Training	AC	(0,0,0)	0	1	
7	35772	ITEC403	Graduation Project Orientation	AC	(1,0,0)	1	3	
7	35773	ITEC413	Information System Security	AC	(3,2,0)	4	5	
7	35774	ITEC415	Analysis of Algorithms	AC	(3,0,1)	3	6	
7	35775	ITEC421	Management Information Systems	AC	(3,0,1)	3	5	
7	35776	AE-02	Area Elective - II	AE	(3,0,0)	3	6	
7	35777	AE-03	Area Elective - III	AE	(3,0,0)	3	6	

Fourth Year Spring Semester (15/139 Credits, 28/240 ECTS)

Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit (Le/La/T)	EMU	ECTS	Prerequisites
8	35781	ITEC404	Graduation Project	AC	(3,0,0)	3	6	ITEC403
8	35782	AE-04	Area Elective - IV	AE	(3,0,0)	3	6	
8	35783	AE-05	Area Elective - V	AE	(3,0,0)	3	6	
8	35784	AE-06	Area Elective - VI	AE	(3,0,0)	3	6	
8	35785	UE-03	University Elective - III	UE	(3,0,0)	3	4	

AC = Area Core   AE = Area Elective   UC = University Core   UE = University Elective

Le = Lecture Hours   La = Lab Hours   T = Tutorial Hours

Non-Turkish speaking students should take: TUSL181 - Turkish speaking students should take: HIST280

Course Title	Information Technology Fundamentals
Course Code	ITEC103
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(2,2,0) 3
Prerequisite	-
Language	English
Level	First Year
Teaching Format	2 Hours Lecture and 2 Hour Lab per week
ECTS Credit	6
Course Web Site	WWW.LMS.EMU.EDU.TR

Instructor(s)	Halide Sarıçizmeli	**Office Tel**	+90 392 6301661
E-mail	halide.saricizmeli@emu.edu.tr	**Office No**	CT111

Course Description

This course is an introduction to the world of Computing and Information Technology (IT). Today, we are all part of an exploding Information Society and in this dynamic new society people at homes, schools, institutions and businesses are engaged in an ever- growing partnership with computers. Computers and Information Technology are part of just about everything we do at work and at home. And the fact is that, computers will play an even greater role in our lives in the years to come.

The course presents the basic description of information technology concepts, basic computer system hardware and software components, common terminology in information technology, application areas, and integration of computer system components.

General Learning Outcomes

On successful completion of this course students should:

- Define History of Computing (IT)
- Interpret the Components of a Computer System
- Calculate binary numbering systems
- Define pervasive themes in information technology
- Identify Information Technology Concept
- Identify importance of Computer Network
- Identify Computer Crimes, Security and Computer Ethics
- Operate computers effectively
- Practice Microsoft Office Tools such as Word, Excel, Power Point and Access as well as Internet

Teaching Methodology / Classroom Procedures

- The course has 2 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 with an experience of keyboarding, use of popular Microsoft Office tools such as Word and Excel as well as the use of Internet.
- Lecture notes 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 Office tools.
- There is a written midterm exam.
- There is a written final exam.
- 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.

Course Materials / Main References
Text Book:
LaBerta, Catherine. Computers are your future. 12th ed. Boston, MA: Prentice Hall, 2012. Print. ISBN NO: 0-13-254518-7
Lecture Notes:
All course materials are also available online in PPT format on course web site.

Weekly Schedule / Summary of Topics	
Week 1	Introduction to the course procedures, introduction to the computing facilities used in the department
Week 2	**History of computing technology:** Social history of computing impacts, Development of user interaction, History of the Internet
Week 3	**Computers and You :** Understanding the computer basic Definitions, Input Processing, Output, Storage, Communications and the information processing cycle in Action
Week 4	**Binary numbering System**: what is numbering system? converting binary to decimal and decimal to binary, calculations(additions).
Week 5	**System Unit:** How computers represent data, introducing the system unit, inside the system unit, what's on the motherboard, what's on the outside of the box
Week 6	**Input, output and storage:** Input devices, output devices, storage devices
Week 7	**System Software:** The operating system, exploring popular operating system, system utilities.
Week 8-9	**MIDTERM**
Week 10	**Application software:** General purpose application, Tailor made application, standalone programs , Integrated programs and software suites, system requirements and software versions, software license and registration, installing and managing application software
Week 11	**The Internet & The World Wide Web:** Web How the internet works, Accessing the internet, the internet and the web, finding information on the web, Exploring internet services

Week 12	**Networks:** Network fundamentals, advantages and disadvantages of networking, local area networks , Wide area networks. **Wired & Wireless Communication:** Moving Data, Wired and wireless transmission media, Wired transmission via the public switched Telephone, Convergence, wired and wireless applications.
Week 13	**Privacy, Crime and Security:** Ethics, Privacy in cyberspace, computer crime and cybercrime, security, the encryption debate.
Week 14	**Pervasive Computing:** History of pervasive computing, Advantages of pervasive computing, Application of pervasive computing, Use of pervasive computing, problems and challenges
Week 15	**Ethics:** Computer ethics of computer user, ethical principles, computer ethics for organizations, software privacy, **Cloud Computing:** characteristics of cloud computing, cloud computing service categories, cloud deployment method, advantages and disadvantages of cloud computing, the future of cloud computing.
Week 16-18	Final

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	Class Quizzes	Lab work	Midterm Exam	Final Exam
Percentage	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.

Course Title	Algorithms and Programming Techniques
Course Code	ITEC113
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(3,2,0) 4
Prerequisite	-
Language	English
Level	First Year
Teaching Format	3 Hours Lectures and 2 Hour lab per week
ECTS Credit	9 [What is ECTS? Why ECTS is needed? How does it work?](#)
Workload of a Student	270 Hours/270 saat
Course Web Site	https://lms.emu.edu.tr

Instructor	Yesim Kapsıl Çırak	**Office Tel**	+90 392 6302310
E-mail	yesim.kapsil@emu.edu.tr	**Office No**	CT216

Course Description

This course is the first ring of the chain of Algorithms and Programming courses aiming to introduce students to the manner of thought in programming. The course aims to give an introduction to problem solving techniques and programming using structured programming approach. The applications will be performed using C language. The course will provide the students with the programming and analytical foundations that will be used in all consecutive IT related courses. One of the main objectives is to endow the student with critical thinking skills in programming. In the first part of the course, students earn the required skills about the thought of programming using flowcharts and pseudo-code. In the second part, a general purposed programming language, C, is being taught to the students in order to fortify their programming skills.

General Learning Outcomes

On successful completion of this course students should be able to:
- Develop knowledge and understanding of problem analysis and solution design
- Develop algorithms using flowcharts
- Develop algorithms using pseudo code
- Use input/output operations in C
- Use selection statements
- Make use of loops for iterative operations
- Define and use 1 D Arrays Develop knowledge and understanding of problem analysis and solution design
- Define and use Functions
- Be able to write complete C programming language

Teaching Methodology

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 the corresponding Lab Assignments in printed form at the start of each Lab Session

Every week the student has to follow the following :

- Two 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
- One hour of tutorial session
- 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 web (http://http://lms.emu.edu.tr)
- There is written midterm exams which covers Algorithms, introduction to C programming subjects and C control structures.
- There is a written final exam which covers all topics.

Course Materials

Textbook:

"C How to Program", by DEITEL & DEITEL, 978-0132990448, 2017,7th edition

Weekly Schedule

Week 1	Introduction to Computer Programming Concepts
Week 2-3	Principles of Algorithms
Week 4-5	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 Examinations**
Week 10	C program Control
Week 11-12	C Functions
Week 13-14	C Arrays
Week 15-16	Revision
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.

Method of Assessment

Evaluation and Grading	Lab	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 after calculating the class average at the end of the semester and distribution of the grades will play a significant role in the evaluation.

Course Title	Structured Programming
Course Code	ITEC114
Type	Full Time
Semester	Fall - Spring
Category	AC (Area Core)
Workload	270 Hours
EMU Credit	(3,2,0) 4
Prerequisite	ITEC113
Language	English
Level	First Year
Teaching Format	3 Hours Lecture, 2 Hours Laboratory per week
ECTS Credit	9
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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Introduction to Multimedia
Course Code	ITEC122
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(2,2,0) 3
Prerequisite	ITEC103
Language	English
Level	First Year
Teaching Format	2 Hours Lecture and 2 Hours Laboratory per week
ECTS Credit	7 What is ECTS? Why ECTS is needed? How does it work?
Workload of a student	210 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 aims to introduce the basic multimedia elements namely text, sound, image, video, animation, and to show how to sew these elements together to produce a multimedia project using the current computer technology. It is also designed to provide students with the knowledge of the hardware/software and file types involved in multimedia technology. Upon successful completion of the course, students should be able to understand the major media elements in detail; gain experience of some commercially used multimedia software; develop good-quality multimedia products.

General Learning Outcomes

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

- Develop knowledge and understanding of the basic multimedia elements, and the hardware/software used in multimedia.
- Utilize the multimedia elements to produce and deliver an effective multimedia project.
- Use multimedia development tools such as 3DS Max, Photoshop.
- Capture, and edit sound, image, and video.
- Gain an awareness of the developments in multimedia world.

Teaching Methodology / Classroom Procedures

- 2 hours of lecture and 2 hours of laboratory per week are conducted for this course.
- Laboratory attendance affects the Lab Participation (5% of Grading) while the lecture attendance may have a positive effect on the student's final letter grade.
- There are TWO exams namely Midterm Exam, and Final Exam.
- There are TWO assignments namely Assignment 1, and Assignment 2. The assignments are to be done using different multimedia software packages, and should be submitted to the instructor by e-mail.Class attendance is compulsory.
- The student is responsible to check the course web site regularly and view the latest announcements.

Course Materials / Main References

Textbook:

Tay Vaughan, **Multimedia: Making It Work, Eighth Edition**, McGraw-Hill Technology Education, 2011. ISBN 13: 978-0-07-174846-9

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	Multimedia Definitions, Hardware and Software
Week 3	Text
Week 4	Sound
Week 5	Image
Week 6	Animation
Week 7	Video
Week 8-9	**Midterm Examinations**
Week 10	Sound Capturing / Editing
Week 11	Image Capturing / Editing
Week 12	Image Editing
Week 13	Video Capturing
Week 14	Video Editing
Week 15	Video Editing
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	15 %	10 %	5 %	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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	İşletmeye Giriş Introduction to Business
Course Code	ITEC161
Type	Full Time
Semester	Fall/Spring
Category	Area Core
Workload	210 Hours/210 saat
EMU Credit	(3,0,0) 3
Prerequisite	-
Language	English
Level	First Year
Teaching Format	3 hours lecture per week
ECTS Credit	7
Course Web	lms.emu.edu.tr

Instructor	Esen Ertunga	**Office tel**	+90 392 630 1536
E-mail	esen.ertunga@emu.edu.tr	**Office no**	CT210

Course Description
This course is designed to develop knowledge and understanding of the environment in which business activity takes place such as the way in which changes in that environment influence business behavior, the major groups and organizations within and outside business, the role and purposes of business activity in both the private and the public sector, the ways the main types of business and commercial activities are organized, financed and operated, how business relations with other organizations, consumers, employees, owners and society are regulated.

General Learning Outcomes
On successful completion of this course students should be able to: - Explain what a business is and identify four key social and economic roles that business serve   - what it means to practice good business ethics and analyse factors that influence ethical behaviour   - Explain ways to improve communication in an international business relationship   - Explain the essential functions of a business plan and the importance of preparing a business plan.   - Analyse the forms of business ownership and business combinations.   - Explain the functions and skills of management.

Teaching Methodology   Classroom Procedures
- Each week there are three lecture sessions.   - Lecturing, solving questions, cases, and application of instruments.   - Teamwork and participation is very important for the students   - internet usage is required.   - 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 site.

Course Materials/Ders Materyalleri

Text Book:

No textbook is used directly as a reference for this course.

Lecture Notes:

Lecture notes are available on the course web site in PDF format.

Weekly Schedule Summary of Topics	
Week 1-2	**Business Basic**
Week 3-4	**Economics And Banking**
Week 5	**Ethics In Business**
Week 6	**Business In A Global Economy**
Week 7-8	**Midterm Examinations**
Week 9	**Small Business And The Entrepreneur**
Week 10-11	**Forms Of Busıness Ownershıp**
Week 12-13	**Business Management And Organization**
Week 14-15	**Motivation, Leadership And Teamwork**
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 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 objection about their grades.
- It is the students' responsibility to follow the announcement in the course web site.
- Students who do not pass the course and fail to attend the lectures regularly may be given NG grade.

Method of Assessment				
Evaluation and Grading	**HW**	**Project**	**Midterm Exam**	**Final Exam**
Percentage	5 %	15 %	40 %	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 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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF 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	ITEC255
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)	Sr. Instr. 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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Database Management Systems		
Course Code	ITEC212		
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

This is an introductory course in Database Management Systems. The main aim of the lectures is to teach students how to model the data at the conceptual level and finally implement the model in SQL. The emphasis of the lectures is on practical aspects of data modeling such as creating entity relationship diagrams and normalization. SQL is taught in the laboratories using Oracle. Lab work is designed to teach SQL and in particular Select statement in depth.

General Learning Outcomes

Upon successful completion of this course students should be able to:
- Give a brief history of database models and their evolution
- Explain the basic concepts of Database Management Systems
- Explain the basic concepts of the Entity Relationship Diagram model
- Describe and interpret Entity Relationship diagrams
- Create simple and advanced Entity Relationship diagrams
- Exemplify and practice the rules and techniques of converting Entity Relationship Diagrams to Relational Schema
- Explain the relationship between functional dependencies and keys and give examples
- Explain and examine the concepts of normalization
- Practice the normalization rules
- Distinguish the basics of SQL language
- Exemplify and practice the SQL language to create database tables and manipulate data stored in the tables

Teaching Methodology / Classroom Procedures

The course advances in two branches.
- In the lectures practical data modeling methods are discussed. The students get regular homework every other week from both the lecture and the lab material.
- In the laboratories, SQL is taught using Oracle. 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.
- There is no term project for this course
- At most two quizzes are held during the semester. Quizzes include certain chapters of lectures and labs which are announced before the quizzes.
- The duration of the quizzes is 40 mins.

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 2, 3	**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 4, 5	**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 6, 7	**The Relational Data Model:** Intro to Relational Data Model, From E/R Diagram to Relational Designs, Converting weak entities and subclass structures to relations.
Weeks 8, 9	**Midterm Exams**
Weeks 10,11	**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)
Week 12	**The Relational Data Model:** Boyce-Codd Normal Form (BCNF), and Advanced Examples
Weeks 13,14	**Managing Transactions and Concurrency:** Transaction Properties (ACID), Tasks of Transactions, Design Principles and Modeling of constraints and General Review
Weeks 15-17	**Final Exams**

Weekly Schedule / Summary of Topics for Lab		
Week 1	Lab I	Lab Overview, Introduction to SQL and SQL*Plus
Week 2	Lab II	Oracle Functions - Single Row Functions, Character Functions
Weeks 3, 4	Lab III	Oracle Functions - Conversion Functions, Date Functions
Week 5	Lab IV	Set Operators - Union, Intersect, Minus
Week 6, 7	Lab V	Group (or Aggregate) Functions. *Group by* and *Having* clauses
Week 7	Lab VI	Joins. Retrieving information from multiple tables.
Weeks 8, 9		**Midterm Exams**
Weeks 10	Lab VI	Joins. Retrieving information from multiple tables. Complex Joins- Self Join, Outer Join, etc.

Weeks 11, 12	Lab VII	Sub-Queries – Single and Multiple Row Subquery
Weeks 13, 14	Lab VIII	DDL, DML Commands- Create, Alter, Drop, Insert, Delete, Update DCL Commands - Controlling DB users- Grant, Revoke, and General Review
Weeks 15-17		**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	**Quiz**	**Participation**	**Project**	**Midterm Exam**	**Final Exam**
Percentage	10%	5%	15%	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 the distribution of the averages will play a significant role in the evaluation of the letter grades.

EASTERN MEDITERRANEAN UNIVERSITY/DOĞU AKDENİZ ÜNİVERSİTESİ

SCHOOL OF COMPUTING AND TECHNOLOGY/BİLGİSAYAR VE TEKNOLOJİ YÜKSEKOKULU

DEPARTMENT OF INFORMATION TECHNOLOGY/BİLİŞİM SİSTEMLERİ VE TEKNOLOJİLERİ BÖLÜMÜ

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
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, çeşitli 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.

Course Title	Human Computer Interaction
Course Code	ITEC215
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	Birol Özkaya	**Office Tel**	+90 392 630 1660
E-mail	birol.ozkaya@emu.edu.tr	**Office No**	CT115

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 human perceives and interacts 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.

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.

Teaching Methodology / Classroom Procedures

- 3 hours of lecture and 1 hour of tutorial per week are conducted for this course.
- Lecture attendance affects the Class Participation (5% of Grading), and also may have a positive effect on the student's final letter grade.
- There are TWO exams namely Midterm Exam, and Final Exam.
- There are TWO assignments namely Assignment 1, and Assignment 2. Assignment 1 is to be saved as .DOC (WORD DOCUMENT) format, and should be submitted to the instructor by e-mail whereas Assignment 2 is to be made on paper, and should be submitted to the instructor in class or his office.

Course Materials / Main References

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, assignments, and announcements are available on the course web site.

Weekly Schedule / Summary of Topics	
Week 1	Introduction of the Course
Week 2	Definition of HCI, Overview of User-Centered Development Cycle
Week 3	Human Perception and Memory; Mental Models
Week 4	User and Task Analysis
Week 5	Content Organization
Week 6	Visual Organization
Week 7	Navigation
Week 8-9	**Midterm Examinations**
Week 10	Prototyping
Week 11	User Testing
Week 12	Color
Week 13	Typography
Week 14	Multimedia
Week 15	Multimedia
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 <u>3 days</u> 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/tutorials 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**	**Class 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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Database Programming
Course Code	ITEC224
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(3,2,0) 4
Prerequisite	ITEC212
Language	English
Level	Second Year
Teaching Format	3 hours of lecture, 2 Hours laboratory per week
ECTS Credit	6 What is ECTS? Why ECTS is needed? How does it work?
Workload	180 Hours
Course Web Site	http://lms.emu.edu.tr

Instructor(s)	Assoc. 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. Concepts such as data quality, backup/recover, business rules, and data organization architecture, replication are introduced. Details of the conceptual and logical database design procedure for an enterprise level database, advanced concepts in database design and implementation from the programming perspective are studied in detail in the lectures. Common problems and their solutions, security and access considerations in database design are covered. The labs cover efficient use of SQL for complicated tasks and teach a 3GL database language. The main topics of the laboratory applications are: use of triggers, stored procedures and functions for efficient and more secure implementations of database applications.

General Learning Outcomes
On successful completion of this course students should be able to: - Describe the database development life cycle;   - List and describe the server system architectures   - List phases of database design;   - Explain aims of and approaches used in each database design level   - Analyse data requirements in order to develop a conceptual data model using ERDs   - Design a data model at 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
  - Written exams (midterm and final) that include both lecture and lab related problems
  - Project where students work in pairs to analyze the data requirements of a business and produce a database design and implementation document
  - 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, Pearson 2015
2. Carlos Coronel, Steven Morris , Database Systems: Design, Implementation, & Management, 11th Edition, ISBN-13: 9781285196145 , Course technology, 2015
3. Joseph Adamski, Philip Pratt, Concepts of Database Management, 7th Edition, Course Technology, 2012

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.
2 weeks	**Case Studies**: Designing ERDs using various forms of data requirements such as forms, reports and formal requirements
3 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 week	**Conceptual Database Design:** User views, steps of conceptual design: identifying entities, relationships, attributes attribute domains; integrity constraints; validation.
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 week	**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
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
3 weeks	Final Exams

Requirements
▪ Each student can have only one make-up exam. A medical report or a valid excuse must be submitted to the departmental secretary within 3 days after the missed exam. The make-up exam will be given 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	**Lab Work**	**Quiz**	**Project**	**Midterm Exam**	**Final Exam**
Percentage	10%	10%	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 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.

* 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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Client-Side Internet and Web Programming
Course Code	ITEC229
Type	Full Time
Semester	Fall
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	https://lms.emu.edu.tr

Instructors(s)	Raygan Kansoy	**Office Tel**	+90 392 6301131
E-mail	raygan.kansoy@emu.edu.tr	**Office No**	CT107

Course Description
This course focuses on the client-side of web-application development. The course provides an overview of the history and the development of the Internet and World Wide Web. It is an introduction to the technologies and tools used for searching & programming the web. Key topics include HyperText Markup Language (HTML5) - as the primary language of the web, Cascading Style Sheets (CSS) – for styling the web, and JavaScript – as the most popular language for client-side scripting. Upon completion of the course, students will have acquired the tools and skills necessary to design develop and implement interactive web sites.

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

- Explain the history and the development of the internet
- Describe the technologies used for communicating over the internet.
- Apply several commonly used searching techniques for searching the web.
- Create web based applications with HTML.
- Create and manipulate the most popular image formats used over the Web
- Specify the style of web pages by using CSS
- Enhance the functionality and appearance of Web pages by JavaScript

Teaching Methodology / Classroom Procedures

- Each week there are two lecture sessions, one tutorial session and two lab sessions.
- In the two hour of lecture sessions, besides the power point slides that are followed, according to the given subject, there are also the small practical applications which is done by the instructor and repeated by the students.
- One hour of tutorial session is organized for solving questions related to lectures and encourages the students to voice their difficulties about the related subject.
- Laboratory sessions are organized in parallel to theoretical study given in lecture hours. There are totally 10 lab works given in one semester. During the lab sessions, students are asked to create the practical applications of what they have learned in the lecture hours. Students should submit their lab works regularly each week (to their instructor by an e-mail) for evaluation.

- There is no any quiz for this course.
- There is one term-project. In the term project students are asked to create a personal web site by using the knowledge and all the tools that they have learned in this course during the semester. Duration given for the project is approximately two weeks. In the last week of the semester (before the finals), each student is responsible for bringing the project (written on a cd) and presents it to the instructor on an announced date and time.
- There are two written examinations, Midterm and Final. Midterm examination covers first 5 chapters. Final Examination covers all the topics from chapter 1 to 10.
- Students are responsible for following the course's web site for downloading the lecture notes, lab works and for viewing their performance results, important dates or latest announcements about the course.
- Attendance to all lecture, tutorial and lab sessions is compulsory.

Course Materials / Main References
Text Book: Internet & World Wide Web – How to Program, 5/e, Paul J. Deitel, Harvey M. Deitel and Abbey Deitel, Pearson Higher Education, 2012. ISBN-13: 978-0-13-215100-9. **Lecture Notes & Lab Works:** All course related materials like lecture notes and lab works are available online at course's web site.

Weekly Schedule / Summary of Topics	
Week 1-2	**Introduction to Internet and World Wide Web –** History and development of internet including terminology and used technology.
Week 3	**Introduction to HTML4 & HTML5 -** Basic Tags, Formatting, Links.
Week 4-5	**Creating Web Sites and Adding a Content with HTML**
Week 6	**Creating Tables and Lists.**
Week 7	**Creating Forms with HTML5 form elements.**
Week 8-9	**Midterm Examinations**
Week 10	**Using Frames and Iframes.**
Week 11	**Adding Multimedia to Websites –** Audio, Video, Animation
Week 12	**Cascading Style Sheets (CSS) -** Introduction, CSS Syntax, External CSS, Internal CSS, Inline CSS, Styling with CSS
Week 13	**Intermediate CSS -** Styling Links, Styling Lists, Styling Tables, CSS Box Model
Week 14	**Client-Side Scripting with JavaScript –** Introduction to Client-Side Scripting and JavaScript, Statements, Variables, Expressions and Operators, Conditional Statements & Loops.
Week 15	**Term-Project Presentations**
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 will be done at the end of the term and will cover 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. - Instructions and the deadlines for the submission of lab assignments will be announced during the class. It is each student's responsibility to follow the instructions. Failure to follow the submission instructions or late submissions may result in the assignment receiving a mark of zero.

Method of Assessment				
Evaluation and Grading	**Midterm Exam**	**Labs**	**Term-Project**	**Final Exam**
Percentage	25 %	20 %	15 %	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.

Ders Adı/Course Title	Zengin İçerikli İnternet Uygulamaları Rich Internet Application (RIA) Development
Ders Kodu/Course Code	BTBS230/ITEC230
Tipi/Type	Tam Zamanlı/Full Time
Yarıyıl/Semester	Bahar/ Fall-Spring
Türü/Category	Alan Zorunlu/Area Core
İş Yükü/Workload	180 saat/hours
DAÜ Kredi Değeri/EMU Credit	(3,2,0) 4
Ön Koşul(lar)/Prerequisite	BTBS229/ITEC229
Öğretim Dili/Teaching Language	Türkçe/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
AKTS Değeri/ECTS Credit	6
Dersin Web Sitesi/Course Web	http://lms.emu.edu.tr

Öğretim Elemanı /Instructor	Assoc. Prof. Dr. Emre Özen	Ofis Tel/Office Tel	+90 392 6301358
E-posta /E-mail	emre.ozen@emu.edu.tr	Ofis No/Office No.	CT102

Dersin Kısa Tanımı/Course Description
Bu ders, zengin içerikli internet uygulamaları oluşturmak için gereken teknolojilere odaklanmaktadır. Dönem boyunca statik web uygulamalarının JavaScript kullanarak nasıl dinamik ve etkileşimli hale getirilebileceği tartışılacaktır. Ders konuları; JavaScript temel bilgileri, nesne tabanlı dil olarak JavaScript'e bakış, HTML formları aracılığıyla kullanıcıyla etkileşim, tarayıcıyı programlama, belge nesne modeli (DOM) ve jQuery kütüphanesini içerir. This course focuses on technologies for building Rich Internet Applications(RAIs). Throughout the semester enhancing static web applications by providing dynamic and interactive content using JavaScript will be discussed. Topics include JavaScript basics, JavaScript language as object-based language, Interacting with the User through HTML forms, Programming the Browser, Document object Model(DOM)and Framework jQuery.

Dersin Öğrenme Çıktıları/ General Learning Outcomes
Dersi başarı ile tamamlamış öğrenciler · JavaScript tarafından sunulan veri türlerini ve veri yapılarını kullanma · Basit bir problemi modellemek için uygun bir veri yapısı seçme · İstemci tarafı programlama / komut(script) dosyası dillerinin önemini ve kullanımını anlama · Temel betik dili kavramlarını anlama · Temel program kontrol yapılarını uygulama · Bir JavaScript kodu dosyası tasarlama, uygulama, test etme ve hatalarını ayıklama · Örnek verilerle bir komut dosyasını test etme · Tarayıcı tabanlı web programlama geliştirme · Zengin içerik ve etkileşim içeren uygulamalar yazma yeterliliklerini kazanacaklardır. On successful completion of this course students will be able to:

- · Use primitive data types and data structures offered by JavaScript
- · Choose an appropriate data structure for modelling a simple problem
- · Understand the importance and the use of client side programming/scripting languages
- · Understand basic scripting language concepts
- · Apply core program control structures
- · Design, implement, test, and debug a script
- · Test a script with sample data
- · Develop browser based Web programming
- · Write applications with rich content and interactivity

Öğrenim Yöntem ve Teknikleri / Teaching Methodology

- • Ders, haftada üç saat teorik anlatım ve iki saat uygulama şeklinde yapılacaktır.
- • Dönem içerisinde bir dönem projesi, iki tane yazılı kısa sınavlar, bir tane yazılı vize ve bir de yazılı dönem sonu sınavı yapılacaktır.
- • Her laboratuvar seansında performans değerlendirmesi(lab sınavı) yapılacaktır.
- • Dersi alan öğrenciler verilen görevleri yerine getirmekle sorumludur.
- • Dersle ilgili tüm bilgiler (ders materyalleri, duyurular gibi) dersin sitesinde bulunacaktır.

- • The course has three hours of lecture and two hours of laboratories in a week.
- • There will be a term project, two written quizzes, one written midterm exam and one written final exam within the semester.
- • There will be a Performance evaluation (lab exam) in each laboratory session.
- • Students are supposed to submit the assigned tasks on time.
- • Course related materials will be posted on the course web site.

Ders Materyalleri / Referanslar -Course Materials / Main References

Ders Kitabı / Text Book:

Bu ders için doğrudan takip edilen bir ders kitabı yoktur. / No textbook is used directly as a reference for this course.

https://developer.mozilla.org/en-US/docs/Web/JavaScript/Language_Resources (Kaynak İngilizce dilindedir)

Ders Notları / Lecture Notes:

Ders Notları dersin web sayfasında powerpoint(pptx) formatında mevcuttur. / Lecture notes are available on the course web site in powerpoint(pptx) format.

Haftalık Ders Programı / Konu Özeti - Weekly Schedule / Summary of Topics	
Hafta 1 **Week 1**	**JavaScript diline giriş / Introduction to JavaScript:** JavaScript nedir? Neden JavaScript'i Seçmelisiniz? JavaScript ile web uygulamaları oluşturmak için gerekli araçlar. İlk Basit JavaScript kodu örneği What is JavaScript? Why to choose JavaScript? Tools needed to create JavaScript Web Applications. First Simple JavaScript Programs **Veri türleri ve değişkenler / Data Types and Variables** JavaScript'te veri türleri, Sayısal Hesaplamalar, operatör önceliği, temel dize işlemleri, veri türü dönüştürmeleri, diziler ve çok boyutlu diziler Types of data in JavaScript, Numerical Calculations, operator precedence, basic string operations, data type conversions, arrays and multi-dimensional arrays
Hafta 2 **Week 2**	**Döngüler ve Fonksiyonlar/ Decisions Loops and Functions** Karşılaştırma operatörleri, mantıksal operatörler, if, if-else ve switch ifadeleri, For, for..in, while, do.. while döngüleri break ve continue ifadeleri, Fonksiyon oluşturma, değişkenlerin geçerlilik alanları

	Comparison operators, logical operators, if, if-else and switch statements, For, for..in, while, do..while loops break and continue statements, Creating functions, variable scope and lifetime
Hafta 3 **Week 3**	**Hata yakalama ve ayıklama / Error Handling & Debugging** Yaygın hatalar, try..catch ifadeleri, Internet Explorer'da hata ayıklama Common mistakes, try..catch statements, debugging in Internet Explorer
Hafta 4 **Week 4**	**JavaScript'te nesne tabanlı programlama / Object-Based Programming in JavaScript** Nesne nedir, JavaScript'te nesneler, JavaScript nesnelerini Kullanma, JavaScript Yerel Nesneler: Dize, dizi, matematik, sayı, tarih, yeni nesne türleri oluşturma (Referans türleri) What are objects, Objects in JavaScript, Using JavaScript Objects, JavaScript's Native Objects: String, array, math, number, date, Creating new types of objects(Reference types)
Hafta 5-6 **Week 5-6**	**Tarayıcıyı programlama / Programming the Browser** Tarayıcının nesneleri: pencere, geçmiş, konum, gezinme, ekran ve belge nesneleri. Kullanıcının eylemlerine yanıt vermek. Browser's objects: window, history, location, navigation, screen, and document objects. Responding to the user's actions with events.
Hafta 7-8 **Week 7-8**	**Vizeler** **Midterm Examinations**
Hafta 9 **Week 9**	**HTML formları: Kullanıcıyla etkileşim / HTML Forms: Interacting with the User** Formlardaki HTML öğeleri, ortak özellikleri ve yöntemleri: Düğme, metin, metin alanı, onay kutuları, radyo düğmeleri ve seçim kutuları HTML elements in forms, their common properties and methods: Button, text, textarea, check boxes, radio buttons and selection boxes
Hafta 10-11 **Week 10-11**	**Çerçeveleri kontrol etme / Controlling Frames** Çerçeveler arasında kodlama, çerçeveler arasında erişim, yeni bir tarayıcı penceresi açma, pencereler arasında komut çalıştırm, pencereleri taşıma ve yeniden boyutlandırma. Coding between frames, accessing between frames, opening a new browser window, scripting between windows, moving and resizing windows.
Hafta 12 **Week 12**	**Dize manipülasyonu / String Manipulation** Normal ifadeler ve RegExp nesnesi, bölme, değiştirme, arama ve eşleştirme gibi yöntemler. Regular expressions and RegExp object, methods like split, replace, search and match.
Hafta 13 **Week 13**	**Tarih, saat ve zamanlayıcılar/ Date, Time and Timers** Bir Tarih Nesnesinin UTC Tarihini ve Saatini ayarlama ve alma. Bir web sayfasındaki zamanlayıcılar. Setting and getting a Date Object's UTC Date and Time. Timers in a web page. **Çerezler / Cookies in JavaScript** Bir çerez oluşturma, bir çerezin değerini alma, çerezlerdeki sınırlamalar Creating a cookie, getting a cookie's value, cookie limitations
Hafta 14 **Week 14**	**Belge Nesne Modeli (DOM) / Document Object Model (DOM) and Its manipulation** Çekirdek DOM nesneleri, öğelere erişim, görünümleri değiştirme, içeriği konumlandırma ve taşıma, DOM olay işleme Core DOM objects, accessing elements, changing appearances, positioning and moving content, DOM event handling
Hafta 15 **Week 15**	**JQuery / JQuery** Sayfalara bir kütüphane (JQuery) ekleme, bir kütüphaneye eklentiler ekleme, öğeler ekleme ve kaldırma, JQuery'nin olay modeli ve olayları işleme, CSS sınıfları uygulama / değiştirme.

	Adding a framework (JQuery) to the pages, adding plug-ins to a framework, creating appending and removing elements, JQuery's event model and handling events , applying/changing CSS classes.
Hafta 16-18 **Week 16-18**	**Dönem Sonu Sınavları / Final Examinations**

Gereksinimler / Requirements

Öğrencilerin her blok ders sonunda, derste öğretilenleri kullanarak lab uygulamaları geliştirmesi sağlanmaktadır. Dönemin sonunda ise, her öğrenci dönem başında kendisine verilen projeyi tamamlayıp teslim etmek zorundadır.

Her öğrenci aşağıdakilere uymak zorundadır:

- Ders, ağırlıklı olarak seminer şeklinde düzenlenen haftada üç saat ders içerir.
- Derslerle ilgili öğrenilen komutların (laboratuar ödevi) uygulanması için düzenlenen ve öğrencileri bu soruları çözme konusundaki zorluklarını dile getirmeye teşvik eden haftada iki laboratuvar saati vardır.
- Ders notları ve laboratuvar soruları dersin web sitesinde yayınlanır.
- Ara sınav ve final sınavlarından bir hafta önce yapılan iki yazılı quiz vardır.
- Kısa sınavların süresi 50 dakikadır.
- 1, 2, 3, 4, 5 ve 6. haftaları kapsayan yazılı bir ara sınav vardır.
- Tüm bölümleri içeren ancak ağırlıklı olarak 9, 10, 11, 12, 13, 14 ve 15. haftaları içeren yazılı bir final sınavı vardır.
- Dönem projesi/ödevi, derslerin üçüncü haftasında bireysel olarak verilecektir.
- Derse devam zorunludur.
- Dersin web sitesini düzenli olarak kontrol etmek ve güncel duyuruları takip etmek öğrencinin sorumluluğundadır.

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.

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 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 web site.
- There are two written quizzes which are held one week before the midterm and final exam periods.
  - The duration of the quizzes is 50 mins.
- There is a written midterm exam which covers weeks 1, 2, 3, 4, 5 and 6.
- There is a written final exam which includes all the chapters but mainly the weeks 9,10, 11, 12, 13, 14 and 15.
- Term project/assignment will be assigned individually at the third week of classes.
- Class attendance is compulsory.

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

Değerlendirme Yöntemi/Method of Assessment					
Değerlendirme ve Harf Notu	**Lab**	**Kısa Sınavlar**	**Ödevler/Projeler**	**Ara Sınav**	**Final Sınavı**
Yüzdelikler	8 %	15 %	12%	30 %	35 %

Değerlendirme Kriteri */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.

* 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.

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.

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 includes 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.
- Class attendance is compulsory.
- The student is responsible to check the course web site regularly and view 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.
- 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	**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.

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.

Course Code	ITEC295	Course Title	Investigation of Computer Forensics
Semester	2018-2019 Fall	Language	English
Category	University /Area Elective	Level	Second Year
Workload	180 Hours	Teaching Format	2 Hours Lecture, 2 Hours Laboratory
EMU Credit	(3,0,1) 3	ECTS Credit	6
Prerequisite(s)	-	Course Web	http://staff.emu.edu.tr/ibrahimadeshola/

Instructors(s)	Ibrahim Adeshola		
e-mail(s)	ibrahim.adeshola@emu.edu.tr	Office No:	CT123B

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.

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

Lecture Notes:

All course materials are also available online in PowerPoint Slide.

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
	Midterm Examinations Period
Weeks 11	Email Investigations
Weeks 12	Cell Phone and Mobile Device Forensics
Week 13	Cloud Forensics Report Writing for High Tech Investigations
Week 14	Expert Testimony in High Tech Investigations Ethics for the Investigator and Expert Witness
	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 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**	**Quizzes**	**Lab**	**Midterm Exam**	**Final Exam**
Percentage	5%	20 %	20 %	25 %	30 %

EASTERN MEDITERRANEAN UNIVERSITY
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF 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.

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
Workload	210 Hours
Course Web Site	https://lms.emu.edu.tr

Instructor(s)	**Office Tel**	**Office No**	**E-mail**
Prof. Dr. Ali Hakan Ulusoy	+90 392 6302881	CT108	alihakan.ulusoy@emu.edu.tr
Assist. Prof. Dr. Hüsnü Bayramoğlu	+90 392 6302894	CT103	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 in 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 in 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 in 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 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 is no assignments or term project.   - Class attendance is compulsory.   - The student is responsible to check the course web site regularly and view 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
▪ 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	**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.

Course Title	Multiplatform Programming
Course Code	ITEC314
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(3,2,0) 4
Prerequisite	-
Language	English
Level	Third Year
Teaching Format	3 Hours Lecture and 2 Hour Labwork 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

This course is aiming to introduce students to multi-platform (cross platform) application development, including the reasons of that study, the approaches, and techniques for meeting the requirements. The fundamentals and alternative ways of the multi-platform programming with restrictions and benefits are also taught in the course. The given theory is supported with exercises and sample applications using Java programming language (J2SE) that is the most popular alternative solution of today. Students get experience on "Write once and run everywhere" approach of programming.

General Learning Outcomes

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

- Explain the most common problems of software developers coding for a unique solution aiming to work on different operating systems.
- Explain the methods of Java (J2SE) and other alternative multi-platform programming solutions.
- Explain the multiplatform (cross platform) programming with its requirements, restrictions, and benefits.
- Explain the alternative approaches, methods, and techniques for solving multiplatform programming problems of today.
- Describe the concept of "virtual machines", how they are working, configuring, and maintaining.
- Explain why the Java programming language is the most popular alternative solution of today for the multiplatform programming problem.
- Analyze, design, and implement a desktop application (using J2SE) that can be work on different operating systems.
- Code in Java programming language (J2SE) to develop a software (SW) solution for a multiplatform.
- Apply the structured and object-oriented with event-driven programming skills to SW development projects.

Teaching Methodology / Classroom Procedures

- Each week there are three lecture hours, and two lab hours.
- Class attendance is compulsory.
- Laboratory works are organized to go as parallel with the theory, given in lecture hours in the classroom.
- 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 one midterm exam and one final exam.
- Students must complete and submit their HWs and the milestones of their term projects before the deadlines.

Course Materials / Main References

Textbook:
- M.Rashid Raza, "Getting Skilled with Java - Learn Java Programming from Scratch with Realistic Applications and Problem Solving Programmes", BPB Publications, First Edition (2022), ISBN: 978-93-91392-499

Weekly Schedule / Summary of Topics	
Week 1	■ The need for multiplatform programming: Operating System (OS) – Application platforms (multiplatform). The "Write once run anywhere" though. The alternative approaches and solutions for multiplatform problem. Virtual machines. How Java Virtual Machines are working. Java editions. Java programming language essentials. ■ The programming languages in time: Historical changes through the Structured Programming to the Object-Oriented Programming language. ■ Object Oriented Programming in Java: Classes and objects. Messages and methods. Class and instance Data values. Inheritance.
Week 2	■ Introduction to Java: Obtaining and installing Java virtual machine and NetBeans IDE. The components of a Java program. The syntax. Edit-Compile-Run cycle. Java standard classes. ■ The basic input-output methods in Java: console I/O methods. Dialog box I/O methods. ■ Numerical data in Java: Variables. Arithmetic expressions. Constants. Getting numeric input values. Standard output. Standard input. The Math Class. Random number generator. GregorianCalendar and Date classes.
Week 3	■ User defined Classes in Java: Defining and using a user defined class. Multiple classes. Matching arguments and parameters. Passing objects to a method. Constructors. Information hiding and visibility modifiers (public/private). Class constants. Local variables. Calling methods of the same class. Changing any class to main class. Returning and object from a method. The reserved word "this". Overloaded methods and constructors. Class variables and methods. Call-by-value parameter passing. Organizing classes into a package. Using JavaDoc comments for class documentation. ■ Inheritance and Polymorphism: Defining classes with inheritance. Using classes effectively with polymorphism. Inheritance and member accessibility. Inheritance and constructors. Abstract super classes and abstract methods. Inheritance versus interface.
Week 4	■ Fundamentals of Coding-I: ■ Selection Statements: The if statement. Nested if statements. Boolean expressions and variables. Comparing objects. The switch statements. ■ Repetition Statements: The while statement. Pitfalls in writing repetition statements. The do-while statement. Loop and a half repetition control. Confirmation dialog. For statement. Nested for statements.
Week 5	■ Exception and Assertions: Catch exceptions. Throwing exceptions and multiple catch blocks. Propagating exceptions. Types of exceptions. Programmer defined exceptions. Assertions. ■ Collections in Java ■ Recursive Algorithms: Basic elements of recursion. Advantages of recursion. When not to use recursion.
Week 6	■ Characters and Strings: Characters. Strings. Pattern matching and regular expressions. The Pattern and Matcher classes. Comparing strings. StringBuffer and StringBuilder classes. ■ String manipulation: Algorithms and methods.
Week 7	■ Reviews before Midterm Exam
Week 8-9	**Midterm Examinations**
Week 10	■ Arrays: Array basics. Arrays of objects. Passing arrays to methods. Two-dimensional arrays. Lists and Maps. Developing CRUDL methods with array of objects.
Week 11	■ File Input and Output: File and JFileChooser Objects. Low level File I/O. High level File I/O. Text Files I/O. Object Files I/O.

Week 12	▪ Visual Design and Event Driven programming: The GUI elements, Form design and handling the events.
Week 13	▪ Through JDBS, accessing MySQL Databases and techniques for developing Java applications using database tables. Developing CRUDL methods with relational databases.
Week 14	▪ Testing the Java projects using JUNIT tool.
Week 15	▪ Reviews before Final Exam
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	Midterm Exam	Final Exam
Percentage	25 %	25 %	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 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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	System Analysis and Design
Course Code	ITEC315
Type	Full Time
Semester	Fall/Spring
Category	Area Core
Workload	240 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	8
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 Inception 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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Code	ITEC316	Course Title	Software Engineering
Semester	Fall 2022-23	Language	English
Category	Area Core (AC)	Level	Third Year
Workload	210 Hours	Teaching Format	3 Hours Lecture, 1 Hour Interactive Session
EMU Credit	(3,0,1) 3	ECTS Credit	7
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

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

Course Title	Ethical and Social Issues in Information Systems
Course Code	ITEC317
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(3,0,0) 3
Prerequisite	-
Language	English
Level	Third Year
Teaching Format	3 Hours Lectures per week
ECTS Credit	3 What is ECTS? Why ECTS is needed? How does it work?
Workload of a Student	90 Hours
Course Web Site	https://lms.emu.edu.tr

Instructor	Yesim Kapsıl Çırak	**Office Tel**	+90 392 6302310
E-mail	yesim.kapsil@emu.edu.tr	**Office No**	CT216

Course Description

Main objectives of the course are basic understanding of history of IT, awareness of current issues, and familiarity with ethics. The course provides an overview of ethical theories and related problems such as privacy, networking, security and reliability. The course presents issues such as government supervision, computer crimes, and intellectual property from all points of view. Global issues such as cyberspace, cybernetics, social networking, and online crimes will be reviewed. This course aims to challenge students to think critically and enables them to draw their own conclusion. Besides they will learn to balance divergent thoughts which eventually prepare them to become responsible and ethical professionals as a team, as well as individual users of innovative technologies.

General Learning Outcomes

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

- Discuss what ethics is and what constitutes an ethical issue in information and computer ethics;
- Develop awareness of ethical issues in different contexts;
- İdentify and discuss ethical issues that arise in general public media, and in particular in individuals everyday professional practice;
- Discuss how negotiation might resolve apparent ethical differences;
- Apply ethical theories to interpret personal and group behavior to use a variety of information technology tools;
- Evaluate the ethical decisions that can be made by individual and others when various roles that expose social and multicultural differences are served.
- Develop written arguments on the evolving nature of ethical norms relating to innovative technologies.

Teaching Methodology

- 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.

- There is written midterm exam which covers Catalysts for Change, Introduction to Ethics, Intellectual Property and Privacy
- There is a written final exam which covers all topics.
- 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.

Course Materials

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.

Weekly Schedule

Week 1-2	Catalysts for Change
Week 3	Introduction to Ethics
Week 4-5	Intellectual Property
Week 6-7	Privacy
Week 8-9	**Midterm Examinations**
Week 10-11	Privacy- Government Surveillance, Data Mining.
Week 12-13	Professional Ethics.
Week 14-15	Professional Ethics: Analysis of the code, Case studies, Whistleblowing.
Week 16	Work and Wealth: Automation and unemployment, Workplace changes.
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.

Method of Assessment

Evaluation and Grading	Project	Class Work	Midterm Exam	Final Exam
Percentage	20%	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 after calculating the class average at the end of the semester and distribution of the grades will play a significant role in the evaluation.

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)	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.

EASTERN MEDITERRANEAN UNIVERSITY
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Python for Web Applications
Course Code	ITEC320
Type	Full Time
Semester	Fall
Category	AE (Area Elective)
EMU Credit	(3,1,0) 3
Prerequisite	-
Language	English
Level	Third Year
Teaching Format	2 Hours Lecture, 2 Hour Laboratory
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	DR. Erfan Amirzadeh Shams	**Office Tel**	+90 392 6303159
E-mail	erfan.shams@emu.edu.tr	**Office No**	AT106

Course Description

This course presents the required fundamentals of python programming. Students start with simple algorithmic code before they scale into functions, objects, and classes as problems become more complex and require new abstraction mechanisms. Furthermore, this course presents a Python-based web application development framework. The students will be able to use Python to develop web applications using open-source frameworks for easy application development.

General Learning Outcomes

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

- Upon successful completion of this course students should be able to:
- Learn the skills for effective design, testing, and documentation,
- Deal with real-life project challenges and accomplishments as they complete engaging case studies,
- Practice top-down design and recursive design with functions, object-based programming, and object-oriented design,
- Deal with problem-solving projects as they complete challenging programming projects throughout the course,
- Learn to use python programming language for web application development,
- Understand the needs of the industry.

Teaching Methodology / Classroom Procedures

- Each week there are two hours of lecture sessions, and two hours of lab sessions.
- Laboratory sessions are organized in parallel to lectures given in classrooms. During the lab sessions, students will be introduced to different tasks in a systematic approach.

Course Materials / Main References

Text Book:

- Fundamentals of Python: First Programs, 2nd Edition. Kenneth A. Lambert. ISBN: 9781337560092.
- Django 3 By Example: Build powerful and reliable Python web applications from scratch, 3rd Edition. Mele, Antonio. ISBN: 9781838981952

Lecture Notes:

All course materials are also available online in PPTX.

Additional Resources:

- https://www.python.org/doc/   https://docs.python.org/3/tutorial/index.html   https://webpy.org/
  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	Introduction: Python Programming, Tools, and Installation
Week 2	Software Development, Data Types, and Expression.
Week 3	Loops, Selection Statements, and Array.
Week 4	Strings and Text Files.
Week 5	Lists and Dictionaries.
Week 6	Design with Functions.
Week 7	Design with Classes.
Week 8-9	**Midterm Examinations**
Week 10	Simple Graphics and Image Processing.
Week 11	Graphical User Interfaces.
Week 12	Modules and Packages.
Week 13	Python Web framework: Install PostgreSQL and Django Web Application. Web.py / Django Web Framework.
Week 14	Project Presentations
Week 15	Project Presentations
Week 16-17	**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 lectures regularly may be given NG grade.   - Once the grades are announced, the students have only one week to make objections about their grades.   - It is the student's responsibility to follow the announcement on the course website and MS Teams Group.

Method of Assessment			
Evaluation and Grading	**Quizzes**	**Lab**	**Midterm**	**Final Exam**
Percentage	10%	30%	30%	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 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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Code	ITEC321	Course Title	Administering Web-based Content Management System
Semester	Fall 2022-23	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)	ITEC229, ITEC224	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

EASTERN MEDITERRANEAN UNIVERSITY
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Introduction to Machine Learning
Course Code	ITEC323
Type	Full Time
Semester	Fall
Category	AE (Area Elective)
EMU Credit	(3,1,0) 3
Prerequisite	-
Language	English
Level	Third Year
Teaching Format	2 Hours Lecture, 2 Hour Laboratory
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	DR. Erfan Amirzadeh Shams	**Office Tel**	+90 392 6303159
E-mail	erfan.shams@emu.edu.tr	**Office No**	AT106

Course Description

The Machine Learning field covers a vast collection of automated methods that improve their own performance by learning patterns from the data. In this undergraduate level class, students will get an introduction to machine learning concepts as well as methodologies, technologies, and algorithms used in machine learning. The material covered in class will be reinforced through practical applications. Topics covered: supervised learning, unsupervised learning, reinforcement learning and combining multiple learners.

General Learning Outcomes

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

- Describe what machine learning is.
- Understand and describe supervised and unsupervised learning.
- Discuss the main factors involved in achieving good learning and generalization performance in machine learning.
- Identify the main implementation issues for common machine learning methods.
- Evaluate the practical considerations in applying machine learning to real classification problems.

Teaching Methodology / Classroom Procedures

- Each week there are two lecture sessions and two tutorial/lab sessions.
- Homeworks are organized in parallel to theoretical studies given in classrooms. A report should be submitted for evaluation for each homework.
- 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 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, 2016.

Weekly Schedule / Summary of Topics	
Week 1	Introduction
Week 2-3	Categories of Machine Learning Algorithms and Basic Terminologies
Week 4-5	Linear Regression
Week 6	Decision Trees
Week 7	Naive Bayes
Week 8-9	**Midterm Examinations Week**
Week 10-11	Support Vector Machines (SVM)
Week 12-13	Clustering
Week 14-15	Reinforcement Learning
Week 16-17	**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 will be done at the end of the term 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.
▪ Instructions for the submission of homework 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 homework receiving a mark of zero.

Method of Assessment			
Evaluation and Grading	**Homework**	**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 after calculating the class average at the end of the semester and distribution of the grades will play a significant role in the evaluation.

Ders Adı/Course Title	Sunucu Odaklı İnternet Programcılığı/Server-Side Internet and Web Programming
Ders Kodu/Course Code	BTBS327/ITEC327
Tipi/Type	Tam Zamanlı/ Full Time
Yarıyıl/Semester	Güz - Fall/Spring
Türü/Category	Alan Zorunlu / AC (Area Core)
İş Yükü/Workload	180 Saat/Hours
DAÜ Kredi Değeri/EMU Credit	(3,2,0) 4
Ön Koşul(lar)/Prerequisite	BTBS230,BTBS212 / ITEC230, ITEC212
Öğretim Dili/Teaching Language	Türkçe/English
Seviye/Level	Üçüncü Yıl/ Third Year
Öğretim Formatı/Teaching Format	3 saat ders,2 saat laboratuvar / 3 Hours Lecture and 2 Hours Laboratory per week
AKTS Değeri/ECTS Credit	6
Dersin Web Sitesi/Course Web	http://lms.emu.edu.tr

Instructor(s)	Assoc. Prof. Dr. Emre ÖZEN	**Office Tel**	+90 392 6301358
E-mail	emre.ozen@emu.edu.tr	**Office No**	CT102

Dersin Kısa Tanımı/Course Description

Bu derste web tabanlı, sunucu taraflı İnternet uygulamalarının geliştirilmesi üzerinde duruluyor . Dönem boyunca veritabanı kullanan internet uygulamaları tasarımı ve geliştirilmesi hakkında konular işlenecektir . Web formları geliştirmek amacıyla , HTML form elemanları kısaca ele alınacaktır . Dönem boyunca kullanılacak ilişkisel veritabanı sunucusu açık kaynak kodlu olarak bilinen MySQL'dir. Yaygın olarak kullanılan açık kaynak kodlu programlama dili olan PHP dersin esas konusudur. Dönem boyunca ele alınacak diğer konular arasında ise, e-ticaret uygulamaları, kimlik doğrulama, kullanıcı haklarına dayalı dinamik web sitesi uygulamaları yer almaktadır.

This course focuses on development of web-based server-side Internet applications. Designing web forms and developing database Internet applications will be covered throughout the semester. In order to develop web forms, HTML form elements will be discussed in short. As relational database management server which will be introduced during the semester, an open source one, MySql(MariaDB) has been chosen. One of the most popular open source server-side programming language named PHP is the main focus of the course. How to implement web sites with authentication and access rights and how to model and Implement web sites ready for e-commerce are the other topics which will be discussed among the semester.

Dersin öğrenme Çıktıları/General Learning Outcomes

Dersi başarı ile tamamlamış öğrenciler,

- PHP veri türlerini ve veri yapılarını kullanır.
- Basit bir problemi modellemek için uygun bir veri yapısı seçer.
- Sunucu tarafı programlama dillerinin önemini ve kullanımını bilir.
- Programlama kavramlarını uygular.
- Çekirdek program kontrol yapılarını uygular.
- Bir programı tasar, uygular, test eder ve hatalarını giderir.
- Örnek verilerle uygulamaları test eder.

Belirli bir görevle ilgili veritabanına dayalı Web uygulamaları geliştirir.On successful completion of this course students

will be able to:

- Use primitive data types and data structures offered by PHP
- Choose an appropriate data structure for modelling a simple problem
- Understand the importance and the use of server side programming languages
- Apply programming concepts
- 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

Öğrenim Yöntem ve Teknikleri/Teaching Methodology

Öğrencilerin her blok ders sonunda, derste öğretilenleri kullanarak lab uygulamaları geliştirmesi sağlanmaktadır. Dönemin sonunda ise, her öğrenci dönem başında kendisine verilen projeyi tamamlayıp teslim etmek zorundadır.
Her öğrenci aşağıdakilere uymak zorundadır:

- Ders, ağırlıklı olarak seminer şeklinde düzenlenen haftada üç saat ders içerir.
- Derslerle ilgili öğrenilen komutların (laboratuar ödevi) uygulanması için düzenlenen ve öğrencileri bu soruları çözme konusundaki zorluklarını dile getirmeye teşvik eden haftada iki laboratuvar saati vardır.
- Ders notları ve laboratuvar soruları dersin web sitesinde yayınlanır.
- Ara sınav ve final sınavlarından bir hafta önce yapılan iki yazılı quiz vardır.
- Kısa sınavların süresi 50 dakikadır.
- 1, 2, 3, 4, 5, 6 ve 7. haftaları kapsayan yazılı bir ara sınav vardır.
- Tüm bölümleri içeren ancak ağırlıklı olarak 10, 11, 12, 13, 14 ve 15. haftaları içeren yazılı bir final sınavı vardır.
- Dönem projesi/ödevi, derslerin üçüncü haftasında bireysel olarak verilecektir.
- Derse devam zorunludur.
- Dersin web sitesini düzenli olarak kontrol etmek ve güncel duyuruları takip etmek öğrencinin sorumluluğundadır.

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.
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 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 web site.
- There are two written quizzes which are held one week before the midterm and final exam periods.
  - The duration of the quizzes is 50 mins.
- There is a written midterm exam which covers weeks 1, 2, 3, 4, 5, 6 and 7.
- There is a written final exam which includes all the chapters but mainly the weeks 10, 11, 12, 13, 14 and 15.
- Term project/assignment will be assigned individually at the third week of classes.
- Class attendance is compulsory.
- The student is responsible to check the course web site regularly and view the latest announcements.

Ders Materyalleri /Course Materials / Main References

Ders Kitabı:

A dan Z ye PHP, 4. Baskı, Seçkin Yayıncılık

Her Yönüyle PHP 6, Mehmet Şamlı ,Kodlab yayımcılık

PHP ve MYSQL, Erkan Balaban,Pusula yayımcılık

https://www.php.net/manual/tr/

Text Book:

Mark Lassoff, "PHP and MySQL for Beginners",1st Edition,LearnToProgram.tv,2014. ISBN-13: 978-0990402015

http://www.php.net/manual/en/

Haftalık Ders Programı / Konu Özeti - Weekly Schedule / Summary of Topics

Week 1	**PHP diline genel bakış:** Çalışma mantığı avantajları, dezavantajları. **Overview of PHP:** How it works? Advantages,disadvantages
Week 2	**Değişkenler ve Operatörler:** Değişken tipleri, özel karakterler, değişken öldürme, uzun metinler, değişken kullanım yöntemleri, mod, arttırma, eksiltme,aritmetik, işaret,karşılaştırma ve mantıksal operatörler. **Variables and Operators :** Data types, type conversions,how to unset a variable, arithmetic operators and logical operators.
Week 3	**Denetim yapıları ve döngüler:** If, else if , switch, while, for, do..while., **Flow Control and Looping:** If,else if, switch, while, do..while.
Week 4	**Fonksiyonlar:** fonksiyonlar, global, static, include. **Functions:** how to write a function. Terms global, static and include**.**
Week 5	**Öntanımlı küresel değişkenler:** $_SERVER,$_FILES,$_GET,$_POST,$_REQUEST **Predefined global variables:** $_SERVER,$_FILES,$_GET,$_POST,$_REQUEST
Week 6	**ARRAY(dizi) değişkenleri:** Tek boyutlu, çok boyutlu dizi değişkenleri, foreach döngüsü **Arrays:** Arrays, multi-dimensional arrays, for..each loop.
Week 7-8	**Ara Sınavlar** **Midterm Exams**
Week 9-10	**Form İşlemleri:** GET ve POST metodları, çok aşamalı formlar. **Forms:** GET and POST methods, multi-stage forms.
Week 11	**Metin Biçimlendirme Fonksiyonları:** Tırnak etkisizleştirme, metin şifreleme, boşluk silmek, html kodu temizleme. **String processing:** How to deal with quotations, how to cypher, how to clean spaces, how to eliminate html codes and how to format a string.
Week 12	**Dizin ve Metin işlemleri:** Dosya okuma-yazma, kopyalama, dizin oluşturma-silme, upload işlemleri **Files:** How to read/write from/to a file, how to copy afile, how to upload a file and how to deal with folders.
Week 13	**Tarih işlemleri:** Tarih yazdırma, okuma. **İstisna (Hata) yönetimi :** try...catch rutinleri ve kullanımı. **Dates:** How to deal with different date formats. **Error handling:** try…catch blocks and how to use them.
Week 14	**Class:** Sınıf kullanımı, özellik,metod ve miras. **MYSQL kütüphanesi:** Bağlantı kurma, sonlandırma, veri alış verişi. **Classes:** Classes,properties,methods, inheritance, **MYSQL library: How to connect to MYSQL RDBMS and how to run queries(communicate with MYSQL).**
Week 15	**HTTP , Cookie ve Oturum yönetimi**: header fonksiyonuyla login kontrolü, http statü kodları, karakter seti tanımlama, session değişkeni yaratma, ömrünü belirleme. **HTTP, Cookies and Sessions:** How to control authorization using header function, HTTP status codes, character set recognition, how to create session variables, how to use cookies.
Week 16-18	**Final Sınavları** **Final Exams**

Gereksinimler/Requirements
Öğrencilerin her blok ders sonunda, derste öğretilenleri kullanarak lab uygulamaları geliştirmesi sağlanmaktadır. Dönemin sonunda ise, her öğrenci dönem başında kendisine verilen projeyi tamamlayıp teslim etmek zorundadır. Her öğrenci aşağıdakilere uymak zorundadır: • Ders, ağırlıklı olarak seminer şeklinde düzenlenen haftada üç saat ders içerir. • Derslerle ilgili öğrenilen komutların (laboratuar ödevi) uygulanması için düzenlenen ve öğrencileri bu soruları çözme konusundaki zorluklarını dile getirmeye teşvik eden haftada iki laboratuvar saati vardır. • Ders notları ve laboratuvar soruları dersin web sitesinde yayınlanır. • Ara sınav ve final sınavlarından bir hafta önce yapılan iki yazılı quiz vardır. • Kısa sınavların süresi 50 dakikadır.

- 1, 2, 3, 4, 5 ve 6. haftaları kapsayan yazılı bir ara sınav vardır.
- Tüm bölümleri içeren ancak ağırlıklı olarak 9, 10, 11, 12, 13, 14 ve 15. haftaları içeren yazılı bir final sınavı vardır.
- Dönem projesi/ödevi, derslerin üçüncü haftasında bireysel olarak verilecektir.
- Derse devam zorunludur.
- Dersin web sitesini düzenli olarak kontrol etmek ve güncel duyuruları takip etmek öğrencinin sorumluluğundadır.

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.

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 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 web site.
- There are two written quizzes which are held one week before the midterm and final exam periods.
- The duration of the quizzes is 50 mins.
- There is a written midterm exam which covers weeks 1, 2, 3, 4, 5 and 6.
- There is a written final exam which includes all the chapters but mainly the weeks 9,10, 11, 12, 13, 14 and 15.
- Term project/assignment will be assigned individually at the third week of classes.
- Class attendance is compulsory.

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

Değerlendirme Yöntemi/Method of Assessment					
Evaluation and Grading	**Assignment**	**Laboratory**	**Class Quizzes**	**Midterm Exam**	**Final Exam**
Percentage	12%	8%	15 %	30 %	35 %

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
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DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Macro Coding
Course Code	ITEC397
Type	Area Elective
Semester	Spring
Category	AC (Area Core)
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.

Course Title	Mobile Application Development
Course Code	ITEC399
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3,1,0) 3
Prerequisite	-
Language	English
Level	-
Teaching Format	3 Hours Lecture and 1 Hours Laboratory per week
ECTS Credit	6
Course Web Site	https://staff.emu.edu.tr/mobinabeheshti/en

Instructor(s)	Mobina Beheshti	Office Tel	+90 392 6301669
E-mail	Mobina.beheshti@emu.edu.tr	Office No	CT123B

Course Description

This course examines the principles of mobile application design and development. Students will learn application development on the mobile OS platforms. Topics will include memory management, user interface design, user interface building, data handling, and, finally, specific topics such as GPS and motion sensing. Students are expected to work on a project that produces a professional-quality mobile application. Projects will be chosen from real-world applications. Course work will include project conception, design, implementation, and pilot testing of mobile phone software applications.

General Learning Outcomes

On successful completion of this course students will be able to:
- Identify different techniques to plan, design and prototype your mobile apps before writing any code
- Thoroughly understand the App life cycle and its main components
- Create a graphical user interface (GUI)
- Implement a custom application theme
- Define a Recycler View item list
- Implement menu-based or drawer navigation
- Integrate code from an external support library
- Schedule a time-sensitive task using alarms
- Schedule a background task using Job Scheduler
- Designing and building a functional Android application
- Debugging Android applications using different tools and plugins
- Setting up and understanding your Android Development Environment
- Register and publishing on Play Store

Teaching Methodology / Classroom Procedures

- The course has three hours of lectures in a week.
- There is 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 web site.
- There is a written final exam.

- Term project will be assigned individually at the third week of classes.
- 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:

Jeff McWherter and Scott Gowell,"Professional Mobile Application Development", 1ˢᵗ Edition, 2012.

Weekly Schedule / Summary of Topics	
Week 1	Android application structure
Week 2-3	Activity and intents
Week 4-5	Elements of user interface
Week 6	Model-View-Controller architecture
Week 7	Data persistence and storage
Week 8-9	**Midterm Examinations**
Week 10	Multithreading
Week 11	Mobile web vs. mobile app
Week 12	Services, broadcasts, and notifications
Week 13	Sensor management and location-based services
Week 14	Multithreading
Week 15	Final project submission
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.
- 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.
- Students who arrive after the first 20 minutes of laboratory session will not be accepted to the Laboratory.

Method of assessment				
Evaluation and Grading	**Participation**	**Laboratory**	**Term Project**	**Final Exam**
Percentage	5%	20%	40%	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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF 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	1
Workload of a student	30 Hours
Course Web Site	https://lms.emu.edu.tr

Instructor	Zafer YUCA	**Office Tel**	+90 392 6302886
E-mail	zafer.yuca@emu.edu.tr	**Office No**	CT208

Course Description

As a part of the fulfilment of the graduation requirements, all students must complete 40 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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Graduation Project Orientation
Course Code	ITEC403
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(1,0,0) 1
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	1-hour weekly meetings
ECTS Credit	3 What is ECTS? Why ECTS is needed? How does it work?
Workload of a student	90 Hours
Course Web Site	https://lms.emu.edu.tr

Committee Members	E-mail	Office No	Office Tel
Hüsnü Bayramoğlu (Chair)	husnu.bayramoglu@emu.edu.tr	CT 103	0392 630 2894
Esen Ertunga	esen.ertunga@emu.edu.tr	CT 210	0392 630 1536
Şensev İlkan	sensev.alicik@emu.edu.tr	CT 110	0392 630 1665
Ali Hakan Ulusoy	alihakan.ulusoy@emu.edu.tr	CT 108	0392 630 2881/2637
Kolawole Adeniran	kolawole.adeniran@emu.edu.tr	CT123C	0392 630 1583

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.

Course Title	Graduation Project
Course Code	ITEC404
Type	Full Time
Semester	2022-2023 Fall
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3, 0, 0) 3
Prerequisite	ITEC403
Language	English
Level	Fourth Year
Teaching Format	Weekly meeting with the Graduation Project Committee Members
ECTS Credit	6
Course Web Site	http://lms.emu.edu.tr/itec404

Graduation Project Committee Members	Hasan Oylum-Chair (GUI), Raygan Kansoy(Coding), Mustafa T. Babagil(Report/Presentation), Nazife Dimililer(DB), Henry Ikediego(UML).	**Office Tel**	+90 392 630 1671
E-mail	hasan.oylum@emu.edu.tr	**Office No**	CT118

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.

- 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.

Course Title	Information System Security
Course Code	ITEC413
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
EMU Credit	(3,2,0) 4
Prerequisite	-
Language	English
Level	Third Year
Teaching Format	3 Hours Lecture and 2 Hour Labwork per week
ECTS Credit	5 What is ECTS? Why ECTS is needed? How does it work?
Workload of a student	150 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

This course focuses on basic concepts, principles, and practice of Information Systems Security (ISS). It is containing the topics like: Ethics, legality and the need for ISS, overview of networking and operating systems, their vulnerabilities and prevention. Active-passive attacks and their countermeasures. Access, authentication, and user privileges. Foot printing. Scanning. Enumerations and system hacking. Trojans and backdoors. Sniffers. Denial of service attacks. Social engineering techniques. Session hijacking. WEB servers and WEB applications, vulnerabilities, attacks, and countermeasures. Wireless networks, vulnerabilities, attacks, and protection techniques. Malicious programs; viruses, worms, bacteria. Physical security issues. Evading IDS, honey pots and firewalls. Buffer overflow attacks. Cryptography and crypto analysis. Penetration testing methodologies.

General Learning Outcomes

On successful completion of this course students should be able to:
- Explain the requirements, carrier opportunities, ethical and legal regularities of studying in ISS.
- Identify the vulnerabilities, the way of exploits, and their countermeasures of the components of Information Systems
- Distinguish the ethical hackers (White hat hackers), grey hat hackers, black hat hackers and identify the legal - illegal activities of hacking.
- Interpret, reproduce, and examine ISS policies. Analyze IS vulnerabilities and design-implement-suggest solutions for potential attacks.

Teaching Methodology / Classroom Procedures

- Each week there are three lecture hours, and two lab hours.
- Class attendance is compulsory.
- Laboratory works are organized to go as parallel with the theory, given in lecture hours in the classroom.
- 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 one midterm exam and one final exam.
- Students must complete and submit their HWs and the milestones of their term projects before the deadlines.

Course Materials / Main References

Textbook:
- D. Kim, M.G. Solomon, "Fundamentals of Information Systems Security", BPB Publications, Jones & Bartlett Learning; 3rd edition (2016), ISBN: 978-1284116458

Weekly Schedule / Summary of Topics	
Week 1	▪ The ethics, legality and the need of Information Systems (IS) Security. ▪ Networking and Operating Systems essentials. Domains in IS. Disaster Recovery Planning.
Week 2	▪ Active-passive attacks and their security countermeasures. ▪ Access and authentication. User privileges. Vulnerabilities, type of attacks and countermeasures.
Week 3	▪ Foot printing. ▪ Scanning. Ways and tools.
Week 4	▪ Physical security. Security policies, planning, controlling, educating, insuring. ▪ Enumerations and System Hacking
Week 5	▪ Trojans, time bombs, and back doors. ▪ Malicious programs: viruses, worms, bacteria. ▪ Sniffers.
Week 6	▪ Denial of Service Attacks (DOS). Distributed DOS Attacks (DDOS). ▪ Social Engineering Techniques and countermeasures.
Week 7	▪ Reviews before Midterm Exam
Week 8-9	**Midterm Examinations**
Week 10	▪ Session Hijacking techniques and countermeasures. ▪ Man in middle attacks. Detection and prevention techniques.
Week 11	▪ Hacking WEB Servers. ▪ WEB Application vulnerabilities, attacking techniques and countermeasures.
Week 12	▪ WEB based password cracking techniques and tools. ▪ Attack to Database Servers. SQL injections attacks and countermeasures.
Week 13	▪ Wireless networks. Vulnerabilities, type of attacks and protection ways.
Week 14	▪ Cryptography and crypto analysis.
Week 15	▪ Evading IDS, honey pots and firewalls. ▪ Buffer overflow attacks. ▪ Penetration testing methodologies, tools, agreements, and legal issues.
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**	**Midterm Exam**	**Final Exam**
Percentage	25 %	25 %	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 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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DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Code	ITEC 415	Course Title	Analysis of Algorithms
Semester	Fall / Spring	Language	English
Category	AC (Area Core Course)	Level	Fourth Year
Workload	180 Hours	Teaching Format	3 Hours Lecture, 1 Hour Tutorial per week
EMU Credit	(3,0,1) 3	ECTS Credit	6
Prerequisite(s)	-	Course Web	http://lms.emu.edu.tr/itec415

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

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, recursive formulations.
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, basic data structure concepts
Week 7	Heaps, maintaining the heap property, build a heap, and heap-sort algorithm, queues, priority queues, stack mechanisms, concepts of data structures.
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), Euler tour, Hamiltonian circuit.
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.

Course Title	Framework Based Internet Application
Course Code	ITEC420
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 Lab per week
ECTS Credit	6
Course Web Site	https://lms22-23fall.emu.edu.tr/course/view.php?id=1382

Instructor(s)	Erdoğan Alper	**Office Tel**	+90 392 6301135
E-mail	erdogan.alper@emu.edu.tr	**Office No**	CT106

Course Description

This course focuses on development of Internet applications. Designing web sites/pages and developing database Internet applications will be covered throughout the semester. In order to eliminate tedious coding and to develop all these applications, ASP.NET with C# as the programming language will be used.

As relational database management server which will be introduced during the semester, is addressed as MS Sql Server.

The ASP.NET Web Site Administration Tool will also be covered as part of web sites with authentication, access rights and web sites ready for e-commerce among the semester.

General Learning Outcomes

On successful completion of this course students will 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 .NET framework.
- Create event-driven applications.
- Design GUI using visual programming languages.
- Easily adapt on any 4th generation programming language.

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 the corresponding Lab Assignments in printed or electronic 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.
- One hour 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 web (http://courses.sct.emu.edu.tr/it/itec420) and track the designated dates for timely submission of the assignment and for timely attendance to all quizzes.

- There are two written quizzes which are held one week before the midterm and final exam periods.
  - Quiz 1 includes Lecture 1, 2, 3 and 4.
  - Quiz 2 includes chapters 5, 6, 7, 8 and 9.
- The duration of the quizzes is 90 mins.
- There is a written midterm exam which covers chapters 1, 2, 3 and 4.
- There is a written final exam which includes all the chapters.
- There is one term project about developing a web page.
  - Individual/Group work(Depends on number of students)
  - Subject will be chosen by the instructor.
  - There is no report. But students should present their work at the end of the semester.
- Class attendance is compulsory.

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.

Lecture Notes:

Lecture , Lab and tutorial notes on web link : http://sct.emu.edu.tr/it/itec420

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 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.
- Course Web Page, http://courses.sct.emu.edu.tr/ITEC420 must frequently be visited for the course announcements, the exam/quiz results, labs etc.

Method of Assessment				
Evaluation and Grading	Assignments	Quizzes	Midterm Exam	Final Exam
Percentage	15 %	20 %	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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
ITEC 421 MANAGEMENT INFORMATION SYSTEMS
COURSE OUTLINE   Fall 2022

Course Code	ITEC421	**Course Title**	Management Information Systems
Semester	Fall	**Language**	English
Category	AC (Area Core)	**Level**	Fourth Year
Workload	3.5 hrs per wk	**Teaching Format**	3 hrs of lectures and 1 hr tutorial per wk (all face to face)
EMU Credit	(3,0,1) 3	**ECTS Credit**	5
Prerequisite(s)	Nil	**Course Web**	To Be Announced

Instructors(s)	Asst. Prof. Mehmet Islamoglu
e-mail(s)	**mehmet.islamoglu@emu. edu.tr**

	Office No, Hours:	Teams or whats app **90 533 866 9501** can CALL **ANY DAY** INCLUDING WEEKENDS **FROM 0900 TO 2100**. PLEASE **MAKE APPOINTMENT** TO SEE ME **FOR LONGER DISCUSSIONS**.

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 lectures and one tutorial.
- Lectures introduce the material and cover it in depth before the issues are further elaborated with examples and discussions during lectures and tutorial. Participation is expected, encouraged, and graded.
- 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.

Reading References

Text Book:
Baltzan, P. Business Driven Technology, 7th Ed., McGrawHill, 2017.
Laudon and Laudon, Management Information Systems, Global 16th Ed., Pearson, 2019.

Weekly Schedule / Summary of Topics	
4 weeks	**Introduction to Information Systems in Businesses Today, Data, Information, Business Intelligence, and Knowledge, ERP, business processes, TPS, MIS, DSS, ESS, and IT and Strategy, Competitive Advantage, SWOT, Five Forces, Three Generic Strategies, Value Added Primary Secondary Activities.** *From Business Driven Technology Chapters 1, 2, and 3 (pages 3-55) and from Laudon Chapter 1 (pages 2-24) Chapter 2 ERP TPS MIS DSS ESS (40-68 and 79-80) and Chapter 3 Strategy (94-108).*
2 weeks	**ERP, SCM, and CRM: Using supply chain management systems, customer relationship management systems, and enterprise systems for high levels of cooperation and intimacy with suppliers and customers and for operational excellence within the firm.** *Laudon Ch.9 (pp.338-362)*
2 weeks	**Electronic Commerce: Innovative Organizations, E-Business and Internet Technologies** 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, knowledge management systems. Laudon Ch.10 (pp.372-406), and *plus pp.247-248 (reinterm cybermed), pp.249-250 (clickstream and website metrics), p.256 (brick click mortar pure), p.260 (content mgmt. taxonomy), p.268 (crowdsourcing), p.270 (folksonomy), p.272 (network effect), pp.273-274 (tech dependence, info vandalism, web 3.0 semantic web), pp.289-292 (RFID, GPS, location-based ecommerce), p.294 (Making Business Decisions 1-8), optional reading p.299 (Bitcoin), pp.300-301 (Über)*
3 weeks	**Data, Big Data, and Decision Systems in an Enterprise:** Data warehouses and marts, data mining, Big Data, expert systems, case-based reasoning systems, intelligent agents, transaction processing systems, management information systems, decision support systems, executive support systems, (from other sources) geographic information systems and customer decision support systems. *Laudon Ch.6 (pp.227-248), Baltzan information granularity p.99 transactional information analytic information p.100, real-time information p.101, nestle, opportunity costs of low quality data, data gap analysis, data stewardship, data governance, pp.103-104, data driven website (personalization of web pages), static, dynamic information, Zappos, p.110, ten tribes, behavioural grouping targeting, p.114, data aggregation (level closely relevant to MIS and ESS) p.121, estimation, affinity (associations, sequencing), market basket, cluster, classification, optimization, forecasting, regression, data analytics table, pp.136-141, fast data p.141, data visualization infographics, analysis paralysis, business intelligence dashboards pp.142-144.operational-structured OLTP, managerial-semistructured OLAP, strategic-unstructured decisions pp.165-168, what-if, sensitivity, goal-seeking, and optimization analysis p.169, consolidation, drill-down, slice-and-dice, pivot analysis p.171-172, CSF, KPI, efficiency, effectiveness metrics, pp.59-61, website metrics, SCM&CRM metrics pp.63-64. Geog Info Systems, Group DSS, and Customer DSS using internet sources.*
3 weeks	**KNOWLEDGE MANAGEMENT Laudon Ch. 11 (pp.418-447)**

Course Requirements and Considerations
▪ Students whose attendance is below 66% (without any extenuating circumstances), shall be assigned NG grade.
▪ Attendance without participation in lecture discussions or tutorial discussions, does not make any academic contribution towards your grade.
▪ Each student is expected to do required readings from the main textbook prior to the lectures and come to class ready to participate and discuss. Usually a list of interesting issues, questions, scenarios will be mentioned verbally at some points during a lecture and students will be expected to comment on these in the following lecture.
▪ Those who miss midterm or final exam for valid and documented reasons shall take the makeup exam, the date and place of which will be announced by your departmental secretariat. There is no makeup for quizzes.
▪ **Materials (cases, examples, etc) which is not written in the textbooks but which are taught by lecturer and/or discussed in class will have questions about them in the quiz, midterm and final (about 20% of total questions). So take notes.**

Method of Assessment			
Evaluation&Grading	**2 Quizzes (20%), In-class participation (20%)**	**Midterm Exam**	**Final Exam**
Percentage	40%	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

EASTERN MEDITERRANEAN UNIVERSITY

SCHOOL OF COMPUTING AND TECHNOLOGY

DEPARTMENT OF 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)	Sr. Instr. 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.
  - o Midterm 1 includes chapters 1, 2 and 3.
  - o Midterm 2 includes chapters 4, 5 and 6.
  - o Final Exam includes remaining chapters 7, 9 and 10.
  - o 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.

Course Title	IoT and Cyber Security
Course Code	ITEC442
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	2 Hours Lecture and 2 Hour Tutorial per week
ECTS Credit	6
Course Web Site	https://lms22-23fall.emu.edu.tr/course/view.php?id=2348

Instructor(s)	Beran Tanseloglu	**Office Tel**	
E-mail	Beran.tanseloglu@emu.edu.tr	**Office No**	

Course Description

The aim of this course is to express why cybersecurity is a societal imperative; analyze the tradeoffs of balancing key security properties like confidentiality, integrity, and availability; contrast the roles of prevention, deterrence, and detection mechanisms; document the role of formal methods in creating high assurance software and systems; express the differences between vulnerabilities, threats, and risk; analyze a security policy and/or procedure to show where it considers, or fails to consider, human factors; contrast encryption, digital signatures, and hash functions; document standards that apply to an organization's information security posture; contrast the internet of things with the web of things, with industrial internet, with pervasive computing, and with smart systems; illustrate ways to interface an IoT component to sensors and actuators; demonstrate several security issues and challenges of collaborative data acquisition in IoT; express the design and implementation issues related to ad hoc networks and contrast the difference between proactive, reactive and hybrid routing; express intelligent information discovery, retrieval, and mining on IoT and express tools that are using in designing IoT.

General Learning Outcomes

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

- Identify and explain the architecture, structure and functionality of basic components of a computer system, considering Cyber Security issues
- Evaluate critically implications of the key vulnerabilities and threats of software and network security and approaches to mitigate these issues
- Appraise critically and apply the concepts and principles of secure object-oriented design to facilitate business security-based decisions
- Evaluate critically the solutions developed to solve/mitigate these security issues.
- Human interaction with IoT devices and wearable sensors
- How advances in robotics and IoT fields have converged over the years.
- Planning an IoT implementation
- The IoT development life cycle

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 the corresponding Lab Assignments in printed or electronic form at the start of each Lab Session

Every week the student has to follow the following :

- Two hours of Lectures to learn the basic skills and theoretical information needed.
- One and a half hour 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 web and track the designated dates for timely submission of the assignment and for timely attendance to all quizzes.

- There are two written quizzes which are held one week before the midterm and final exam periods.
    - Quiz 1 includes Lecture 1, 2, 3 and 4.
    - Quiz 2 includes chapters 5, 6, 7, 8 and 9.
- The duration of the quizzes is 90 mins.
- There is a written midterm exam which covers lectures 1, 2, 3 ,4 and 5
- There is a written final exam which includes all the chapters.
- There is one term project about developing e-portfolio
    - Individual/Group work(Depends on number of students)
    - Subject will be chosen by the instructor.
    - There is no report. But students should present their work at the end of the semester.
- Class attendance is compulsory.

Course Materials / Main References

Text Book:

Text Book:

Build Your Own IoT Platform: Develop a Fully Flexible and Scalable Internet of Things Platform in 24 Hours

Demystifying Internet of Things Security: Successful IoT Device/Edge and Platform Security Deployment (2019, Free, Chapters 2, 4, 5, 6)

Internet of Things (IoT): System and Applications (2019, All)

Lecture Notes: Lecture, Lab and tutorial notes on VLE

Books:

Network Security Assessment: Know Your Network Edition: 3rd

Author(s): McNab, C. Date of Publication: 2016 Publisher: O'Reilly Media Place of Publication: Beijing

Useful web site resources: -

https://iot-analytics.com/

https://internetofbusiness.com/10-examples-showcasing-iot-energy/

Weekly Schedule / Summary of Topics	
Week 1	Understand the key concepts of Confidentiality, Integrity and Availability (CIA) in Cyber Security. Appreciate of the competencies required to be able to address Cyber Security issues. Gain awareness of the ethical and governance frameworks around information systems security and data protection acts.
Week 2-3	Developed an awareness of the implications of security breaches. Evaluated available techniques and technologies at database and metadata levels dealing with privacy and data disclosure. Critically evaluate the implications of vulnerabilities and threats in software and networks. Develop knowledge about approaches to identify vulnerabilities and threats. Apply knowledge to mitigate the identified issues. Develop an awareness of emerging trends in Cyber Security.
Week 4-5	Develop solutions that will efficiently identify vulnerabilities and threats in software and over networks. Develop security requirement documents to ensure security is embedded in a software development process. Develop the capacity to predict security issues in software and develop appropriate solutions to deal with them.
Week 6	Select and explain which assessment regime to use based on the type and size of the target business. Utilise open-source scanning and testing tools to perform vulnerability tests and scans. Analyse scanning results and make recommendations to mitigate vulnerabilities.
Week 7-8	**Midterm Examinations Week**
Week 9-10	Introduction to, the Internet of Things (IoT) and its expected global growth.
Week 11-12	Human interaction with IoT devices and wearable sensors and IoT infrastructure and understanding of business challenges, technical challenges and security challenges
Week 13	Background of Physical computing and IoT Introduction to Microcontrollers and programming Application of IoT in Pervasive computing. Undertaking an IoT project.
Week 14	How advances in robotics and IoT fields have converged over the years. understanding the applications, challenges, and opportunities within these two fields. introducing the Internet of Robotic things (IoRT), provide background on IoRT, briefly discuss robot operating systems available and the potential applications of IoRT.
Week 15-16	Ambient, Embedded and Wearable interaction methods with IoT devices and sensors Creating automation and trigger events Exploring IoT platforms and application
Week 17-18	**Final Examinations Week** **Submission of the e-portfolio project**

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. ▪ Course Web Page, must frequently be visited for the course announcements, the exam/quiz results, labs etc.

Method of Assessment				
Evaluation and Grading	**Project e-portfolio**	**Quizzes**	**Midterm Exam**	**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 distribution of the averages will play a significant role in the evaluation of the letter grades.

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)	Assoc. Prof. Dr. Ersun İşçioğlu		
e-mail(s)	ersun.iscioglu@emu.edu.tr	**Office No:**	EFB01

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 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	**Term Project**	**Activities**	**Midterm Exam**	**Final Exam**
Percentage	20 %	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.

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	http://courses.sct.emu.edu.tr/it/itec447

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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF 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.

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COURSE POLICY SHEET

Course Code	ITEC 456	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 per week
EMU Credit	(3,1,0) 3	ECTS Credit	6
Prerequisite(s)	-	Course Web	http://lms.emu.edu.tr/ITEC456

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

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	Animate 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://lms.emu.edu.tr/ITEC456 must frequently be visited for the course announcements, the exam/quiz results, etc.
▪ Tutorials will be organized on animation techniques by using Adobe Animate 2022.

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

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COURSE POLICY SHEET

Course Code	ITEC 457	**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/ITEC457

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.

Evaluation and Grading	Method of Assessment				
	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.

Course Title	Introduction to Neural Networks
Course Code	ITEC460
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
EMU Credit	(3,0,1) 3
Prerequisite	ITEC114
Language	English
Level	Third Year
Teaching Format	3 Hours Lecture and 1 Hour tutorial per week
ECTS Credit	6
Workload of Student	180 Hours
Course Web Site	http://courses.sct.emu.edu.tr/it/itec460

Instructor(s)	Prof. Dr. Ahmet Rizaner	**Office Tel**	+90 392 630 2480
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 being 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 perceptions, multi-layer perceptions, 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 relation 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 to theoretical study given in classrooms. A report should be submitted for evaluation for each project.
- Students should form project groups of 3-5 students.
- Students are encouraged to use internet to search for various related topics. Lecture notes, Projects, Related Programs, assignments and announcements will be posted on the course's web site.

Course Materials / Main References

Text Book:

Robert Callan, The Essence of Neural Networks, First Edition, Pearson Prentice Hall, 1999, ISBN-13: 978-0139087325.

Resource Books:

1. Laurene V. Fausett, Fundamentals of Neural Networks: Architecture, Algorithms and Applications, First Edition, Prentice Hall, 1993, ISBN-13: 978-0133341867.
2. Phil Picton, Neural Networks, Second Edition, Palgrave, 2000, ISBN 0-13-334186-0.
3. Simon Haykin, Neural Networks and Learning Machines, 3rd Edition, Prentice-Hall, 2008, ISBN-13: 978-0131471399.

Lecture Notes:

Most course materials are also available online in Adobe 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 4-5	**Multi-Layer Perceptron** Multi-layer Perceptron, structure of multi-layer perceptron, feedforward backpropagation network and backpropogation learning rule.
Week 6-7	**Associative Memory Neural Network** Autoassociative networks, heteroassociative networks, pattern association, pattern storing and capacity.
Week 8-9	**Midterm Examinations Week**
Week 10-11	**Discrete Hopfield Network** Fundamental memory, storing, error-correcting capability and common problems arising with the Hopfield networks.
Week 12-13	**Radial Basis Function Networks** Radial basis functions, learning algorithms used in RBF networks and function approximation.
Week 14-16	**Self-Organizing Future Maps** Self-organizing network, unsupervised learning and principle of clustering patterns.
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 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 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 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.

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	Any 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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Fundamentals of Wireless Networking
Course Code	ITEC479
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, 1 Hour Tutorial per Week
ECTS Credit	6
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

The purpose of this course is to expand students' knowledge and understanding of networking concepts and principles into the world of wireless communications and networking. Building from a foundation of radio frequency communications technology, the world of wireless local and personal area networks are explored at an intermediate level towards providing the students with a thorough understanding of the use, application and development of a wireless network.

General Learning Outcomes

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

- Explain the fundamentals of wireless networking.
- Find a fundamental introduction to wireless networking.
- Describe a straightforward survey of wireless technologies.
- Show practical, hands-on experience that will build skills required of wireless network technicians.
- Describe key wireless topics, such as RF communications, wireless hardware devices, and IEEE standards.

Teaching Methodology / Classroom Procedures

- The course has three hours of lectures in a week mainly held in the form of a seminar and one hour tutorial.
- 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 6.
  - Quiz 3 includes chapters 8 and 9.
  - Quiz 4 includes chapters 10, 11 and 12.
  - The duration of the quizzes is 20 mins.
- There is a written midterm exam which covers chapters 1, 2, 3, 4, 5, 6 and 7.
- There is a written final exam which includes chapters 8, 9, 10, 11, 12, 13 and 14.
- Students are asked to prepare a term project in a course related topic.
  - Students work with other class members as part of a team in groups of 2 or 3 students and submit a project report as a detailed 15-20 page of 1.5 line-spaced 12-point text written technical report.
  - Turnitin (plagiarism) test result must be obtained and attached as the last page of the project report.

- Class attendance is compulsory.
- The student is responsible to check the course web site regularly and view the latest announcements.
- Students are encouraged to use internet to search for various related topics.

Course Materials / Main References

Text Book:

Ron Price, Fundamentals of Wireless Networking, Second Edition, Career Education, 2007, ISBN: 978-0072256680.

Resource Books:

1. Jim Geier, Designing and Deploying 802.11 Wireless Networks: A Practical Guide to Implementing 802.11n and 802.11ac Wireless Networks For Enterprise-Based Applications, Second Edition, Cisco Press, 2015.
2. Eldad Perahia, Next Generation Wireless LANs: 802.11n and 802.11ac, Cambridge University Press, Second Edition, 2013.
3. Matthew S. Gast, 802.11 Wireless Networks: The Definitive Guide, Second Edition, O'Reilly Media, 2005.

Lecture Notes:

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

Weekly Schedule / Summary of Topics	
Week 1	**Introduction to Wireless Networks:** Why Choose a Wireless LAN? The Wireless Networking Market, Wireless Networking Issues and Constraints. **Wireless Mode Technologies:** WLAN Modes and Topologies, Wireless Network Media.
Week 2	**Wireless Network Devices:** WLAN Radio Components, WLAN Devices.
Week 3	**Radio Frequency (RF) Communications:** RF Communications Basics, Radio Communications, Transmitting RF Signals, RF Communications Standards.
Week 4	**WLAN Standards:** The IEEE 802 Standards, The IEEE 802.11 WLAN Standards, The 802.11 Legacy Standard, The IEEE 802.11b WLAN Standard, The IEEE 802.11a WLAN Standard, The IEEE 802.11IR Standard, Cutting-Edge IEEE 802.11x Standards.
Week 5	**Infrared and Other Networking Media:** IR Operations, IR Networking, The Infrared Data Association (IrDA) Standards, Other Limited Range Technologies.
Week 6	**Bluetooth and Wireless Personal Area Networks:** Understanding the Bluetooth Technology and Its Operations, Understanding WPAN Concepts and the IEEE 802.15 Standards, Reviewing WPAN Technology.
Week 7	**WLAN Planning and Design:** WLAN Design Considerations, Performing a Site Survey.
Weeks 8-9	**Midterm Examinations**
Week 10	**WLAN Configuration and Installation:** WLAN Planning, Installing and Configuring WLAN Devices, Configuring Wireless Repeaters, Wireless Routers, Wireless Bridges, and LAN Switches.
Week 11	**WLAN Antennas:** WLAN Antenna Basics, Antenna Installation.
Week 12	**WLAN Security:** Wireless LAN Security Basics, IEEE 802.11i, Security Threats to WLANs, The TLAs of Security.
Week 13	**HAN, SOHO and the Enterprise WLANs:** Home and Small Office WLAN Devices, Installing a HAN WLAN, Installing a SOHO WLAN, Installing an Enterprise WLAN.
Week 14	**Troubleshooting WLANs and Wireless Devices:** Network Troubleshooting Procedures, Troubleshooting Wireless Network Problems, Wireless Network Troubleshooting Tools.
Week 15	**Wireless WANs:** Wide Area Network (WAN) Basics, Wireless WAN Technologies, WAN Communications Technologies, Virtual Private Networks, IEEE 802.16/Wireless Metropolitan Area Networks (WMAN).
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	**Term Projects**	**4 Quizzes**	**Midterm Exam**	**Final Exam**
Percentage	15 %	15 %	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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Code	ITEC498	Course Title	Cloud Computing Applications
Semester	2018 -2019 Spring	Language	English
Category	AE (Area Elective)	Level	Fourth Year
Workload	180 Hours	Teaching Format	2 Hours Lecture, 2 Hours Laboratory
EMU Credit	(3,0,1) 3	ECTS Credit	6
Prerequisite(s)	-	Course Web	http://staff.emu.edu.tr/ibrahimadeshola/en

Instructors(s)	Ibrahim Adeshola		
e-mail(s)	ibrahim.adeshola@emu.edu.tr	**Office No:**	CT123B

Course Description

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 accessed by common Internet protocols and networking standards. Its architecture, abstraction, virtualization, infrastructures, scaling deployments, machine learning in the cloud, data management, security and privacy in the cloud will be discussed in details.

General Learning Outcomes

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

- Explain Cloud Computing abstraction and virtualization.
- Describe cloud storage services, pros and cons.
- Use different cloud storage services.
- Work with cloud APIs and SDKs.
- Describe machine learning in cloud.
- Secure data in cloud.
- Build own cloud with open stack.

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 be introducing to different cloud storage each week.
- Different cloud computing applications will be used during the lab sessions.

Course Materials / Main References

Text Book:
Thomas Erl, Ricardo Puttini, Zaigham Mahmood, *Cloud Computing: Concepts, Technology & Architecture*, ISBN-9780133387520.

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.

Weekly Schedule / Summary of Topics	
Week 1	Introduction to Cloud Computing
Week 2-3	Managing Data in Cloud
Week 4	Computing in the Cloud
Week 5-6	Using and Managing Virtual Machines
Week 7	Using and Managing Containers
Week 8	Scaling Deployments
	Midterm Examinations Period
Weeks 11	Data Analytics in the Cloud
Weeks 12	Streaming Data to Cloud
Week 13	Machine Learning in the Cloud
Week 14	Developing Cloud Storage, Security and Privacy
	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 quiz.
▪ 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.

Method of Assessment					
Evaluation and Grading	**Quiz**	**Project**	**Lab**	**Midterm Exam**	**Final Exam**
Percentage	5%	10 %	20 %	30 %	35 %

EASTERN MEDITERRANEAN UNIVERSITY/DOĞU AKDENİZ ÜNİVERSİTESİ
SCHOOL OF COMPUTING AND TECHNOLOGY/BİLGİSAYAR VE TEKNOLOJİ YÜKSEKOKULU
DEPARTMENT OF INFORMATION TECHNOLOGY/BİLİŞİM SİSTEMLERİ VE TEKNOLOJİLERİ BÖLÜMÜ
COURSE POLICY SHEET/DERS İÇERİĞİ

Ders Adı / Course Title	Mobile Uygulama Geliştirme
Ders Adı / Course Title	Mobile Application Development
Ders Kodu / Course Code	ITEC499
Tipi / Type	Tam Zamanlı / Full Time
Yarıyıl / Semester	Güz / Fall
Türü / Category	Üniversite Seçmeli /UE Elective
İş Yükü / Workload	180 Saat / 180 Hours
DAU Kredi Değeri / EMU Credit	(3,0,1) 3
Ön Koşullar / Prerequisite	
Dil / Language	Türkçe / Turkish
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	

Öğretim Elemanı / Instructor	Atalay TALAYKURT	**Ofis Tel / Office**	+90 392 6301582
E-posta / E-mail	Atalay.talaykurt@emu.edu.tr	**Ofis No /Office No**	CT208

Ders İçeriği / Course Description
Turkish: 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

Turkish:

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		Katılım/Participation	Ara Sınav/MidTerm	Final	
Yüzdelikler / Percentage		15 %	35%	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

EASTERN MEDITERRANEAN UNIVERSITY
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
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

SCHOOL OF COMPUTING AND TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

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
SCHOOL OF COMPUTING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
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. Probaaility 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.

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WEEKS	DATES	RESOURCES	WEEKLY LEARNING OBJECTIVES / ENGL 191 (GSE:55-60 / CEFR: B1+)		
			GSE 10 20 30 40 50 60 70 80 90 CEFR <A1 A1 A2+ B1+ B2+ C1 C2		
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)	

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			PRIMARY OBJECTIVES	SUB 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)	• 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.	• 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)**	• engage in pair and group discussions. • encounter, study and use high frequency vocabulary targeted in academic texts. • act as autonomous learners through online tasks.	• 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)	• 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.	• 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.

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		Content	PRIMARY OBJECTIVES	SUB OBJECTIVES
		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%)**		
10	**05 – 09 December**	• **Teacher's Outline Feedback Submission**	**PRIMARY OBJECTIVES** • act as autonomous learners through online tasks	**SUB OBJECTIVES** • edit and improve a simple text.
		• 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.

Week	Dates	Content	PRIMARY OBJECTIVES	SUB OBJECTIVES
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.

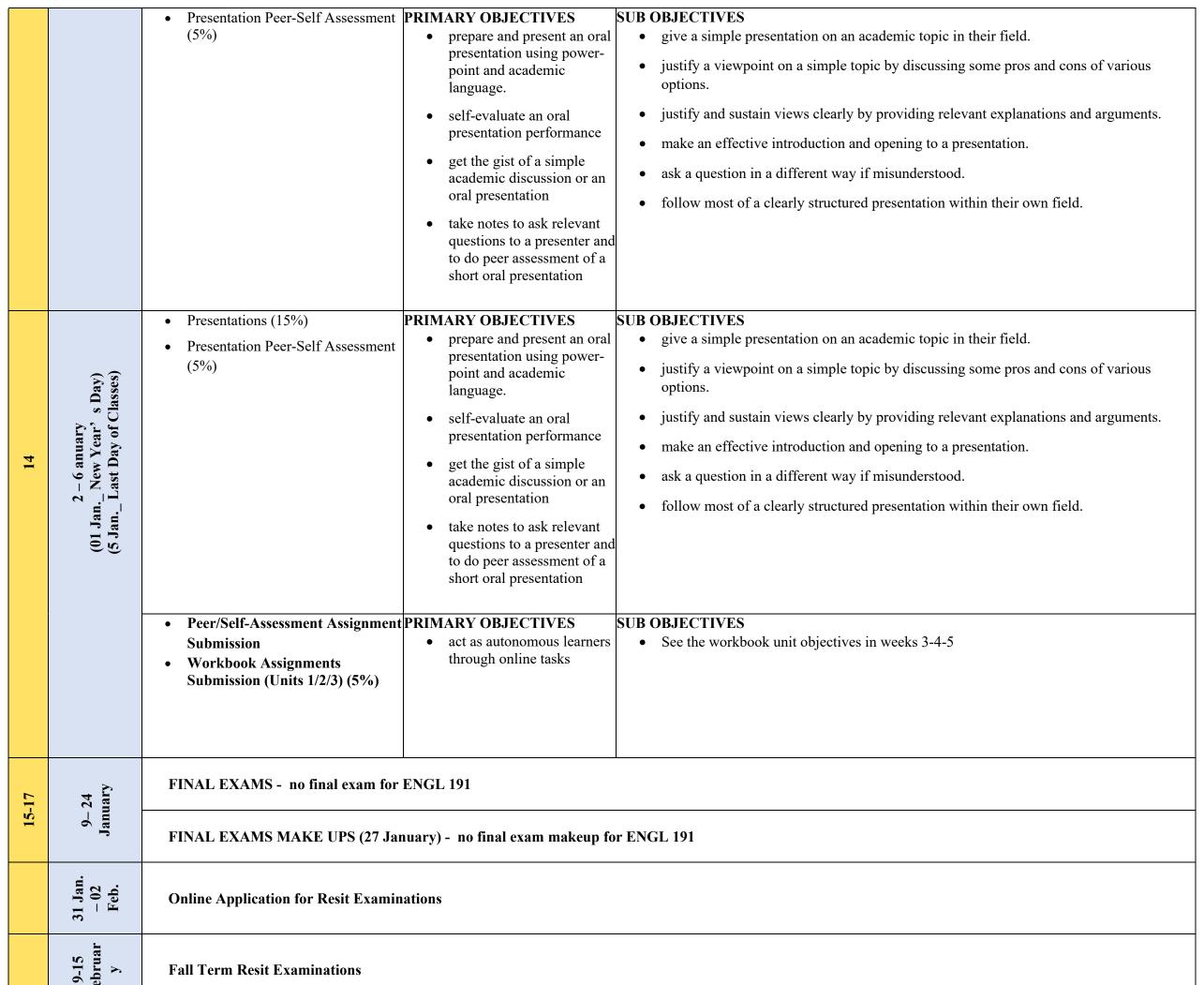| Week	Date	Assessment	PRIMARY OBJECTIVES	SUB OBJECTIVES
		• Presentation Peer-Self Assessment (5%)	**PRIMARY OBJECTIVES** • prepare and present an oral presentation using power-point and academic language. • self-evaluate an oral presentation performance • get the gist of a simple academic discussion 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 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.

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ENGL 192 COURSE OUTLINE

WEEKS	DATES	RESOURCES	WEEKLY LEARNING OBJECTIVES (GSE:59-66 CEFR: B2)	
			GSE 10 20 30 40 50 60 70 80 90 **CEFR** <A1 | A1 | A2⁺ | B1⁺ | B2⁺ | C1 | C2	

WEEKS	DATES	RESOURCES	PRIMARY OBJECTIVES	SUB OBJECTIVES
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.

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ENGL 192 COURSE OUTLINE

Week	Dates	Content	PRIMARY OBJECTIVES	SUB OBJECTIVES
12		• **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)

Eastern Mediterranean University
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Foreign Languages Division
Academic Affairs

FLEPS
Foreign Languages and English Preparatory School

ENGL 192 COURSE OUTLINE

Week	Dates	Content	PRIMARY OBJECTIVES	SUB OBJECTIVES
		• **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.