Modules Handbook

Department of Information Technology

School of Computing and Technology

Eastern Mediterranean University

Curriculum of the Information Technology (35) Program

Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit (L/L/T)	EMU	ECTS	Prerequisites
			Freshman Year – First Semester					
1	35711	ITEC103	Information Technology Fundamentals	AC	(2,2,0)	3	6	35711
1	35712	ITEC113	Algorithms and Programming Techniques	AC	(3,2,0)	4	8	35712
1	35713	ITEC161	Introduction to Business	AC	(3,0,0)	3	4	35713
1	35714	MATH133	Basic Mathematics	AC	(3,0,1)	3	6	35714
1	35715	ENGL191	Communication in English - I	UC	(3,0,1)	3	4	35715

Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			Prerequisites
			Freshman Year – Second Semester					
2	35721	ITEC114	Structured Programming	AC	(3,2,0)	4	8	ITEC113
2	35722	ITEC122	Introduction to Multimedia	AC	(3,1,0)	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	3	
2	35726	UE-01	University Elective - I	UE	(3,0,0)	3	3	

Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			Prerequisites
			Sophomore Year – First Semester					
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	

Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			Prerequisites
			Sophomore Year - Second Semester					
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 – First Semester					
Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			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	3	

			Junior Year – Second Semester					
Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			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	7	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	(3,0,1)	3	6	

			Senior Year – First Semester					
Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			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	6	
7	35774	ITEC415	Analysis of Algorithms	AC	(3,0,1)	3	6	
7	35775	ITEC421	Management Information Systems	AC	(3,0,1)	3	6	
7	35776	AE-02	Area Elective - II	AE	(3,0,1)	3	6	
7	35777	AE-03	Area Elective - III	AE	(3,0,1)	3	6	

			Senior Year – Second Semester					
Sem.	Ref Code	Course Code	Full Course Title	Course Category	Credit			Prerequisites
8	35781	ITEC404	Graduation Project	AC	(3,0,0)	3	6	ITEC403
8	35782	AE-04	Area Elective - IV	AE	(3,0,1)	3	6	
8	35783	AE-05	Area Elective - V	AE	(3,0,1)	3	6	
8	35784	AE-06	Area Elective - VI	AE	(3,0,1)	3	6	
8	35785	UE-03	University Elective - III	UE	(3,0,1)	3	3	

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

Non-Turkish speaking students should take: TUSL181

Turkish speaking students should take: HIST280

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

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

Instructor(s)	Halide Sarıçizmeli	**Office Tel**	+90 392 6301661
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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	**Assignments**	**Class Quizzes**	**Lab Quizes**	**Midterm Exam**	**Final Exam**
Percentage	5 %	15 %	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.

Course Title	Algorithms and Programming Techniques
Course Code	ITEC113
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	240 Hours
EMU Credit	(3,2,0) 4
Prerequisite	-
Language	English
Level	First Year
Teaching Format	3 Hours Lecture, 2 Hours Laboratory Peer week
ECTS Credit	8

Instructor(s)	Yeşim Kapsıl Çırak	Office Tel	+90 392 6302310
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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 / 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 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 and track the designated dates for timely submission of the assignment and for timely attendance to all quizzes.

There are lab assignments as follows:
- ✓ A lab assignment given from related topic every week.

There are two written quiz as follows:
- ✓ Quiz1-Algorithms and Basic C structures(before midterm week)
- ✓ Quiz2-C structures,Functions and 1D Arrays(before final week)

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 / Main References

Text Book:

  "C How to Program", by DEITEL & DEITEL, Seventh Edition, 2012, ISBN-13: 978-0-13-299044-8

Resource Books:

- "C for Business Programming", by John C. Molluzo
- "Problem Solving using C: Structured programming techniques" by Yuksel Uckan

Lecture Notes:

- Lecture , Lab and tutorial notes are available on the web site.

Weekly Schedule / Summary of Topics	
Week 1	**Introduction to Computer Programming Concepts :** - To understand Computers, Types Programming languages - To define properties of well designed programs
Week 2-3	**Principles of Algorithms:** -To understand Algorithms -To learn tools of Algorithms(Pseudocodes, Flowcharts) -To learn and apply structures with algorithms
Week 4-5	**Introduction to C Programming and Structured Development in C:** -To be able to write simple program in C -To be able to use simle input/output statments -To become familiar with fundamental data types -To understand computer memory concept -To be able to use arithmetic operators -To be able to write simple decision

Week 6	**C Formated Input/Output** -To be able to use all print formatting capabilities -To be able to use all input formatting capabilities -To be to print with field widths and precisions
Week 7	**Structured Development in C** -To understand basic problem-solving techniques -To be able to use selections statements -To be able to use while loop(counter control/sentinel control) To be able to use operators
Week 8-9	**Midterm Exams**
Week 10	**C program Control** -To be able to use for and do-while repetition statments -To understand multiple selection using switch selection statement -To be able to use break and continue control statements -To be able to use logical operators
Week 11-12	**C Functions** **-**To understand how to construct programs modularly from small pieces called functions. -To introduce the common functions available in the C standart library -To be able to create new functions -To understand the mechanisms used to pass information between functions. -To understand how to write and use functions
Week 13-14	**C Arrays** **-**To introduce the array data structure -To understand use of arrays -To understand how to define an array, initialize an array. -To be able to write C programs with array.
Week 15-16	**Revision** C Arrays / Functions revisions
Week 17-18	**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 who do not pass the course and fail to attend the lectures regularly may be given NG grade. ▪ 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

Method of Assessment				
Evaluation and Grading	**Labs**	**Quizzes**	**Midterm Exam1**	**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.

Course Title	Structured Programming
Course Code	ITEC114
Type	Full Time
Semester	Fall - Spring
Category	AC (Area Core)
Workload	240 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	8

Instructor(s)	Akile Oday	Office Tel	+90 392 6301183
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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, files, strings, and pointers.

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 and for timely attendance to all quizzes.

- There are three assignments as follows:
  - ✓ Assignment#1 – C Arrays and C Functions %4
  - ✓ Assignment#2 – C Structures %3
  - ✓ Assignment#3 – C Files %3

- There are three written quizzes as follows: (Duration of each quiz is 40 minutes)
  - ✓ Quiz#1 – C Arrays and C Functions %4
  - ✓ Quiz#2 – C Pointers %3
  - ✓ Quiz#3 – C Structures %3

- There is a written midterm exam which covers Functions, Array and Pointers

- 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 are available on the web site.

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, Unions, Bit Manipulation and Enumarations (Chapter 10)**
	- Create and use structures, unions and enumarations
	- Pass structures to functions by value and by reference
	- Use typedef to create aliases for existing type name
	- Manipulate data with the bitwise operators
	- Create bit fields for storing data compactly
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	**Assignments (3 assignment)**	**Quizzes (3 quiz)**	**Lab Performance**	**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.

Course Title	Introduction to Multimedia
Course Code	ITEC122
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	210 Hours
EMU Credit	(3,1,0) 3
Prerequisite	ITEC103
Language	English
Level	First Year
Teaching Format	3 Hours Lecture and 1 Hour Laboratory per week
ECTS Credit	7

Instructor(s)	Birol Özkaya	**Office Tel**	+90 392 6301660
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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

- 3 hours of lecture and 1 hour 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 written exams namely Midterm Exam, and Final exam. Each exam consists of 50 multiple-choice type questions.
    - Midterm Exam includes Lectures and Labs 1, 2, 3, 4, and 5.
    - Final Exam includes all the Lectures and Labs.
- There are two practical 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.

Course Materials / Main References

Course Materials:

The lecture notes, laboratory exercises, assignments, and announcements are available on the course web site.

Weekly Schedule / Summary of Topics	
Week 1	Course Registration
Week 2	Introduction of the Course
Week 3	Multimedia Definitions, Hardware and Software
Week 4	Text
Week 5	Sound
Week 6	Image
Week 7	Animation
Week 8	Video
Week 9-10	Midterm Examinations
Week 11	Sound Capturing / Editing
Week 12	Image Capturing / Editing
Week 13	Video Capturing
Week 14	Video Editing
Week 15	Sound Capturing / Editing
Week 16-18	Final Examinations

Requirements
▪ Only 1 make-up exam is held for the missed exam/s at the end of the semester provided that the instructor is informed about a valid excuse within <u>3 days</u> after the date of the missed exam. The make-up exam includes all the topics.
▪ There is no make-up assignment for the missed assignment/s.
▪ Students who fail to attend the lectures regularly may get a NG grade.
▪ Students can examine their exam papers only within the 10 days after the results have been posted.
▪ 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 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 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 Business
Course Code	ITEC161
Type	Full Time
Semester	Fall/ Spring
Category	AC (Area Core)
Workload	120 Hours
EMU Credit	(3,0,0) 3
Prerequisite	-
Language	English
Level	First Year
Teaching Format	3 Hours Lecture per week
ECTS Credit	4

Instructor(s)	Esen Ertunga	**Office Tel**	+90 392 6301536
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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
- Explain 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.
- Explain what accountants do.
- Analyse responsibilities of financial manager.

Teaching Methodology / Classroom Procedures

- Each week there are three lecture sessions per week
- 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.
- There are two online quizzes which are held one week before the midterm and final exam periods.
    - Quiz 1 includes chapters 1, 2 and 3.
    - Quiz 2 includes chapters 5 and 6.
    - The duration of the quizzes is 30 mins.
- 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 one term project and homework
- Class attendance is not compulsory.
- The student is responsible to check the course web site regularly and view the latest announcements.

Course Materials / Main References

Text Book:

Better Business Second edition by: Solomon,Poatsy,Martin, 2012 Pearson Educating, ISBN: 13:978-0-13-259905-4

Resource Books:

Business Today 10th edition By: Mescon, Bovee & Thill, 2005 Pearson Educating, ISBN: 0-13-127304-3

Business: A Changing World 8th edition By: Ferrell, Hirt, Ferrell, 2011 Mc Graw Hill, ISBN:978-125-900743-9

Lecture Notes: All course materials are available online

Weekly Schedule / Summary of Topics	
Week 1-2	**BUSINESS BASIC** (Chapter. 1) • The Business Landscape • Common Business Challenges and Opportunities • Types of Business • Types of Business Ownership
Week 3-4	**ECONOMICS AND BANKING** (Chapter. 2) • The Basic of Economics • Determining Price (Supply and Demand) • Degress of Competition • Economic Indicators • Government and The Economy
Week5	**ETHICS IN BUSINESS** (Chapter. 3) • Ethics: The Basic • Personal Ethics Meets Business Ethics • Corporate Social Responsibility • Dangers of a Weak Ethical Focus • Business Opportunities Created by Ethical Needs • How Business Develop and Ethical Environment
Week 6	**BUSINESS IN A GLOBAL ECONOMY** (Chapter. 4) • What is Globalization • International Trade • Free Trade and Protectionism • Conducting Business Internationally • International Business: Economis Factors and Challenges • Creating Successful International Business
Week 7-8	**SMALL BUSINESS AND THE ENTREPRENEUR** (Chapter. 5) • Small Business • Entrepreneurs and the American Dream • Buying Franchises and Existing Business • The Risk of Small Business and where to get help • Financing Consideration
Week 9-10	**Mid Term Examination**
Week 11-12	**FORMS OF BUSINESS OWNERSHIP** (Chapter.6) • Sole Proprietorships • Partnerships • Corporations • Alternative Business Arrangements • Merger and Acquisitions

Week 13	BUSINESS MANAGEMENT AND ORGANIZATION (Chapter.7)
	• The Foundation of Management
	• The Functions of Management
	  - Planning
	  - Organizing
	  - Controlling

Week 14	MOTIVATION, LEADERSHIP AND TEAMWORK (Chapter.8) • Motivation • Leadership • Teamwork
Week 15	HUMAN RESOURCE MANAGEMENT (Chapter. 9) • Human Resource Management • Training and Evaluating Employees • Compensation, Scheduling, Promoting and Terminating Employees • Managing Workplace Diversity • Labor and Union Issues
Week 16-17-18	**Final Examination**

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 site. 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	2 Quizzes	Term Project	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	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

Instructor(s)	Assoc. Prof. Dr. Ahmet RIZANER	**Office Tel**	+90 392 6302480/2283
E-mail	ahmet.rizaner@emu.edu.tr	**Office No**	CT112
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.
  Quiz 1 includes chapters 1,2, and 3.
  Quiz 2 includes chapters 5, 6 and 7.
- 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 period of the semester.

Course Materials / Main References

Text Book:

William Stallings, Operating Systems, Internal and Design Principles, Fifth Edition, Pearson Prentice-Hall, 2005.
ISBN: 0-13-147954-7

Resource Books:

1. Andrew S. Tanenbaum, *Modern Operating Systems*, Second Edition, Pearson Prentice-Hall, 2001.
   ISBN-10: 0136006639 ; **ISBN**-13: 978-0136006633
2. Ann McIver McHoes and Ida M. Flynn, *Understanding Operating Systems*, Fifth Edition, Thomson, 2008.
   ISBN-10: 1423901606 ; **ISBN**-13: 978-1423901600
3. William S. Davis and T. M. Rajkumar, *Operating Systems*, *A Systematic View*, Sixth Edition, Addison Wesley, 2004.
   ISBN-13: 978-0321267511 ; **ISBN**-10: 0321267516
4. Amir Afraz, *Unix Unbounded*, *A Beginning Approach*, Third Edition, Prentice-Hall, 2000.

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	**Assignments**	**Quizzes**	**Lab**	**Midterm Exam**	**Final Exam**
Percentage	3 %	15 %	16 %	26 %	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 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)
Prerequisite	-
Language	English
Level	Second Year
Teaching Format	3 Hours Lecture, 2 Hours Laboratory per week
ECTS Credit	6

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

On 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 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	**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, 13	**The Relational Data Model:** Boyce-Codd Normal Form (BCNF), Fourth Normal Form (4NF) and Advanced Examples
Weeks 14, 15	**Managing Transactions and Concurrency:** Transaction Properties (ACID), Tasks of Transactions, Design Principles and Modeling of constraints and General Review
Weeks 16,17,18	**Final Exams**

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

Weeks 8, 9	Midterm Exams	
Weeks 10, 11	Lab VII	Sub-Queries – Single and Multiple Row Subquery
Weeks 12,13	Lab VIII	DDL, DML Commands- Create, Alter, Drop, Insert, Delete, Update
Weeks 14, 15	Lab IX	DCL Commands - Controlling DB users- Grant , Revoke and General Review
Weeks 16,17,18	Final Exams	

Requirements
• Only one make up exam will be held at the end of the semester to make up for at the 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 from 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 hand written homework will not be accepted.
• Copying or plagiarizing will be punished by grading zero.

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

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

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

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COURSE POLICY SHEET

Course Title	Data Structures and Applications
Course Code	ITEC213
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 and 2 Hour Lab per week
ECTS Credit	6

Instructor(s)	Cantaş Özerek	**Office Tel**	+90 392 6301141
E-mail	cantas.ozerek@emu.edu.tr	**Office No**	CT103

Course Description
This course is designed to cover the basic block structures of the C language and data structure. Pointer, structure, linked lists, stacks, queues, and tree topics 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 student will discuss each of the major types of data structures and implement programs that create and manipulate these data structures.

General Learning Outcomes
On successful completion of this course students should be able to: • Utilize primitive data types and built-in data structures • Developed knowledge and understanding of the concept of data structure. • Design linked data structures using pointers, self-referential structures and recursion. • Design and manipulate linked lists, queues, stacks and binary trees. • Practice various important applications of linked data structures. • Choose the appropriate data structure for modelling a given problem.

Teaching Methodology / Classroom Procedures
▪ Each week there are two lecture sessions, two lab sessions and one tutorial session. ▪ Laboratory sessions are organized in parallel to theoretical study given in classrooms. ▪ 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 five written quizzes. ▪ There is a written midterm exam. ▪ There is a written final exam. ▪ Class attendance is compulsory.

Course Materials / Main References

Text Book:

H. M. Deitel, P. J. Deitel, C How To Program, Fourth Edition, Pearson Prentice-Hall, 2004. ISBN 0-13-122543-X

Resource Books:

"C for Business Programming", by John C. MOLLUZO ISBN-10: 0-13-482282-X

Lecture Notes:

All course materials are also available online as PowerPoint (ppt).

Weekly Schedule / Summary of Topics

Week 1	Introduction: Explanation of the Course Outline, Review of ITEC114
Week 2-3	Pointer Operators: Pointers and pointer operators, pointers to pass arguments to functions by reference and the use of pointers to functions. Dynamic memory allocation.
Week 4	Structure Definitions: Create and use of structures, unions and enumerations.
Week 5-6	Using Structure with Functions: Pass structures to functions by value and by reference.
Week 7	C File Processing: Create, read, write and update files, sequential accesses file processing.
Week 8-9	Midterm Examinations
Week 10	Stacks: Create and manipulate stacks. Representing the stack in C.
Week 11	Queues: Create and manipulate queues. Representing the queue in C.
Week 12 -13	Linked Lists: Create and manipulate linked lists. C implementation of linked list and practice various important applications of linked data structures
Week 14	Binary Trees: Create and manipulate binary trees
Week 15	Practice various important applications of data structures
Week 16-18	**Final Examinations**

Requirements

- 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. The teaching methodology of this lecture based on the discussion of concepts followed by supervised as well as unsupervised applications of these concepts.
- Each week there are two hours of lecture to teach the basic skills and theoretical needed.
- Three hours of supervised lab applications to apply the information/knowledge given during the lectures.
- Laboratory sessions are organized in parallel to theoretical study given in classrooms.
- Students will be encouraged to do research to learn more about topics discussed. At the end of each chapter students should work on project to apply the knowledge.
- Students expected to carry out the assigned reading, attend quizzes and submit homework on time.
- Lecture notes, Lab descriptions, assignments, and announcements will be posted on the course's web site.

Method of Assessment

Evaluation and Grading	Home works	Quizzes	Lab	Midterm Exam	Final Exam
Percentage	10 %	10 %	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	Human Computer Interaction
Course Code	ITEC215
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
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

Instructor(s)	Birol Özkaya	**Office Tel**	+90 392 6301660
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 written exams namely Midterm Exam, and Final exam. Each exam consists of 50 multiple-choice type questions.
    o Midterm Exam includes Lectures 1, 2, 3, 4, 5, and 6.
    o Final Exam includes Lectures 7, 8, 9, 10, and 11.
▪ There are two assignments namely Assignment 1, and Assignment 2. The assignments are written assignments to be submitted on paper, to the instructor in class.

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	Course Registration
Week 2	Introduction of the course
Week 3	Definition of HCI, Overview of User-Centered Development Cycle
Week 4	Human Perception and Memory; Mental Models
Week 5	User and Task Analysis
Week 6	Content Organization
Week 7	Visual Organization
Week 8	Navigation
Week 9-10	Midterm Examinations
Week 11	Prototyping
Week 12	User Testing
Week 13	Color
Week 14	Typography
Week 15	Multimedia
Week 16-18	Final Examinations

Requirements
▪ Only 1 make-up exam is held for the missed exam/s at the end of the semester provided that the instructor is informed about a valid excuse within <u>3 days</u> after the date of the missed exam. The make-up exam includes all the topics.
▪ There is no make-up assignment for the missed assignment/s.
▪ Students who fail to attend the lectures regularly may get a NG grade.
▪ Students can examine their exam papers only within the 10 days after the results have been posted.
▪ 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 on time (within the first 10 minutes).

Method of Assessment					
Evaluation and Grading	Assignment1	Assignment2	Lab Participation	Midterm Exam	Final Exam
Percentage	10%	10 %	5 %	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 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 Title	Database Programming
Course Code	ITEC224
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3,2,0)
Prerequisite	ITEC212
Language	English
Level	Second Year
Teaching Format	3 Hours Lecture, 2 Hours Laboratory per week
ECTS Credit	6

Instructor(s)	Asst. 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 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; ■ Create a logical database design for the relational model based on a conceptual database design ■ Identify and solve problems in ERDs in order to correct improve a data model. ■ List and describe the server system architectures ■ Describe Distributed database system characteristics ■ Describe Database Administration tasks and explain their importance ■ 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 SQL commands for creating views, sequences and for performing simple database administration are covered.
- Class discussions, case studies and projects allow the students to explore topics in greater depth.
- Students 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

Text Book:

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 at the course web site.

Weekly Schedule / Summary of Topics for Lecture	
2 week	**Introduction :** Data Models, business rules, evolution of data models, data quality metrics etc.
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; Conceptual Design; Logical design; Physical Design; Database Design strategies.
2 weeks	**Midterm Exams**
2 weeks	**Identifying and Finding problems in Data Models** : Dealing with fan traps, chasm traps, unnormalized attributes etc.
2 weeks	**Database Architecture**: Centralized and Client-Server Systems; Server System Architectures; Parallel Systems; Distributed Systems; DDBMS characteristics; Levels of data and process distribution
1 week	**Transaction Management and Concurrency Control**: Transaction properties, transaction logs; Concurrency Control: locking, time stamping.
1 week	**Database Administration and Security**: Role of Database Administrator/Data administrator; Security, Database Administration tools; Database Administration Strategies.
3 weeks	**Final Exams**

Weekly Schedule / Summary of Topics for Lab	
1 weeks	Create/Alter/Drop objects such as View, Sequence, Index, synonym, roles; Grant/Revoke; Commit/Rollback/Savepoint; New join syntax
1 week	General concepts and components of PL/SQL; Programming blocks; Simple Anonymous Blocks.
3 week	Using SQL statements in PL/SQL blocks: INSERT,DELETE, UPDATE, SELECT INTO, CURSORS: attributes of cursors, cursor for loops, cursors with parameters
2 week	Exception handling in PL/SQL
2 weeks	**Midterm Exams**
1 week	Functions in PL/SQL
2 week	Procedures in PL/SQL
2 weeks	Triggers in PL/SQL
1 weeks	Packages 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**	**Project**	**Midterm Exam**	**Final Exam**
Percentage	10 %	15 %	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 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	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

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 eXtensible HyperText Markup Language (XHTML) & HyperText Markup Language (HTML) - 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.

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- 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	**Searching the Web -** Search Engines**,** Searching Operators & Techniques.
Week 4	**Introduction to HTML** - Basic Tags, Formatting, Links.
Week 5	**Intermediate HTML** - Tables and Lists.
Week 6	**Intermediate HTML** – Forms.
Week 7	**Intermediate HTML** – Frames and Iframes.
Week 8-9	**Midterm Examinations**
Week 10	**Using Images and Image Processing**
Week 11	**Cascading Style Sheets (CSS) -** Introduction, CSS Syntax, External CSS, Internal CSS, Inline CSS , Styling with CSS
Week 12	**Intermediate CSS -** Styling Links, Styling Lists, Styling Tables, CSS Box Model
Week 13	**Client-Side Scripting with JavaScript** – Introduction to Client-Side Scripting and JavaScript, Statements, Variables, Expressions and Operators.
Week 14	**JavaScript** – 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.

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

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

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

3

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

Course Title	Rich Internet Application (RIA) Development
Course Code	ITEC230
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3,2,0) 4
Prerequisite	ITEC229
Language	English
Level	Second Year
Teaching Format	3 Hours Lecture and 2 Hours Laboratory per week
ECTS Credit	6
Course Web Site	http://courses.sct.emu.edu.tr/it/itec230

Instructor(s)	Asst. Prof. Dr. Emre ÖZEN	**Office Tel**	+90 392 6301358
E-mail	emre.ozen@emu.edu.tr	**Office No**	CT106

Course Description

This course focuses on technologies for building Rich Internet Applications (RIAs). 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.

General Learning Outcomes

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

Teaching Methodology / Classroom Procedures

- 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.
    o 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. |

Course Materials / Main References
Text Book: Jon Duckett, "JavaScript & JQuery: Interactive front-end web development", 1st Edition, John Wiley & Sons, 2014. ISBN13: 978-1118531648

Weekly Schedule / Summary of Topics	
Week 1	**Introduction to Javascript :**What is JavaScript? Why Choose JavaScript? Tools needed to create JavaScript Web Applications. First Simple JavaScript Programs **Data Types and Variables :**Types of data in JavaScript, Numerical Calculations, operator precedence, basic string operations, data type conversions, arrays and multi-dimensional arrays
Week 2-3	**Decisions Loops and Functions :** 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 **Error Handling & Debugging :** Common mistakes, try..catch statements, debugging in Internet Explorer
Week 4-5	**Object-Based Programming in JavaScript** 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)
Week 6	**Programming the Browser:** Browser's objects: window, history, location, navigation, screen, and document objects. Responding to the user's actions with events.
Week 7	**HTML Forms: Interacting with the User :**HTML elements in forms, their common properties and methods: Button, text, textarea, check boxes, radio buttons and selection boxes
Week 8-9	**Midterm Examinations**
Week 10	**HTML Forms: Interacting with the User :**HTML elements in forms, their common properties and methods: Button, text, textarea, check boxes, radio buttons and selection boxes cntd.
Week 11	**Controlling iFrames:** Coding between frames, accessing between frames, opening a new browser window, scripting between windows, moving and resizing windows.
Week 12	**String Manipulation:** Regular expressions and RegExp object, methods like split, replace, search and match.
Week 13	**Date, Time and Timers :** Setting and getting a Date Object's UTC Date and Time. Timers in a web page. **Cookies in JavaScript :** Creating a cookie, getting a cookie's value, cookie limitations
Week 14	**Document Object Model (DOM) and Its manipulation :**Core DOM objects, accessing elements, changing appearances, positioning and moving content, DOM event handling
Week 15	**JQuery:**Adding a faramework (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
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. ▪ Students who arrives after the first 20 minutes of laboratory session will not be accepted to the Laboratory.

Method of Assessment					
Evaluation and Grading	Assignment	Laboratory	Class Quizzes	Midterm Exam	Final Exam
Percentage	12%	8%	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
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DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Object Oriented Programming
Course Code	ITEC243
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3,2,0)
Prerequisite	ITEC114
Language	English
Level	Second Year
Teaching Format	3 Hours Lecture, 2 Hours Laboratory per week
ECTS Credit	6

Instructor(s)	Şebnem Çoban	**Office Tel**	+90 392 6301677
E-mail	sebnem.coban@emu.edu.tr	**Office No**	CT117

Course Description
Main objective of this course is to teach students object oriented programming techniques using Visual C++ programming language. 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
On 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, exams as well as of your participation in class and

enthusiasm in 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
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 Pointers The Relationship Between Arrays and Pointers Dynamic memory management (new & delete)
Weeks 8,9	**Midterm Exams**
Weeks 10,11	*this* Pointer and Constant Member Functions Static Members Friend Functions
Weeks 12,13	Composition Inheritance
Weeks 14,15	Operator Overloading Templates
Weeks 16, 17,18	**Final Exams**

Requirements

- Only one make up exam will be held at the end of the semester to make up for at the 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 from 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 hand written homework will not be accepted.
- Copying or plagiarizing will be punished by grading zero.

Method of Assessment

Evaluation and Grading	Hourly Exam	Midterm Exam	Lab Performance	Final Exam
Percentage	15%	25%	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	Computer Organization and Architecture
Course Code	ITEC255
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
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

Instructor(s)	Asst.Prof.Dr. Hüsnü Bayramoğlu	Office Tel	+90 392 6302894
E-mail	husnu.bayramoglu@emu.edu.tr	Office No	CT100

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 internal components of a computer including processors, cache memories, random access memories, magnetic disks, optical memories and input/output connections are considered from an architectural perspective. Integer and floating point representation in arithmetic logic unit (ALU) with arithmetical operations areexpleained. Operating system principles and are also described.

General Learning Outcomes

On successful completion of this course students should be able to:
- Describe computer architecture and organization, computer arithmetic, and CPU design.
- Describe how numbers and characters are represented in a computer.
- Describe I/O system and interconnection structures of computer.
- Draw a block diagram, including interconnections, of the main parts of a computer.
- Describe how a computer stores and retrieves information to/from memory and hard drives.
- 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, handshaking, serial, parallel, data rate.
- Describe various data representations and explain how arithmetic and logical operations are performed by computers.

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 includes chapters 3, 4 and 5.

o   Quiz 2 includes chapters 6 and 8.
o   The duration of the quizzes is 50 mins.
- There is a written midterm exam which covers chapters 1, 2, 3, 4 and 5.
- There is a written final exam which includes chapters 6, 7, 8 and 9.
- 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:
William Stallings, Computer Organization and Architecture-Designing for Performance, Ninth Edition, Pearson Higher Education, 2013. ISBN 13: 978-0-13-293633-0

Weekly Schedule / Summary of Topics	
Week 1	Distinction Between Computer Organization and Computer Architecture
Week 2	History of Computers and the Evolution of Intel Microprocessors
Week 3	Working principles of microprocessor and Implementation of Interrupts
Week 4	Computer Interconnection Structures, Bus Interconnection, PCI
Week 5	Computer Memory System Overview, Cache Memory, Design Elements and Principles of Cache Design
Week 6	Semiconductor Memories, Random Access Memory, Read Only Memory
Week 7	Error Detection and Correction in Semiconductor Memories, Advanced DRAM Organization
Week 8-9	**Midterm Examinations**
Week 10	External Memories, Magnetic Disk, RAID, Optical Memory, Magnetic Tape
Week 11	External Devices, I/O Modules, I/O Processors, Direct Memory Access, Different External Interfaces
Week 12	Operating System Overview, Scheduling of Processes
Week 13	Operating System Memory Management
Week 14	Arithmetic Logic Unit, Binary Integer Representation, Binary Integer Arithmetic
Week 15	Binary Floating-Point Representation
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	**2 Quizzes**	**Midterm Exam**	**Final Exam**
Percentage	20 %	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

* 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	Digital Logic Design
Course Code	ITEC259
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 and 2 Hours Laboratory per week
ECTS Credit	6

Instructor(s)	Assoc. 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 the 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 lab sessions, particular aspects of the 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 thee written quizzes. The dates of the quizzes will be announced during the lecture hours.
  - Quiz 1 includes Binary Systems, Boolean Algebra and Logic Gates topics.
  - Quiz 2 includes Combinational Logic topic.
  - Quiz 3 includes Synchronous Sequential Logic topic.
  - The duration of the quizzes is 45 minutes.
- There is a written midterm exam which covers Binary Systems, Boolean Algebra, Logic Gates and Gate-Level Minimization topics.

- There is a written final exam which includes Combinational Logic and Synchronous Sequential Logic topics.
- There are three assignments.
- 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:

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	**Binary Systems:** 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 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	**Assignments**	**Quizzes**	**Lab**	**Midterm Exam**	**Final Exam**
Percentage	3 %	12 %	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.

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

Instructor(s)	Assoc. 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.

- o Quiz 2 includes chapters 4, 5 and 7.
- o Quiz 3 includes chapter 10.
- o Quiz 4 includes chapters 11, 12 and 13.
- o 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 %	20 %	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	Computer Networks II
Course Code	ITEC310
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	210 Hours
EMU Credit	(3,2,0) 4
Prerequisite	ITEC309
Language	English
Level	Third Year
Teaching Format	3 Hours Lecture, 2 Hours Laboratory per Week
ECTS Credit	7

Instructor(s)	Assoc. 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 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 in a week mainly held in the form of a seminar and two hours practical laboratory work.
- Lecture notes are posted on the course web site.
- There are two written quizzes which are held one before the midterm and one before the final exam periods.

- o Quiz 1 includes chapters 19, 20 and 21.
  - o Quiz 2 includes chapters 24, 25 and 26.
  - o The duration of the quizzes is 45 mins.
- There is a written midterm exam which covers chapters 19, 20, 21, 22 and 23.
- There is a written final exam which includes chapters 24, 25, 26, 27, 28 and 29.
- Laboratory sessions are organized in parallel to theoretical study given in classrooms. 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: 978-007-325032-8.

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	**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 4-5	**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.
Weeks 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 16-18	**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	**2 Quizzes**	**Lab**	**Midterm Exam**	**Final Exam**
Percentage	10 %	20 %	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	Multi Platform Programming
Course Code	ITEC314
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	210 Hours
EMU Credit	(3,2,0) 4
Prerequisite	ITEC243
Language	English
Level	Third Year
Teaching Format	3 Hours Lecture and 2 Hour Lab per week
ECTS Credit	7

Instructor(s)	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 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.
- Analyse, 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.
- Laboratory works are organized to go as parallel with the theory, given in lecture hours in the classroom.
- Students' performance evaluated by:
  - Midterm-1 covers chapters 1, 2, 3, 4, 5 and 6. (30%)
  - Midterm-2 covers chapters 7, 8 and 9 (30%)
  - Final covers 10, 11, 12, 13, 14 and 15 (40%)
- 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.

Course Materials / Main References

Text Book:

Malhotra A., Choudhary S., "Programming in Java", Oxford University Press, Second Edition (2014),

ISBN: 9780198094852

Resource Books (Available in EMU Library, Reference Section):

1. C.Thomas Wu, "An Introduction to Object-Oriented Programming with JAVA", McGraw-Hill International Edition, Fifth Edition (2010), ISBN: 9780073523309
2. Bruce Eckel, "Thinking in Java", Fourth Edition, Prentice Hall, 2006, ISBN: 9780131872486
3. Evans B. J., Flanagan D., "Java In A Nutshell", Sixth Edition, O'Reilly Media, 2014. ISBN: 9781449370824
4. David Flanagan, "Java Examples in a Nutshell", Third Edition, O'Reilly Media, 2004. ISBN: 978-0596006204
5. Robert F. Stärk , Joachim Schmid, Egon Börger , "Java and the Java Virtual Machine: Definition, Verification, Validation", Springer,2001, ISBN: 9783642594953

Lecture Notes:

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

Weekly Schedule / Summary of Topics	
1 week	**.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.
1 week	**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.
1 week	**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.
2 weeks	**Fundamentals of Coding-I:** **.Selection Statements:** The if statement. Nested if statements. Boolean expressions and variables. Comparing objects. The switch statement. **.Repetition Statements**: The while statement. Pitfalls in writing repetition statements. The do-while statement. Loop and a half repetition control. Confirmation dialog. The for statement. Nested for statements.
2 weeks	**Fundamentals of Coding-II:** . **Nested selection and looping** . **Logical (Boolean) variables of Java and Logical operators and operations** .**Formatted Output**
2 weeks	**Midterm Exams**
2 week	**.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.
1 week	**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.
1 week	**Arrays:** Array basics. Arrays of objects. Passing arrays to methods. Two-dimensional arrays. Lists and Maps. **Basic search and sort** Algorithms and techniques with arrays.
1 week	**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.
1 week	**Visual Design and Event Driven programming:** The GUI elements, Form design and handling the events.
3 weeks	**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. ▪ 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 at the WEB site http://students.emu.edu.tr. ▪ Students have to check their exam papers until the end of the week following the announcement of exam scores.

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

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

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

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

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	**Chapter 4:** The requirements discipline: The requirement discipline in more detail, system requirements, models and modelling, techniques for information gathering, validating the requirements.
Week 5	**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 6	**Chapter 6:** Use Case Modelling and Detailed Requirements: Detailed Object Oriented
Week 7-8	**Midterm Exams**
Week 9	**Chapter 6 (cont):** Requirements definitions, SRS Document, System Processes
Week 10	**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 11	**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 12-13	**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 14	**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.
Week 15	**Project Presentations:** Presentation of the final project
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 any quiz or assignment. • 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	Project	Class Quizzes	Lab Quizes	Midterm Exam	Final Exam
Percentage	15 %	10 %	10%	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
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Software Engineering
Course Code	ITEC316
Type	Full Time
Semester	Fall/Spring
Category	Area Core
Workload	210 Hours
EMU Credit	(3,0,1) 3
Prerequisite	ITEC315
Language	English
Level	Third Year
Teaching Format	3 Hours Lecture, 1 Hour Tutorial per week
ECTS Credit	7

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

Course Description
The aim of this course is to introduce some fundamental principles of software engineering discipline and illustrate the application of those principles in the context of the graduation project. 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, 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 software quality management process
- Design a small scale project: requirements document etc.

Teaching Methodology / Classroom Procedures

- Each week there are two lecture sessions, and one tutorial session.
- Class 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 course home page.
- 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 home page.
- Students are required to submit the assigned tasks on time.
- Course related materials will be posted on the course homepage.
- Only one make-up exam will be given for the missing exams.
- Make-up exam will be given after the final exams.
- No make-up will be given for the project.

Course Materials / Main References

Text Book:

Pressman, Roger S., and Bruce R. Maxim. Software Engineering: A Practitioner's Approach. 8th ed. New York, NY: McGraw-Hill Education, 2015. Print. ISBN: 0078022126

Resource Books:

- Sommerville, Ian. Software Engineering. 9th ed. Boston: Pearson, 2011. Print. ISBN: 978-0137035151
- Schach, Stephen R. Object-oriented and Classical Software Engineering. 8th ed. New York: McGraw-Hill, 2011. Print. ISBN: 0073376183

Weekly Schedule / Summary of Topics	
1 week	**Scope of software engineering:** Economic/Maintenance aspects; specification and design aspects; Team Programming Aspects;
2 weeks	**The Software Process:** Client, Developer and User; Phases of Software Process; Problems with Software Development; Costs and Benefits for improvement
1 week	**Requirements Engineering**: Types of requirements; Problems with requirements specifications, SRS document, Examples
1 week	**Project Presentations:** Presentation and discussion of the proposed project specification.
2 weeks	**Agile Software Development**: Arguments for Agile approach; Agile manifesto; extreme programing
2 weeks	**Midterm Exams**
3 weeks	**Testing and Inspection:** Quality Issues, Nonexecution-Based Testing; Execution-Based Testing; Testing versus Correctness Proofs. Test case selection; Black-box unit-testing techniques; Glass-box unit-testing technique; Code walkthroughs and inspections.
1 week	**Quality Management:** Software Quality; Software Standards; Software Measurement and Metrics.
1 week	**Configuration Management:** Change management; System Building; Release Management.
1 week	**Risk Management:** Sources of Risks; Risk identification; Risk projection (estimation); Risk mitigation, monitoring, and management.
1 week	**Project Presentations:** Presentation of the final project
3 weeks	**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 any quiz or assignment.
- 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	**Assigment**	**Project**	**Midterm Exam**	**Final Exam**
Percentage	15 %	20 %	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	Ethical and Social Issues in Information Systems
Course Code	ITEC317
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	90 Hours
EMU Credit	(3,0,0) 3
Prerequisite	-
Language	English
Level	Third Year
Teaching Format	3 Hours Lecture per week
ECTS Credit	3

Instructor(s)	Yeşim 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 / Classroom Procedures

In the beginning of each class there will be a short lecture about the importance of the topic.
Students will form teams and choose a project from the specified topics to be presented in class.
Case Studies, drama and dialogue will be used as powerful tools to help IT students to identify, discuss and

understand the role of ethics in their professional practice.

Students are encouraged to use internet to research and present various related topics in a team work.

Lecture notes and announcements will be posted on the web site.

Students are responsible to know and use all the course material placed on the web and track the designated dates for timely submission of the assignment and for timely attendance to all quizzes.

There is a project assignments as follows:
  ✓ A project that will be select from students related topic.

There are two written quiz as follows:
  ✓ Quiz1-(before midterm week)
  ✓ Quiz2-(before final week)

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.

Course Materials / Main References

Text Book:
  Michael J. Quinn, *Ethics for the Information Age,* Sixth Edition, Pearson Prentice-Hall, 2014, ISBN-13: 978-0133741629.

Resource Books:
  - George Reynolds, *Ethics in Information Technology,* Fourth Edition, Course Technology, 2011.
  - Albert Bayet, *Bilim Ahlakı,* Türkiye İş Bankası Kültür Yayınları, 2000.

Lecture Notes:
  - Lecture , Lab and tutorial notes are available on the web site.

Weekly Schedule / Summary of Topics	
Week 1-2	**Catalysts for Change:** Introduction, Milestones in computing, Milestones in networking, Milestones in information storage

	and retrieval, Information technology issues.
Week 3	**Introduction to Ethics:** Defining Terms, Overview of ethical theories, Comparing workable ethical theories, Morality of breaking the law.
Week 4-5	**Intellectual Property:** Intellectual property rights, Protecting intellectual property, Fair use, New restrictions on use.
Week 6-7	**Privacy:** Perspectives on privacy, Disclosing information, Public information.
Week 8-9	**Midterm Exams**
Week 10-11	**Privacy:** Government Surveillance, Data Mining.
Week 12-13	**Professional Ethics:** Computer experts as professionals, Software engineering code of ethics.
Week 14-15	**Professional Ethics:** Analysis of the code, Case studies, Whistleblowing.
Week 16	**Work and Wealth:** Automation and unemployment, Workplace changes.
Week 17-18	**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 who do not pass the course and fail to attend the lectures regularly may be given NG grade.

Method of Assessment				
Evaluation and Grading	**Project**	**Quizzes**	**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	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	
	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	Rapid Application Development
Course Code	ITEC319
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	-

Instructor(s)	Asst.Prof.Dr. Hüsnü Bayramoğlu	**Office Tel**	+90 392 6302894
E-mail	husnu.bayramoglu@emu.edu.tr	**Office No**	CT100

Course Description

This course presents the various methods of rapid development that can be applied to generate requirements, validate a solution, or even create a new operational system. The course provides study of Delphi programming language; key properties, methods and events of Delphi forms and menu definitions in Delphi Integrated Development Environment (IDE). Checking errors with exception handling and database applications are also considered within the scope of this course.

General Learning Outcomes

On successful completion of this course students should be able to:
- Define the concept of rapid development.
- Develop knowledge and understanding of the concept of data.
- Identify various methods of prototyping requirements and software.
- Describe fundamental concepts and issues involved in rapid application development.
- Identify the basic services provided by Delphi programming language.

Teaching Methodology / Classroom Procedures

- The course has three hours of lectures in a week mainly held in the form of a seminar.
- Laboratory sessions are organized for practicing the theoretical knowledge obtained in the lecture hours.
- There is a practical midterm exam.
- There is a practical final exam.
- There is a term project.
- Class attendance is compulsory.

Course Materials / Main References

Text Book:

William Buchanan, Mastering Delphi Programming (Palgrave Master Series), Palgrave Macmillan, 2003. ISBN 13: 978-0333918975

Weekly Schedule / Summary of Topics	
Week 1	Delphi Integrated Development Environment (IDE) is explored
Week 2	Anatomy of Delphi Units
Week 3	String Operations
Week 4	Records and Subroutines
Week 5	Functions, Procedures and Methods
Week 6	Method Overloading
Week 7	Multiple Document Interface (MDI) Forms
Week 8-9	**Midterm Examinations**
Week 10	The Sender Parameter and Component Events
Week 11	File Routines
Week 12	Exception Handling
Week 13-15	Database Components and Operations
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	**Lab Works**	**Term Project**	**Midterm Exam**	**Final Exam**
Percentage	10	20%	20%	50%

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

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

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

Course Title	Server-Side Internet and Web Programming
Course Code	ITEC327
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3,2,0) 4
Prerequisite	ITEC230, ITEC212
Language	English
Level	Third Year
Teaching Format	3 Hours Lecture and 2 Hours Laboratory per week
ECTS Credit	6

Instructor(s)	Asst. Prof. Dr. Emre ÖZEN	**Office Tel**	+90 392 6301358
E-mail	emre.ozen@emu.edu.tr	**Office No**	CT106

Course Description

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 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.

General Learning Outcomes

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

Teaching Methodology / Classroom Procedures

- 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.

Course Materials / Main References

Text Book:

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

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

Weekly Schedule / Summary of Topics	
Week 1	**Review of HTML & JavaScript :** HTML elements, HTML form elements and their attributes, JavaScript Interacting with users: Form with validation **Web Servers :** HTTP transactions, Multitier Application Architecture, Client-side vs Server-side scripting
Week 2-3	**PHP:** PHP installation, settings, PHP Syntax variables and expressions, string processing
Week 4-5	**PHP:** Flow Controls, Data Types, type conversions and predefined functions
Week 6-7	**PHP:**Integrating HTML with PHP, Passing variables between pages (get, post methods and query strings), Looing and Arrays
Week 8-9	**Midterm Examinations**
Week 10-11	**PHP :** Functions, Client/Server Environment variables, Session and Cookie variables, user authentication
Week 12	**PHP:** Introduction to MYSQL RDBMS, MYSQLs' SQL dialects, usage of PhpMyAdmin Tool
Week 13-14	**PHP :** PHP-MYSQL database programming (mysql_ methods and PDO object)
Week 15	**PHP:** Dynamic forms (preparing forms via browsing the content from MYSQL RDBMS)
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.
- Students who arrives after the first 20 minutes of laboratory session will not be accepted to the Laboratory.

Method of Assessment					
Evaluation and Grading	**Assignment**	**Laboratory**	**Class Quizzes**	**Midterm Exam**	**Final Exam**
Percentage	12%	8%	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	Summer Training
Course Code	ITEC400
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	30 Hours
EMU Credit	(0,0,0) 0
Prerequisite	-
Language	English
Level	Fourth Year
Format	40 working days training at the industry
ECTS Credit	1

Committee Members	Halide Sarıçizmeli (Chair), Emre Özen, Ahmet Rizaner
Contact	halide.saricizmeli@emu.edu.tr

Course Description
As part of the fulfillment of graduation requirements, all students must complete 40 working 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
• Students must be in the 5th academic term or above to be able to complete the 40 working days of summer training. • The duration of the summer training is 40 working days. It should be done either continuously or in two periods of 20 days. • If you are in 4th academic term, you can only do 20 days summer training. The rest must be completed in the following semesters. • The summer training cannot be done in parallel with the summer school. Those students taking one or more courses in the summer school are not allowed to do summer training. • Summer Training Log Book should be filled by the supervisor of the trainee at the company. It could be filled in English or in Turkish and must be submitted in a sealed and closed envelope. • 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. During the summer training you should take photographs, plans, specifications, etc. and use them in your report. • The student must submit the report to the chair of the committee not later than the end the 9th week of the semester. • The reports should have less than 20% plagiarism from overall sources as test result where from each source plagiarism should be less than 2%. This test should be conducted using Turnitin.

- The report and the log book of a student will be evaluated by a jury member. The student may perform an oral exam against this jury member, if required. Oral Exams take place within the last 2 weeks of semester, prior to the final examinations.
- Finally, the jury member gives one of the following decisions upon the evaluation process:
    o Satisfactory (trainee completed summer training satisfactorily)
    o Unsatisfactory (trainee needs to repeat the summer training)
    o Rewrite (trainee needs to rewrite the report and pass through the oral exam again)

Requirements

- The insurance is needed only by the companies in Turkey and TRNC (according to the by-laws of Turkey and TRNC)
- All students who want to do their summer practice in Turkey or TRNC must do the following:
    o Students must take a written acceptance document from a company.
    o Students has to fill the insurance form provided on the web site.
    o Insurance forms will be signed by the department summer training committee chair and the director of the school.
    o Then, the student should bring the forms to the Registrar's Office at least 15 days before starting the training.

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.

Procedure for Doing the Summer Training

Obtain «Summer Training Confirmation Form» from ITEC400 website. Complete this form and get approval form the summer training committee.

Apply different companies in your are of interest. Make sure that the company you apply has at least one computer scientist or engineer. The training should be related to information technology applications or systems, software, hardware or a mixture of them.

Download the logbook from the web.

During the summer training period, fill-out the summer training log book on a day to day basis. That means you need to have a specific entry in your log book that precisely describes what you did on that day. The log book should be signed at the end of the summer training period by the company. The log book should be posted to the department confidentially by the company, or you may bring it in an enclosed and signed envelop to the department.

After completing 40 days of summer training;
Register in Summer Training Course during the Course Registration Period of the next semester. During the semester student writes his/her report under the guidance of his/her advisor.

At the end of the semester the student submits his/her report to his/her advisor for evaluation and for oral exam. A presentation is not required unless the advisor asks for a presentation.

A grade of S (satisfactory) or U (unsatisfactory) is assigned.

Course Title	Graduation Project Orientation
Course Code	ITEC403
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	90 Hours
EMU Credit	(1,0,0) 1
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	1 Hour weekly meetings with project supervisor
ECTS Credit	3

Committee Members	Yeşim K. Çırak (Chair), Nazife Dimililer, Emre Özen, Hüsnü Bayramoğlu, Şensev İlkan, Halide Sarıçizmeli, Şebnem Çoban, Akile Oday
Contact	yesim.kapsil@emu.edu.tr

Course Description
This course is the first stage of the two-semester long graduation project (capstone project) of the IT program. The students are required to form teams, find a project supervisor from the department and propose a real life project to the graduation project committee. Each team should explore the needs and requirements of their project, carry out systems design and develop a prototype, if possible, of their project under the guidance of their project supervisors.

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 current systems • Interact with customers

Teaching Methodology / Classroom Procedures
There are no predefined lectures for this course. Project supervisors advise and guide the students based on project requirements. The graduation project committee may organize seminars and meetings to provide guidance and technical support to the students as needed. The graduation project committee announces the project topic and specifications within the first week of the semester. Students are required to arrange weekly meetings with their supervisors. These meetings help the supervisor to guide the project development and monitor the students' progress. The students are required to submit a written report formatted according to the report template which is available on the web site. The content of the report is as shown in the template. Turnitin plagiarism test must be obtained before submission. The plagiarism test result should be less than 20%. No reports will be accepted for consideration with higher plagiarism test result. An account will be created for you to make the plagiarism test through Turnitin.

A CD that contains the soft copy of the report should also be submitted together with the printed report. The printed reports should be submitted one week before the oral presentation date, which will be announced at the beginning of the semester.

Students are required to get prepared for an individual oral presentation. There will be a group of 3 jury members evaluating the presentations. Each student should present the work done for the project including all the stages for the development of the project. At the end of the presentation, there will be a discussion session for each student. Jury members ask questions related to the demonstration during this session.

Requirements
• The students has to create a team of 3 or 4 students. Then, they are required to meet with a project supervisor and fill the project study agreement form, which is available on the web site. This form should be submitted to the coordinator to complete their registration.
• Weekly meetings with supervisors are compulsory.
• Students who fail to attend the meetings regularly (less than 40%) may be given NG grade.
• The report should have less than 20% plagiarism test result.
• If report is submitted after the deadline, 10% will be reduced per day from the total mark of each student.
• There is no make-up for the presentation unless a medical report is submitted.
• Those who fail to present the work without a reason, will fail the graduation project orientation.
• 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	UML Design	Database Design	Jury Project Evaluation	Jury Student Evaluation	Weekly Meetings	Supervisor Student Evaluation	Peer Evaluation	Report Writing
Percentage	25 %	15 %	5 %	15 %	5 %	10 %	5 %	20 %

* Detailed method of assessment is available on the web site.

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	Graduation Project
Course Code	ITEC404
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3,0,0) 1
Prerequisite	ITEC403
Language	English
Level	Fourth Year
Teaching Format	1 Hour weekly meetings with project supervisor
ECTS Credit	6

Committee Members	Yeşim K. Çırak (Chair), Nazife Dimililer, Emre Özen, Hüsnü Bayramoğlu, Şensev İlkan, Halide Sarıçizmeli, Şebnem Çoban, Akile Oday
Contact	yesim.kapsil@emu.edu.tr

Course Description
This course is the final phase of the two semester long graduation project of the IT program. The students are required to implement their projects and present to a jury which is formed by the graduation project committee. The final submission includes functional software / hardware package, user and system reference manuals and a final 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: - Participate in an IT team   - Carry out the project interacting with the customers   - 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
Project supervisors advise and guide the students based on project requirements. The graduation project committee may organize seminars and meetings to provide guidance and technical support to the students as needed.   Students are required to arrange weekly meetings with their supervisors. These meetings help the supervisor to guide the project development and monitor the students' progress.   The students are required to submit a written report formatted according to the report template which is available on the web site. The content of the report is as shown in the template. Turnitin plagiarism test must be obtained before submission. The plagiarism test result should be less than 20%. No reports will be accepted for consideration with higher plagiarism test result. An account will be created for you to make the plagiarism test through Turnitin.   A CD that contains the soft copy of the report, user manual, executable files and source codes should also be submitted together with the printed report. The printed reports should be submitted one week before the oral presentation date, which will be announced at the beginning of the semester.

Students are required to get prepared for an individual oral presentation. There will be a group of 3 jury members evaluating the presentations. Each student should present the work done for the project including all the stages for the development of the project. At the end of the presentation, there will be a discussion session for each student. Jury members ask questions related to the demonstration during this session.

Requirements
• A student has to pass ITEC403 successfully in order to register ITEC404.
• Students are not allowed to change the supervisor.
• Weekly meetings with supervisors are compulsory.
• Students who fail to attend the meetings regularly (less than 40%) may be given NG grade.
• The report should have less than 20% plagiarism test result.
• If report is submitted after the deadline, 10% will be reduced per day from the total mark of each student.
• There is no make-up for the presentation unless a medical report is submitted.
• Those who fail to present the work without a reason, will fail the graduation project orientation.
• 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	UML Design	Database Design	Jury Project Eval.	Jury Student Eval.	Supervisor Project Eval.	Supervisor Student Eval.	Peer Eval.	Code Eval.	Report Writing
Percentage	20 %	15 %	15 %	10 %	5 %	5 %	5 %	15 %	10 %

* Detailed method of assessment is available on the web site.

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 Title	Information System Security
Course Code	ITEC413
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
Workload	180 Hours
EMU Credit	(3,2,0) 4
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	3 Hours Lecture and 2 Hour Lab per week
ECTS Credit	6

Instructor(s)	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 software; viruses, worms, Trojan horses. Physical security issues. Evading IDS, honey pots and firewalls. SQL injection and 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 needs of ISS studies, carrier opportunities on ISS, ethical and legal regularities of ISS.
- Explain the battlegrounds of the ISS and differentiate the risks, threats and countermeasures of each.
- Identify the vulnerabilities, 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.
- Lists the essential issues on the personal security awareness.
- Explains the risks, treats and countermeasures of the networking.
- Explains the fundamentals of cryptography in ISS and compare the encrypted communication systems
- Lists the types of malicious software, and explains the countermeasures of each.
- Explain the redundancy and redundant systems for tolerating system failures.
- Compare the backup strategies with their costs and benefits.
- Explains the ISS issues relating the Software Developers and Systems Architects.
- Interpret, reproduce and examine ISS policies. Analyse 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.
- On the lab sessions, students are practicing some applications, and techniques supporting the theoretical concepts given in lecture hours. Some tutorial videos are also shown at the lab, for informing students about the techniques that cannot be practiced in our labs.
- Students are encouraged to use internet to search for various topics related with the course content. Lecture notes, Lab materials, and announcements can be reached on the course's web site.
- Students' performance are evaluated with:
  - Midterm-1 covers chapters 1, 2, 3, 4, 5 and 6. (30%)
  - Midterm-2 covers chapters 7, 8, 9 and 10 (30%)
  - Final covers 11, 12, 13, 14, and 15 (40%)
  - Lab work (10% - Bonus)
- All course related material (reading texts, sample tutorials including solutions, previously asked exam questions with their solutions, all announcements and course related links can be reached by students through the course WEB site.

Course Materials / Main References

Text Book:

David K., Solomon M. G., "Fundamentals Of Information Systems Security (Information Systems Security & Assurance)", 2nd Edition, Jones & Bartlett Learning, 2013. ISBN: 9781284031621

Resource Books:

1. Lehtinen R., Gangemi Sr. G.T., "Computer Security Basics", Second Edition, O'Reilly Media, 2006, ISBN: 978-0-596-00669-3
2. Kimberly Graves, "CEH Study Guide", Sybex, 2010, ISBN: 9780470525203
3. Dafydd Stuttard, Marcus Pinto, "The Web Application Hacker's Handbook", Second Edition, Wiley Publishing Inc., 2011, ISBN: 978-1118026472
4. Patrick Engebretson, "The Basics of hacking and penetration testing", Elsevier Inc., 2011, ISBN: 978-0124116443
5. Mark Egan,, Tim Mather, "The Executive Guide to Information Security: Threats, Challenges, and Solutions", Addison-Wesley, 2004, ISBN: 978-0321304513
6. Jon Erickson, "Hacking: The Art of Exploitation", 2nd Edition,No Starch Press, 2008, ISBN: 978-1593271442

Lecture Notes:

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

Weekly Schedule / Summary of Topics

1 week	**Introduction to ISS**: The Reasons for IS security, How to be an IS Professional, Hackers and Script Kiddies, the differences, How bad is the Security problem of IS, General ISS trends in business, What are Companies Doing? What Should Companies Be Doing? Introducing to the ISS Domains (The battle grounds of ISS).
1 week	**Physical Domain**: The risks, threats and countermeasures. The Safer authentication technologies - biometrics. The availability, redundancy and redundant systems. The technologies tolerating the device failures. Getting ready to the disaster, how to plan systems recovery. The backup strategies and techniques. Tools, techniques and equipment enhancing the physical security.
1 week	**People Domain:** The risks, threats and countermeasures. Social Engineering attacks and their countermeasures. Personal security awareness. The importance of education, security polices and controls for securing information and the staff of the organization. Authentication, identification and access control techniques, managing the user groups and privileges. The ways of generating strong passwords, user responsibilities and penalties. Motivations of hackers. A true story – "Kevin Midnick" and the bible of social engineering - "The Art of Deception".
1 week	**Network Domain**: The risks, threats and countermeasures. The review of common networking topologies, protocols, devices and OSI 7 network layering. The use of ports, sockets and services. The protection guard dogs of networks – firewalls, air walls, IDS and IPS systems. Introduction to some useful shell commands and software for newbie network administrators: Nmap, ping, finger, Nslookup, whois, traceroot, nmap, portscanners, wireshark, PRTG.
1 week	**Cryptography:** securing the communication with encrypting. Popular Encryption algorithms and services. Importance of the key in encrypted communication. Symmetric and Asymmetric keys in

	encryption systems. Key distribution services. One way and Two way encryption and their usages. Encrypted communication in wireless networks.
1 week	**Wireless Network Security:** The protocols and amendments in wireless networking. Encryption key certificates and standards in wireless communication. The crypto analysis and FMS attack. Eaves dropping and sniffing attacks. Fake hotspots – Rogue Access points, Evil Twin attack, AP Masquerading. The use of Wireshark. The WIDS and WIPS. Introduction to long distance wireless networking – WiMax.
1 week	**The Type of Attacks:** The Passive and Active Attacks of networks and their countermeasures. Some popular threats: Sniffing, traffic analyzing, session hijacking, URL (DNS) poisoning. Secure communication with proxy services, VPN services. Interruption, Interception, modification, fabrication techniques.
2 week	**Midterm Exams**
1 week	**Computer Domain**: The risks, threats and countermeasures. File systems with their cons and pros. How to plan, install, configure and maintain a server. The importance of the authentication, identification, authorization, accountability, availability, redundancy and use of redundant parts in servers. The review of hot swapping, hot plugging and RAID configurations. Backup strategies and recovery planning.
1 week	**Malicious Software (malware):** The risks, threats and countermeasures. Categories and infection types. Life-cycle of a virus-worm. Trojan horses, zombie farms, DOS and DDOS attacks. Antivirus software and protection policies. Zero-Day viruses. The Heuristic search and its usages in malware protection. Macro viruses and protection ways.
1 week	**Server Security**: Authorization techniques and alternatives. Users and Groups privileges. Auditing and monitoring. Auditing policies. The ways for staying current. An introduction to the security services. The threads; Identity spoofing, masquerading, DOS, DDOS, brute-force, malformed packets, password attacks.
1 week	**Application Security**: ISS security issues from an application developer view. Cross-site scripting attacks. Cookie Poisoning and Snooping, SQL-injection attacks, Buffer overflow attacks, Banner Grabbing, Defacement attack, directory traversal attack, source disclosure attack. Fundamentals of the Secure coding. Manual and automated security testing of applications.
1 week	**Internet Security:** The risks, threats and countermeasures. Review of IP, HTTP, DNS, DHCP, DMZ, Firewall, IDS, IPS, VPN. Hijacking the IP protocol. Hijacking the connection session. IP and MAC spoofing. Attacking to the UDP services. DNS poisoning attack. Countermeasures. Honey pods. Fake servers, services and traps. Personal Firewalls, IDS and IPS systems. Introduction to Snort.
1 week	**Ethics and Legal Issues for CEHs:** What is penetrating test (Pentest). Defining security assessments. Internal and external assessments. Agreements. Pentest steps. The Pen Test Legal Framework. Automated Penetration Testing Tools. Pen Test Deliverables.
3 weeks	**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.
▪ 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 at the WEB site http://students.emu.edu.tr.
▪ Students have to check their exam papers until the end of the week following the announcement of exam scores.

Method of Assessment			
Evaluation and Grading	**Lab Performance**	**2 Midterm Exams**	**Final Exam**
Percentage	10 %	50 %	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	Analysis of Algorithms
Course Code	ITEC415
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
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

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

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

General Learning Outcomes
On successful completion of this course students should be able to: ▪ Possess the mathematical knowledge and programming skills necessary to analyse the common algorithms. ▪ Gain insight into algorithmic design and how it is affected by algorithmic logic, structure, and performance. ▪ Proof techniques and mathematical concepts to demonstrate the correctness and assess the performance of standard algorithms. ▪ Demonstrate their ability to carry out a complete algorithmic process involving, algorithmic design, analysis, and implementation. ▪ Analyze certain classes of algorithms, along with models for future algorithmic work.

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

Course Materials / Main References

Text Book:

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

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

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

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

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

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

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

EASTERN MEDITERRANEAN UNIVERSITY
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COURSE POLICY SHEET

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 Tutorial per week
ECTS Credit	6

Instructor(s)	Eralp Görkan	**Office Tel**	+90 392 6301582
E-mail	Eralp.gorkan@emu.edu.tr	**Office No**	CT208

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 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 are available on the web site.

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 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	10 %	20 %	30 %	40 %

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

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

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COURSE POLICY SHEET

Course Title	Management Information Systems
Course Code	ITEC421
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
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

Instructor(s)	Asst. Prof. Mehmet Islamoglu	**Office Tel**	+90 392 6301405
E-mail	mehmet.islamoglu@emu.edu.tr	**Office No**	BE322

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.
- Describe the various success factors for outsourcing IS systems and their development on a global scale.
- Explain the complex nature of financial evaluation of IS investments.

Teaching Methodology/Classroom Procedures

- Each week there are three lecture sessions and one tutorial session.
- Tutorials are organized in parallel to the lectures and enable students to discuss lecture material and raise issues

- they want to clarify or further deliberate upon.
- Students are also provided with and asked to comment upon case studies and further investigation topics so that they broaden their vision beyond the lecture materials. Lecture notes and announcements will be posted on the course's web site.

Course Materials / Main References

Text Book:
Laudon and Laudon, Management Information Systems, 14th (Global) edition, Pearson, 2015, ISBN-13: 978-0133898163.

Resource Books:
1. Valacich and Schneider, *Information Systems Today*, 6th Edition, Pearson, 2014.
2. McKeen and Smith, *IT Strategy*, 2nd Edition, Pearson, 2012.
3. Motiwalla and Thompson, *Enterprise Systems For Management*, 2nd Edition, Pearson, 2012.
4. Turban, Sharda, and Delen, *Business Intelligence and Analytics*, 10th Edition, Pearson, 2015.

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

Weekly Schedule / Summary of Topics	
Weeks 1-2	**Information Systems in an Enterprise:** The role of information systems in business today, overview of various information systems in an enterprise, transaction processing systems, management information systems, decision support systems, executive support systems, intranets and extranets.
Week 3	**Information Systems and Strategy:** Porter's Competitive Forces Model, using IS to achieve sustainable competitive advantage, aligning IT with business objectives.
Weeks 4-5	**ERP Systems:** Using enterprise systems, supply chain management systems, and customer relationship management systems for operational excellence within the firm and for high levels of cooperation and intimacy with suppliers and customers.
Weeks 5-7	**Electronic Commerce:** rising significance of electronic and mobile commerce channels, digitization of products and services, internet business models, web personalization, product customization, potential hot ecommerce areas and ecommerce challenges for future.
Weeks 8-9	**Midterm Examinations**
Week 10-11	**Managing Knowledge and Collaboration:** Tacit-explicit spectrum of knowledge, knowledge as an asset, managing knowledge and fostering organizational learning, various knowledge related systems in the enterprise ranging from expert systems to case-based reasoning systems and intelligent agents.
Week 12	**Enhancing Decision Making:** Types of decisions, decision support systems, geographic information systems, executive support systems, customer DSS, group decision support systems.
Week 13	**Outsourcing IS:** Mission-criticality, the scale and scope of outsourcing, core IS competencies.
Week 14	**Business Value of Information Systems:** Issues regarding measurement of costs and benefits
Week 15	**Managing Global Systems:** Business opportunities and challenges regarding global value chains
Weeks 16-18	**Final Examinations**

Requirements

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

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

Course Title	Managing Systems Development Project
Course Code	ITEC422
Type	Full Time
Semester	Fall/Spring
Category	AC (Area Core)
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

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

Course Description

This course is about information systems project management covering the processes for delivering quality software on time and on budget using a systematic approach to software project management, project evaluation, estimation, scheduling and resourcing, monitoring and controlling. Various software engineering methodologies and their impact on project management are discussed involving management people, quality, risk and change. The course emphasizes five focal areas of 21st century project management approach: process focus, team focus, global focus, technology focus, and Project Management Body of Knowledge focus. The learning environment is created via networked, collaborative, problem-based learning-centered instructional methods.

General Learning Outcomes

- Understand and practice the process of project management and its application in delivering successful IT projects
- Understand and use risk management analysis techniques that identify the factors that put a project at risk and to quantify the likely effect of risk on project timescales
- Evaluate a project to develop the scope of work, provide accurate cost estimates and to plan the various activities
- Identify the resources required for a project and to produce a work plan and resource schedule
- Practice Microsoft Project Tool.
- Monitor the progress of a project and to assess the risk of slippage, revising targets or counteract scheduling
- Distinguish between the different types of projects and follow the stages needed to negotiate an appropriate contract.
- Project management via team collaboration to prepare a project plan interpersonal relations with people having diverse cultures and skills.

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 1 hours/pw in order to provide the students with an experience of using Case Tools(Microsoft project)
- 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 Project tools.

- There is a written midterm exam.
- There is a written final exam.
- There is one 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
PROJECT MANAGEMENT THE MANEGERIAL PROCESS 4E, CLIFFORD F. GRAY ISBN no: 10: 0073348171

Weekly Schedule / Summary of Topics	
Week 1	Overview of projects and emphasizing management.
Week 2	**Introduction to IS Project Management:** Terminology, project failure, project success, unique features of IT projects, definition of project management.
Week 3	**The Project Management Life Cycle:** Project management life cycle, context, technology and techniques.
Week 4	**Managing Project Teams and Global project teams:** Definition, motivating team members, leadership, power, conflict, Global IS projects, challenges, developing teams, outsourcing, off shoring.
Week 5	**Project Communication:** Managing, enhancing, collaboration technologies.
Week6	**Managing Project Scope:** project initiation, scope planning, definition, verification, change control.
Week 7-8	Midterm Examinations Week
Week 9	**Managing Project Scheduling:** Importance, challenges, creating WBS.
Week 10	**Managing Project Resources:** Resource, duration, effort, techniques.
Week 11	**Managing Project Quality:** Quality pioneers, standards, techniques.
Week 12	**Managing Project Risk:** Risk effects, categorization, techniques.
Week 13	**Managing Project Execution and Managing Project Control and Closure:** monitoring, managing change, communication, documentation, Importance of control and closure, philosophies, techniques

Week14-15	Project Presentations
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 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	Assignments	Project	Class + Lab Quizzes	Midterm Exam	Final Exam
Percentage	5 %	15 %	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.

Course Title	Extreme Programming
Course Code	ITEC429
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

Instructors(s)	Cem Yağlı		
e-mail(s)	cem.yagli@emu.edu.tr	**Office No:**	CT109

Course Description

The aim of this course is to provide students with an introductory yet comprehensive overview of Extreme Programming. System development is an art and engineering. Since the beginning so many methodologies have been found to let the developers work in a discipline. The agile development methodologies are found on the last decade to fulfill the requirements of developing the unclear bounded projects, especially WEB applications. The extreme programming is the one of those methodologies that is so popular today. The Extreme Programming (XP) paradigm has developers programming in pairs, writing tests to automatically verify all code, and continuously refactoring designs for improved performance. The course also aiming to give students the team work discipline and an agile development experience.

General Learning Outcomes

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

- Compare extreme programming with other older methodologies.
- Explains XP's advantages and on system development cycle
- Lists Main and correlated practices used in XP
- Explains The Principles in programming and their relationship with values and practices
- Explains team-work in terms of XP view
- Apply test-first programming in any software development project
- Lists the roles of developers working in teams
- Explains how the XP Project teams have to be organized
- Explains how an XP project is leading.
- Lists the required skills of a successful leader for an XP project
- Lists the required tools and configurations necessary to be in an XP project
- Explains the necessary thinking skills that are helpful for solving problems in an XP project
- Compare the XP with the other popular agile development methodologies

Teaching Methodology / Classroom Procedures

- Each week there are three lecture hours and one lab hours.
- On the lab sessions, students are practicing some applications, and techniques supporting the theoretical concepts given in lecture hours. Some tutorial videos are also shown at the lab, for informing students about the techniques that cannot be practiced in our labs.
- Students are encouraged to use internet to search for various topics related with the course content. Lecture notes, Lab materials, and announcements can be reached on the course's web site.
- Students' performance are evaluated with:
  - o Midterm-1 covers chapters 1, 2, 3, 4, 5 and 6. (25%)
  - o Midterm-2 covers chapters 7, 8, 9 and 10 (25%)
  - o Final covers 11, 12, 13, 14, and 15 (40%)
  - o Lab work (10% - Bonus)
- All course related material (reading texts, sample tutorials including solutions, previously asked exam questions with their solutions, all announcements and course related links can be reached by students through the course WEB site.

Course Materials / Main References

Text Book:

"Sams Teach You Extreme Programming in 24H", Baird S., Pearson Education (2003), ISBN: 9780672324413

"Learning Agile: Understanding Scrum, XP, Lean, and Kanban", Stellman A., Greene J. O'Reilly Media; 2013
 ISBN: 9781449331924

Resource Books:

"Extreme Programming Explained - Embrace Change", Back K., Addison Wesley, Second Edition, 2004.
 ISBN: 978-0321278654

Lecture Notes:

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

Weekly Schedule / Summary of Topics	
1 week	**Introduction:** What is software engineering? How development methodologies helps software engineers in development. The history of the development methodologies and the place of XP. Comparisons of the methodologies. Comparisons of other agile methodologies with XP.
1 week	**Learning to drive on XP:** The fundamentals of XP. The problem solving approaches of XP. The details of values and principles of XP. The roles of these values and principles in success and failure of software projects. Categorizing the effects of them with respect to better productivity, quality and management in an XP project.
1 week	**Getting Started**: Primary and Corollary Practices of XP. How the main practices can help for success in XP projects. The relations and side effects of values, principles and main practices on success. How the secondary practices that are supporting the primary practices. How to be used together in XP projects.
1 week	**Crises in development.** The crises and mostly seen problems arises on development projects. Reasons and solution ways. What may make a project fails. Reasons of death march approaches in SW development. Control variables of the projects. Risks and how XP mitigates those risks. How XP improve the quality of the end product. Managing changes with XP.
1 week	**The XP Development Lifecycle**: Overview of an XP project lifecycle. Exploring the user requirements. Writing user stories. What and how you are estimating and discovering in XP project. Creating a project plan. Let's play a Planning Game.
1 week	**Understanding XP Team Roles**: How XP roles work together. Importance of collaboration. Solving

	problems as one team. Solving problems as two teams. How to organize and manage business and technical teams pyramids. Rights and responsibilities of technical and business teams. The roles and their responsibilities in business and technical teams in an XP project.
1 week	**XP Practices in Action:** Understanding how XP practices work together. Planning game between customer and the developer. Why small releases are the best way in development. Making metaphor in XP projects.
2 weeks	**Midterm Exams**
1 week	**Leading your XP project:** How XP values and principles respect to leadership. How to build a trustable team. How you have to lead. What may makes you a leader and what may makes you not. What kind attitudes are not tolerated in XP. Difference of the chef and the manager. What kind of leader are you? How XP projects have to be lead? Creating your team culture. How may you motivate your team?
1 week	**Planning Your Software Release with XP**: The basics of a software release. Scoping the project. Release planning. Writing user stories for the release. Estimating the size of the release. Estimating the number of iterations. Prioritizing release features.
1 week	**Developing Software in Iterations**: Breaking down the release into iterations. Brainstorming tasks with the team. Signing up for work. Writing acceptance tests. Automating the acceptance tests. Tracking and steering the iteration. Handling a slip. Measuring and controlling velocity. Standup meetings. Closing the iteration.
1 week	**Gathering the Customer's Requirements with User Stories**: Writing your first User Story. Selecting tools for writing user stories. The tool - Wiki Wiki. User story variations. User stories v.s. Use Case. Converting functional specification. Prototyping with user stories.
1 week	**Software Development with Pair Programming**: Pair programming mindset. Creating the physical space. Pair programming costs and benefits. Improving developer morale with pair programming. Answering pair programming objections.
1 week	**Building Software the XP Way**: The integration Cycle. Shipping the product. Building the software every day. The build automation. Extreme building with continuous integration. Reducing your integration obstacles. Testing your software with the xUnit testing framework. Tracking defects with tools. Source control tools. Tools to check your code quality.
3 weeks	**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.
▪ 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 at the WEB site http://students.emu.edu.tr.
▪ Students have to check their exam papers until the end of the week following the announcement of exam scores.

Method of Assessment			
Evaluation and Grading	**Lab Performance**	**2 Midterm Exams**	**Final Exam**
Percentage	15 %	50 %	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.

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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

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.

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	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.

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

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

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.

Course Title	3D Modeling and Animation
Course Code	ITEC450
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

Instructor(s)	Birol Özkaya	**Office Tel**	+90 392 6301660
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 Lecture and Lab 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 CD.

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	Course Registration
Week 2	Introduction of the course
Week 3	Creating 3D Objects (Standard Primitives); Boolean/Proboolean Operations
Week 4	Creating 3D Objects from 2D Shapes: Extrude, Bevel, Bevel Profile, Lathe, Loft methods
Week 5	Spline Modeling
Week 6	Polygon Modeling
Week 7	Polygon Modeling
Week 8	Materials
Week 9-10	Midterm Examinations
Week 11	Lighting, Cameras
Week 12	Basic Keyframe Animation
Week 13	Procedural Animation
Week 14	Animating lights, and materials
Week 15	Gizmos, Particle Systems
Week 16-18	Final Examinations

Requirements
▪ Only 1 make-up exam is held for the missed exam/s at the end of the semester provided that the instructor is informed about a valid excuse within <u>3 days</u> after the date of the missed exam. The make-up exam includes all the topics.
▪ There is no make-up assignment for the missed assignment/s.
▪ Students who fail to attend the lectures regularly may get a NG grade.
▪ Students can examine their exam papers only within the 10 days after the results have been posted.
▪ 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 lecture and laboratory sessions on time (within the first 10 minutes).

Method of Assessment					
Evaluation and Grading	Assignment1	Assignment2	Lecture and 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 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	Applied Animation Techniques
Course Code	ITEC456
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
Workload	180 Hours
EMU Credit	(3,1,0) 3
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	3 Hours Lecture and 1 Hour Laboratory per week
ECTS Credit	6

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

Course Description

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

General Learning Outcomes

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

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

Teaching Methodology / Classroom Procedures

- Course will be given to the student interactively in the lab hour
- This course has highly practical applications
- All the lectures, labs, quizzes, etc. will be in front of the computer
- Students should attend to the labs just on time and regularly, 60 % absenteeism will automatically failed the student
- Students are responsible to develop a term project and present it at the end of the semester
- During the exam surfing through the internet or cheating with your friend (talking, sharing files, documents, etc. are strictly forbidden)

Course Materials / Main References

Text Book:

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

Resource Books:

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

Lecture Notes:

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

Weekly Schedule / Summary of Topics

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

Requirements

■ Each student can have only one make-up exam. One who misses an exam should provide a medical report within 3 days after the missed exam. The make-up exam will be done at the end of the term and will cover all the topics. No make-up exam will be given for the quizzes.
■ Students who do not pass the course and fail to attend the lectures regularly may be given NG grade.
■ Students are responsible from every subject that will be covered in the lab.
■ Students have to be ready for the practical quizzes; no make up will be given to the practical quizzes. But one of the worst quizzes will be eliminated.
■ Students should attend to the labs and quizzes just on time regularly and submit their quiz results and projects.
■ Within the first two weeks each students are expected to choose a term project topics from the published list and register their topic through the assistant
■ Students are responsible to develop a term project and present it at the end of the semester

- During the exam surfing through the internet or cheating with your friend (talking, sharing files, documents, etc.) are strictly forbidden.
- Instructor Home Page must frequently be visited for the course announcements, the exam/quiz results, etc.
- Tutorials will be organized on animation techniques by using Adobe Flash CS6.

Method of Assessment				
Evaluation and Grading	**Project**	**Quizzes (Practical)**	**Midterm Exam**	**Final Exam**
Percentage	20 %	20 %	20 %	40 %

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

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

EASTERN MEDITERRANEAN UNIVERSITY
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DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Advanced Animation Techniques and Project Development
Course Code	ITEC457
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
Workload	180 Hours
EMU Credit	(3,1,0) 3
Prerequisite	-
Language	English
Level	Fourth Year
Teaching Format	3 Hours Lecture and 1 Hour Laboratory per week
ECTS Credit	6

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

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 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 Flash.
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 Flash CS5.

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

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

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

Course Title	Introduction to Neural Networks
Course Code	ITEC460
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
Workload	150 Hours
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	5

Instructor(s)	Assoc. 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.

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	Advanced Topics in DBMS with Database Administration in ORACLE
Course Code	ITEC474
Type	Full Time
Semester	Fall/Spring
Category	AE (Area Elective)
Workload	180 Hours
EMU Credit	(3,1,0)
Prerequisite	ITEC212
Language	English
Level	Fourth Year
Teaching Format	2 Hours Lecture, 2 Hours Laboratory per week
ECTS Credit	6

Instructor(s)	Şebnem Çoban	**Office Tel**	+90 392 6301677
E-mail	sebnem.coban@emu.edu.tr	**Office No**	CT117

Course Description
The main aim of this course is to provide advanced database management topics using a technology component for database administration. The advanced database management topics consist of discussion lectures on advanced areas of database management in industry. The technology component focuses mainly on Oracle tools for database administration and advanced database management SQL commands. The course covers architecture of a DBMS, responsibilities and tasks of a DBA, installation, logical DB layouts, physical DB layouts, query processing, indexing, and transaction management, data concurrency, logging, managing the development process, security / auditing, flashback recovery and backup / recovery.

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

- Define relational database concepts and terms
- Understand the architecture of a client-server database
- Learn database administration process
- Define the tasks performed by a DBA (Database Administrator)
- Understand DBA tasks using the web browser-based Oracle Enterprise Manager Utility
- Understand and practice how to manage control files, redo-log files, archive redo-log files
- Understand and practice data concurrency and undo management
- Understand and apply flashback technology
- Apply backup/recover a database
- Apply SQL commands to create and manage database objects
- Apply SQL commands to retrieve metadata using data dictionary commands
- Apply SQL commands using the web browser-based Oracle SQL Developer Utility
- Administer a database via team collaboration
- Working with various technical people as database developers, database designers, data analysts, data designer, etc.

Teaching Methodology / Classroom Procedures

- Learning topics will be covered in the lectures theoretically and by discussions on real-life sample cases.
- A project management case will be given to the whole class.
- Different roles in a project team will be selected by the learners and project phases are expected to be completed in collaboration.
- The learner can communicate with peers and contribute to the project via social networks at anytime, anywhere.

Course Materials / Main References
Text Book: Bob Bryla , Kevin Loney. Oracle Database 11g – DBA Handbook. 1st Edition. McGraw Hill, 2008. Print. ISBN-13: 978-0071496636 *Resource Books:* • David M. Kroenke, David J. Auer. Database *Processing: Fundamentals, Design and Implementation.* 12th Edition.   Pearson Prentice-Hall, 2012. Print. ISBN 13: 978-0-13-214537-4 *Lecture Notes:* All course materials are also available online in Adobe PDF (Portable Document Format).

Weekly Schedule / Summary of Topics	
Week 1	**Overview of Database Concepts:** Introduction to Oracle11g Database Administration: Database systems, keys, E-R model, personal DBMS, client/server DBMS.
Weeks 2, 3	**Architecture of a DBMS and creating an Oracle database:** Oracle database architecture, instance architecture, memory structures, background processes, logical and physical storage structures.
Week 4	**Oracle Server:** Database administration software, special database administrative users, installation types, Oracle Universal Installer (OUI). **Database Setup:** initialization parameter files, startup and shutdown processes.
Week 5	**Managing Database Storage Structures: S**torage of table row data in blocks, tablespaces and data files, Automatic Storage Management (ASM). **Data Dictionary:** data dictionary views, queries for the data dictionary and dynamic performance views.
Week 6	**The Control File Maintenance:** Managing control files, control file content, multiplexing control files **Redo Log Files:** Using Redo Log files; Redo Log file structure; Switches and Checkpoints; Adding Groups; Adding Group Members; Dropping Redo Log files and Groups; Relocating and Renaming; Archiving.
Week 7	**Managing Data Concurrency:** Describe the locking mechanism and how Oracle manages data concurrency, Monitor and resolve locking conflicts
Weeks 8, 9	**Midterm Exams**
Weeks 10, 11	**Managing Undo Data:** Undo segment; Read consistency; Automatic undo management including: configuration, initialization parameters, the Undo tablespace, and altering, switching, and dropping Undo tablespaces; Sizing Undo tablespace; Obtaining undo segment information. Configure undo retention, Guarantee undo retention
Weeks 12, 13	**Flashback Technology:** Perform Flashback Query, Use Flashback Version Query, Enable row movement on a table, Perform Flashback Table operations, Use Flashback Transaction Query
Weeks 14, 15	**Backup and Recovery and Moving Data:** Database backup, restore, recovery, checkpoints, redo log files, and archived log files, directory objects, SQL.
Weeks 16,17,18	**Final Exams**

Topics which will be covered in the laboratory sessions
• DDL Statements – Create and Manage Tables • Creating Other Schemas - View, Sequence, Synonym and Index • Create and manage database users, controlling the database accounts, roles, privileges, profiles, password security. • Startup and shutdown the database • Creating and Managing Data files and Tablespaces • Data Dictionary and Dynamic Performance Views • Flashback Query, Flashback Table, Flashback Version Query, Flashback Transaction Query

Requirements
▪ Plagiarism is not accepted, which means deliberately copying the project of another learner; copying directly from any published work without using quotation marks; failing to acknowledge sources used in submitted assignments with proper citation methods; Re-submitting a project submitted in one course as an original piece of work for this course. Work that shows evidence of plagiarism will be penalized in accordance with the seriousness of the case. This may involve 50% reductions in grades for minor infractions, a failing grade for more serious cases, and in extreme circumstances the disciplinary procedures of the institute may be invoked. ▪ Only one Make-up examination will be offered to those learners who have not attended. Mid-term and/or the Final Examination and who brings a valid report signed from the EMU Health Center within three days after the exam. The Make-up examination covers entire course content. The Make-up exam mark will be counted for one missing examination only (Generally for the examination with higher percentage). ▪ Learners are kindly requested to obey the Instructor's Office hour policy.

The learners are kindly requested to obey the rules in the LAB.

Method of Assessment				
Evaluation and Grading	Midterm Exam	Team Project	Final Exam	Total
Percentage	%30	%40	%30	%100

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

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

EASTERN MEDITERRANEAN UNIVERSITY
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DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	Multimedia Development for Web Application
Course Code	ITEC475
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

Instructor(s)	Pınar Kumyalılı	**Office Tel**	+90 392 630 1670
E-mail	pinar.sahin@emu.edu.tr	**Office No**	CT207

Course Description
This course is applicable to anyone who had gained experience on web design concepts, the course aims at introducing students to web design image creation and craftsmanship. In this course students will be introduced to advanced principles of web design graphics, and logos, alongside applications that will enhance their knowledge and skills. It is also designed to provide students with knowledge and analytical skills required for industrial web design, personal websites, and other types of graphics required for web development. The course will use a prevalent imaging tool such as Photoshop or Corel draw.

General Learning Outcomes
On successful completion of this course students should be able to: ▪ Understand fundamental techniques of Multimedia Development for Web Application.   ▪ Create interactive web site content.   ▪ Create friendly user interface.   ▪ Describe the role and purpose of Multimedia Development easily.   ▪ Design and implement a web interface   ▪ Implement a website and integrate it with other IT applications.   ▪ Understand the needs of industry.

Teaching Methodology / Classroom Procedures
▪ Each week there are two lecture sessions and one tutorial session.   ▪ Tutorial sessions are organized in parallel to theoretical study given in classrooms. In the laboratory, particular aspects of the Photoshop program are demonstrated and labs tasks are assigned to students and evaluated based on performance.   ▪ 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 an individual 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 is no need to take plagiarism test for the project.   ▪ Term project will be assigned to students in order to assess their learning outcome each semester

| | Students are also encouraged to use the internet to search for various related topics. Lecture notes, Lab descriptions, and announcements will be posted on the course's web site. |

Course Materials / Main References

Text Book:

1. ***Photoshop® CS5: Top 100 Simplified® Tips & Tricks, 2010 - ISBN: 978-0-470-61265-1***
2. ***Mastering Photoshop for Web Designers, 2011 ISBN: 978-3-943075-12-0***

Lecture Notes:

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

Weekly Schedule / Summary of Topics	
Week 1	Introduction: installing the software**.**
Week 2	Explanation of Adobe Photoshop Tools Palette and assigning individual web based projects.
Week 3	Layers, selections and masks
Week 4	Straighten, crop and resize
Week 5	Retouch images
Week 6	Enhance colors, tones and sharpness
Week 7	Applying digital effects
Week 8-9	**Midterm Examinations**
Week 10	Design with text effect, watermark, warp text
Week 11	Design with text effect, perspective, shadow, weave text and graphics
Week 12	Creating digital artworks, art projects
Week 13	Creating Web Photo Gallery, HTML
Week 14	Project Presentations
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**	**Final Exam**
Percentage	35%	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
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

Instructor(s)	Assoc. 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.

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.

Course Title	Mobile Information Device Programming
Course Code	ITEC499
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

Instructors(s)	Cem Yağlı		
e-mail(s)	cem.yagli@emu.edu.tr	Office No:	CT109

Course Description
This course aims to provide experience to the students on developing applications in J2ME (Java 2 for mobile devices) and introduce the Mobile Information Devices (MID) Profiles. The course content covers the topics of creating a "clipboard" to share data among the components, using streams to read and write persistent storage, searching and sorting records in persistent storage, low-level event handling, primitive drawing operations, creating simple animations for game programming, scheduling timers, creating client request and implementing a server response using HTTP, the use of HTTP GET and POST request methods, managing session through cookies and URL-rewriting, using thread to download network data in the background, downloading and viewing files and images.

General Learning Outcomes

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

- Lists and compare the alternative IDEs and programming languages used for developing mobile information device applications.
- 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.
- Develop software solutions in Java for intermediate level of problems (with J2SE and J2ME).
- Develop mobile applications in Java (J2ME)
- Explain the fundamental techniques of J2ME's MIDP.
- Use MIDlet API in Mobile application development.
- List and explain all event handling and user interface components of J2ME.
- Generate animation and splash screen for MIDs.
- Use Record Management Systems components in MID projects.
- Develop Thin Client Application (HTTP Connection) and GPS Application for MIDs.

Teaching Methodology / Classroom Procedures

- Each week there are three lecture hours and one lab hours.
- On the lab sessions, students are practicing some applications, and techniques supporting the theoretical concepts given in lecture hours. Some tutorial videos are also shown at the lab, for informing students about the techniques that cannot be practiced in our labs.
- Students are encouraged to use internet to search for various topics related with the course content. Lecture notes, Lab materials, and announcements can be reached on the course's web site.
- Students' performance are evaluated with:
  - Midterm-1 covers chapters 1, 2, 3, 4, 5, 6, 7 and 8. (25%)
  - Midterm-2 covers chapters 9, 10, 11, 12, 13 and 14 (25%)
  - Final covers 15, 16, 17, 18, 19, 20, and 21 (40%)
  - Lab work (10% - Bonus)
- All course related material (reading texts, sample tutorials including solutions, previously asked exam questions with their solutions, all announcements and course related links can be reached by students through the course WEB site.

Course Materials / Main References

Text Book:

"Core J2ME Technology & MIDP" Muchow , J. W., Prentice Hall PTR, 2001, ISBN: 9780130669117

Resource Books (Available in EMU Library, Reference Section):

"J2ME in a Nutshell, A Desktop Quick Reference", Topley K., O'Reilly Media, 2002, ISBN: 978-0-596-00253-4.

"Beginning J2ME, From Novice to Professional", Li S., Knudsen J., Apress, 2005, ISBN: 978-1-4302-0020-8

Lecture Notes:

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

Weekly Schedule / Summary of Topics

1 week	**Introduction to Java and J2ME:** Java editions, Configurations and Profiles. Java Virtual Machines (JVM). Installation and "Hello World" application. Talk about other alternative technologies. Windows CE Application programming. Symbian/C++ for Series 60. The Syntax in Java – Lexical Structure. Reserve words and Punctuations.
	Review of Java Programming Language I: Primitive Data Types. Floating Point Types. Type Conversions. Expressions and Operators. Precedence Rules. Associativity. Return Type. Side Effects. Order of Evaluation. Arithmetic Operators. String Concatenation Operator. Increment/Decrement. Operators: Comparison Operators, Boolean Operators, Assignment Operators, Conditional Operators
1 week	**Review of Java Programming Language II:** Conditional Statements. Reputational Statements. Break/Return Statements. Classes/Object in Java. Basic Input / Output methods. Downloading/Installing J2SE & NetBeans IDE. Sample code for introducing the Java world.
	Review of Java Programming Language III: Characters, Strings and the null Reference, Arrays, Array of Objects. Two Dimensional Arrays, List Arrays, Map Arrays. Low Level File I/O, High Level Binary File I/O, High Level Text File I/O, Object File I/O. Exceptions & Assertions. Polymorphism & Inheritance.
1 week	**CLDC – Connected Limited Device Configuration and Mobile Information Device Profile (MIDP):** The goal of CLDC. Hardware/Software requirements. The JVM Specifications. Handling security. Class File Verifications. J2SE Inherited Classes. CLDC Specific Classes. K Virtual Machines. MIDP Profile Architecture. The MIDlet Suite. Accessing JAR/JAD Attributes from MIDlet.
	Development Environment: The Suns's Suggestions: Downloading & installing and Configuring the software. An Easier Way: The NetBeans Suite. First MIDlet development. Running a MIDlet on an emulator. Running a MIDlet onto a Mobile Device.

1 week	**Basics of MIDlets and Display:** MIDlet. Creating a MIDlet. MIDlet API. Communication to Application Manager. MIDletStateChangeException. Throwing an Exception. Display Class. Display API. Getting Device Information. Displayable Class. Creating Displayable Object. Displayable API. **Event Handling**: The big picture. Command Objects. Item objects. Command and CommandListener. Accessing Commands through Button or Menu. Item and ItemStateListener.
1 week	**High Level User Interface**: Screen, Form, Item, DateField, Guage. StringItem, TextField, Choice and ChoiceGroup, Image and ImageItem.
1 week	**High Level User Interface – II:** List, TextBox, Alert and AlertType, Ticker. **Low Level User Interface:** Canvas, Graphics.
1 week	**Creating a display manager:** Animation MIDlet. Display manager API. Animating a series of images. **Record Management System (RMS):** Persistent Storage Through the Record Store. Navigating through RecordEnumaration. Sorting with RecordComparator. Searching with RecordFilter. Notification of Changes with RecordListener. Exception handling.
2 weeks	**Midterm Exams**
1 week	**ToDo List:** Using ToDo List. Interface design. Data design. Application logic. **Scheduling Tasks:** Timer, TimerTask, Timer Template, Delaying Timer, and Animation with Timer/TimerTask.
2 week	**A Quick Review for PHP, MySQL and WEB Server Applications:** Obtaining and installing WAMP server. Creating a web site. Creating a MYSQL database with its tables. Developing a query listing php code. Developing a php code for inserting records. Developing a php code for deleting records. Developing a php code for updating records.
1 week	**Generic Connection Framework:** Connection Hierarchy. HTTP Connection. **Client/Server Applications through 3G technology:** General Information. Client/Server Methodologies. 3G Technology. Communicating with a server through 3G.
1 week	**Developing a Thin Client Application:** Introduction to thin client applications. Interface design. Data design. Application logic. Development of client-side application. Data design. Server side application logic. Development of server-side application. Test it with client-side application.
1 week	**GPS (Global Positioning System) Applications:** General Information. Obtaining and reporting coordinates. **MIDP for Palm OS:** Device requirements, Obtaining and Installing the software. MIDlets. Configuring Preferences.
3 weeks	**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.
▪ 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 at the WEB site http://students.emu.edu.tr.
▪ Students have to check their exam papers until the end of the week following the announcement of exam scores.

Method of Assessment			
Evaluation and Grading	**Lab Performance**	**2 Midterm Exams**	**Final Exam**
Percentage	15 % (Bonus)	50 %	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	Communication in English I
Course Code	ENGL191
Type	Full Time
Semester	Fall/Spring
Category	UC (University Core)
Workload	120 Hours
EMU Credit	(3,0,1) 3
Prerequisite	-
Language	English
Level	First Year
Teaching Format	4 Hours Lecture per week
ECTS Credit	4

Instructors(s)	MLD Academic Courses' instructors		
e-mail(s)	pembe.tinazci@emu.edu.tr	**Office No:**	1529

Course Description

ENGL 191 is a first semester freshman academic English course. It is designed to help students improve the level of their English to B1 level, as specified in the Common European Framework of Reference for Languages. The course connects critical thinking with language skills and incorporates learning technologies such as Moodle. The purpose of the course is to consolidate students' knowledge and awareness of academic discourse, language structures and lexis. The main focus will be on the development of productive (writing and speaking) and receptive (reading) skills in academic settings.

General Learning Outcomes

On successful completion of the course, students will be able to demonstrate understanding and knowledge of:
- organizing a well-structured opinion essay and an argumentative essay as academic essay types.
- speaking to give reasons, expressing opinions, agreeing or disagreeing and discussing in an academic environment.

On completing the course students will:

- understand texts that mainly consist of frequently occurring everyday language
- enter spontaneously (unprepared) into conversation on topics that are familiar, of personal interest or pertinent to everyday life (e.g. family, hobbies, work, travel and current events).
- connect phrases in a simple way in order to describe experiences and events, dreams, hopes and ambitions.
- briefly give reasons and explanations for opinions and plans.
- write simple connected texts on topics which are familiar or of personal interest.
- write short opinion essays and a 5-paragraph argumentative essay to argue for or against an issue.

Teaching Methodology / Classroom Procedures

- Each week there are four lecture sessions.
- In addition to lecture sessions, students are encouraged to use moodle to develop skills in exploiting computers both as a study resource and a tool for producing professional work.

Course Materials / Main References
Text Book: Cox, K. & Hill, D. (2007). *English for Academic Purposes (EAP) Now! Preliminary (Students' Book)*. Australia: Pearson Longman.

Weekly Schedule / Summary of Topics	
1 week	**Introduction to the Course** **Introduction to Moodle** (registration on moodle)
3 weeks	**Introduction to Reading Strategies** (predicting, skimming, purpose, and critical thinking) **Introduction to Speaking Activities**
2 weeks	**Introduction to Reading Strategies** (scanning, finding meaning from context, tracking participants) **Introduction to Moodle Task 1** (getting to know each other)
1 week	**Introduction to Writing an Opinion Essay** **Introduction to Reading Strategies** (sentence completion) **Introduction to Moodle Task 2** (3-paragraph Opinion Essay)
2 weeks	**Midterm Exam Period**
2 week	**Introduction to Argumentative Essay Writing** (outline writing)
1 week	**Argumentative Essay Writing** (first draft writing)
2 weeks	**Introduction to Presentations** (language used in presentations, presentation practice)
2 weeks	**Student Presentations**
3 weeks	**Final Exam Period**

Requirements
Students are required: • to attend 80% of class hours in one semester. • to be punctual about the assignments and other course activities. • to actively participate in the discussions and activities. • to take the exams. • to always bring course book and material to class. • not to download an assignment from an online source, buy or borrow an assignment; not to copy, cut and paste text from an electronic source; **not to copy a section of a book or an article and submit it as their own work.** • not to quote from a source 'word for word', without using quotation marks. • not to cheat in the exams.

Method of Assessment					
Evaluation and Grading	**Presentation/Speaking**	**Essay**	**Moodle**	**Midterm Exam**	**Final Exam**
Percentage	15 %	15 %	10 %	25 %	35 %

Course Title	Communication in English II
Course Code	ENGL192
Type	Full Time
Semester	Fall/Spring
Category	UC (University Core)
Workload	120 Hours
EMU Credit	(3,0,1) 3
Prerequisite	ENGL191
Language	English
Level	First Year
Teaching Format	4 Hours Lecture per week
ECTS Credit	4

Instructors(s)	MLD Academic Courses' instructors		
e-mail(s)	pembe.tinazci@emu.edu.tr	**Office No:**	1529

Course Description

ENGL 192 is a second semester freshman academic English course. This course is designed to further help students improve their English to B2 level, as specified in the Common European Framework of References for Languages. The course aims to reconsolidate and develop students' knowledge and awareness of academic discourse, language structures, and critical thinking. The course also incorporates use of technologies on MOODLE that will promote self study and Microsoft computer skills. The course will focus on reading, writing, listening, speaking and introducing documentation, and will also focus on presentation skills in academic settings.

General Learning Outcomes

On successful completion of the course, students will be able to demonstrate understanding and knowledge of:
- identifying the function and purpose of such text types as procedural text, information and review
- organizing two formal essay types (advantages and disadvantages, and cause-effect essays)
- preparing an academic presentation.

On successful completion of the course, students will have the following skills in:
- writing two essays; giving reasons in support of or against a particular point of view and explaining the advantages and disadvantages on a specific topic, and describing the causes and effects of a particular issue using a source.
- identifying the main idea and specific information in any theme based texts.
- identifying cues and inferring meaning from variety of texts.
- preparing and presenting a power point presentation on a specific topic in academic settings.

Teaching Methodology / Classroom Procedures

- Each week there are four lecture sessions.
- In addition to lecture sessions, students are encouraged to use moodle to develop skills in exploiting computers both as a study resource and a tool for producing professional work.

Course Materials / Main References

Text Book:

Cox, K. & Hill, D. (2007). *English for Academic Purposes (EAP) Now! Preliminary (Students' Book)*. Australia: Pearson Longman.

Weekly Schedule / Summary of Topics	
1 week	**Introduction to the Course** **Introduction to Moodle** (registration on moodle)
2 weeks	**Practicing Reading Strategies** (predicting, skimming, purpose, and critical thinking scanning, finding meaning from context, tracking participants)) **Introduction to Moodle Task 1** (getting to know each other)
3 weeks	**Introduction to Writing a Cause & Effect Essay (outline writing)** **Introduction to quoting from a source** **Introduction to Presentations** (language used in presentations & presentation practice) **Introduction to Moodle Task 2** (Cause and Effect Research task)
1 week	**Students Mini Presentations**
2 weeks	**Midterm Exam Period**
1 week	**Practicing Reading Strategies (**Skimming, scanning and note-taking; finding meaning from context) **Practicing Opinion essay writing** **Exam Practice for the midterm**
2 week	**Practice on quoting from a source** **Quotation Quiz** **Introduction to Moodle Task 3** (Quotation task for cause & effect essay)
2 week	**Cause & Effect Essay Writing** (first draft writing) **Practicing for the Final Exam** **Introduction to Moodle Task 4** (Presentation task)
2 weeks	**Student Presentations**
3 weeks	**Final Exam Period**

Requirements

Students are required:

- to attend 80% of class hours in one semester.
- to be punctual about the assignments and other course activities.
- to actively participate in the discussions and activities.
- to take the exams.
- to always bring course book and material to class.
- not to download an assignment from an online source, buy or borrow an assignment; not to copy, cut and paste text from an electronic source; **not to copy a section of a book or an article and submit it as their own work.**
- not to quote from a source 'word for word', without using quotation marks.
- not to cheat in the exams.

	Method of Assessment

Evaluation and Grading	Presentation	Quotation Quiz	Essay	Moodle	Midterm Exam	Final Exam
Percentage	15 %	5%	15 %	10 %	25 %	30 %

EASTERN MEDITERRANEAN UNIVERSITY
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DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE POLICY SHEET

Course Title	History of Turkish Reforms
Course Code	HIST280
Type	Full Time
Semester	Fall/Spring
Category	UC (University Core)
Workload	90 Hours
EMU Credit	(2,0,0) 2
Prerequisite	-
Language	Turkish
Level	First Year
Teaching Format	2 Hours Lecture per week
ECTS Credit	3

Course Description
The aim of this course is to teach students under what conditions the Republic of Turkey was established; to make students understand the principles of Ataturk's reforms; the phases of the Reforms; Ataturk as a military hero and a statesman; Ataturk's concept of nationalism that defies racism; Ataturk's attempts to maintain global peace based on causes and effects; the relations between the Turkish Republic and the establishment of the Turkish Republic of Northern Cyprus; Turkish Cypriot years of national strife. This is a general education course

General Learning Outcomes
On successful completion of this course students should be able to: • Define the goal and sources of Turkish revolution history. • List the reasons of Ottoman decline. • Explain the Ottoman modernizations and their effects on Turkish modernization. • Describe the character and abilities of Mustafa Kemal.

Teaching Methodology / Classroom Procedures
▪ Each week there are two lecture sessions.

Course Materials / Main References
Text Book: Ahmet Mumcu, İhsan Güneş, *Atatürk İlkeleri ve İnkilap Tarihi, Açıköğretim Yayınları*

Summary of Topics	
14 weeks	**Cumhuriyeti'nin Dış Siyaseti (1923 - 1955)** **İnkılâpların Temel Özellikleri ve Türk İnkılâbı** **Türk İnkılâbını Etkileyen Akımlar** **Demokratik Hukuk Devleti (Türk İnkılâbının Hedefi)** **Türk Hukuk Sisteminin Kurulması**

	Türk Eğitim Sisteminin Kurulması
	Türk Ekonomisinin Yeniden Yapılanması
	Türk Toplum Yaşamına Düzgünlük ve Sağlıklı İşlerlik Getiren Diğer Yenilikler
	Atatürk İlkelerinin Genel Niteliği
	Atatürk İlkeleri (1) / Cumhuriyetçilik
	Atatürk İlkeleri (2) / Milliyetçilik (Ulusçuluk)
	Atatürk İlkeleri (3)-(4) / Halkçılık ve Devletçilik
	Atatürk İlkeleri (5) / Laiklik
	Atatürk İlkeleri (6) / İnkılâpçılık (Devrimcilik)
3 weeks	**Final Exam Period**

Method of Assessment	
Evaluation and Grading	**Final Exam**
Percentage	100 %

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

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.. Differentation: 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	Definite Integral, Applications of definite integral, Use of definite integrals for calculating areas
Week 15-17	**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.

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

Instructors(s)	Prof. Dr. Rashad Aliyev	**Office Tel:**	+90 392 630 1008
e-mail(s)	rashad.aliyev@emu.edu.tr	**Office No:**	AS 144

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:

- 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:** sets, equality of sets, subsets, the Power set, operations on sets, union, intersection, Venn diagram, set difference, the complement of a set, symmetric difference, the Cartesian Product of sets.
Week 2	**RELATIONS:** binary relations, reflexive relation, symmetric relation, antisymmetric relation, transitive relation; equivalence relations, partial orders, Hasse diagram; maximum, minimum, maximal, and minimal elements of a poset.
Week 3	**FUNCTIONS:** domain, target, range or image of a function, one-to-one (or injective), onto (or surjective), one-to-one onto (or bijective) functions, inverses and composition of functions.
Week 4	**BOOLEAN ALGEBRA:** basic Boolean functions, digital logic gates, truth table, truth set, minterm and maxterm expansions, the basic theorems of Boolean algebra, law of duality.
Week 5	**BOOLEAN ALGEBRA:** simplification of Boolean functions using Karnaugh maps.
Week 6	**INDUCTION AND RECURSION:** mathematical induction, recursively defined sequences, the arithmetic and geometric sequences.
Week 7	**INDUCTION AND RECURSION:** solving recurrence relations, the characteristic polynomial. **PRINCIPLES OF COUNTING:** the principle of Inclusion-Exclusion.
Week 8	**PRINCIPLES OF COUNTING:** the principle of Inclusion-Exclusion. **Midterm Exams**
Week 9	**Midterm Exams**
Week 10	**PRINCIPLES OF COUNTING:** the Addition and Multiplication rules.
Week 11	**PRINCIPLES OF COUNTING:** the Pigeonhole Principle.
Week 12	**PERMUTATIONS AND COMBINATIONS:** permutations, combinations, repetitions, derangements, the Binomial Theorem.
Week 13	**GRAPHS:** definitions and basic properties, complete graph, bipartite graph, complete bipartite graph, Euler proposition, degree sequence, isomorphism. **PATHS AND CIRCUITS:** Eulerian circuit, Hamiltonian cycles (circuits), the adjacency matrix
Week 14	**TREES:** trees and their properties, spanning trees, a minimum spanning tree. **MINIMUM SPANNING TREE ALGORITHMS:** Kruskal's algorithm, Prim's algorithm.
Week 15-17	**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**	**Quizzes**	**Final Exam**
Percentage	30 %	30 %	40 %

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)
Workload	180 Hours
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

Instructor(s)	Asst. Prof. Dr. Mehmet Ali TUT	**Office Tel:**	+90 392 630 1237
e-mail(s)	mehmet.tut@emu.edu.tr	**Office No:**	AS251

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
- 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 three lecture sessions where the basic concepts and theory is taught.
- In the one tutorial session each week, 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. Probability 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	
1. week	**FREQUENCY DISTRIBUTIONS:** Raw data arrays. Class intervals, class limits, class boundaries, class interval size, class mark, frequency tables.
2. week	**FREQUENCY DISTRIBUTIONS:** Frequency Distributions. Frequency and relative frequency histograms and frequency polygon.
3. week	**FREQUENCY DISTRIBUTIONS:** Cumulative frequency and relative cumulative frequency histogram and ogive line.
4. week	**THE MEASURES OF CENTRAL TENDENCY:** Index of subscripts notation. Summation notation. Measure of central tendency. Weighted arithmetic mean, properties of weighted arithmetic mean
5. week	**THE MEASURES OF CENTRAL TENDENCY:** The median and mode. Geometric mean, harmonic mean. Quartiles, deciles and percentiles. **Quiz#1**
6. week	**MEASURES OF DISPERSION:** Dispersion. The range. Computing the variance and standard deviation.
7. week	**MEASURES OF DISPERSION:** Standardized variable and standard scores.
8. 9. weeks	*MIDTERM EXAMINATION PERIOD*
10. week	**INTRODUCTION, PROBABILITY:** Sample Space. Events, Mutually Exclusive events. Counting Sample Points. Multiplication Rule. Permutations and Combinations. Probability of Events. Additive and Multiplicative Rules.
11. week	**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.
12. week	**CURVE FITTING AND METHOD OF LEAST SQUARES:** Relationship between variables. Curve Fitting. Equation of a curve. **Quiz#2**
13. week	**CURVE FITTING AND METHOD OF LEAST SQUARES:** Method of least squares. The least square line. The least square parabola.
14. week	**CORRELATION THEORY:** Correlation and Regression. Linear correlation. Measures of correlation. Standard error of estimate. Explained and Unexplained variation. Coefficient of correlation.
15-17. Week	*FINAL EXAMINATION PERIOD*

Requirements

- It is compulsory to show student identification card, in the examinations. Those who will not be able to show identification card their scores will not be recorded.
- 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.
- Students missing an examination have to provide valid excuses within three days after the exam date.
- There will be a single make-up exam for the missed exam(s) which will be after the finals. The content of the make-up exam will cover all topics like a final exam. Time and place of the make-up exams will be announced later.
- There will be No make-up exam 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 marks in order to pass the course.

Method of Assessment			
Evaluation and Grading	**Midterm Exam**	**Quiz**	**Final Exam**
Percentage	35 %	20 %	45 %

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	Turkish as a Second Language
Course Code	TUSL181
Type	Full Time
Semester	Fall/Spring
Category	UC (University Core)
Workload	90 Hours
EMU Credit	(2,0,0) 2
Prerequisite	-
Language	English / Turkish
Level	First Year
Teaching Format	2 Hours Lecture per week
ECTS Credit	3

Instructors(s)	Yelda ILIC, M.A.		
e-mail(s)	yelda.ilic@emu.edu.tr	**Office No:**	GE206

Course Description
The aim of this course is to introduce the Turkish language to students with no or a little knowledge of Turkish. The course incorporates all four language skills (reading, writing, listening, speaking) and covers basic grammar, vocabulary and pronunciation. The topics covered are part of the syllabus for level A1 of the Common European Framework of Reference for Languages.

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

- Differentiate and use the target language at a formal and informal level in everyday situations
- Identify, adapt and use nouns (gender, singular/plural, adjectives) and verbs (present tense conjugations, positive and negative)
- Ask and answer informative questions
- Comprehend dialogues and monologues given by Turkish speakers
- Comprehend simple written texts
- Write short texts
- Practise pronunciation and spelling

Teaching Methodology / Classroom Procedures
In order to achieve a passing grade students are expected to attend classes and to complete all necessary tasks and assignments. It is a requirement of the administration that all students must attend a minimum of 80% of classes. The administration keeps in close contact with Faculties and Schools in this regard.

Course Materials / Main References
Text Book:

The textbook (HİTİT 1 Temel – Yabancılar İçin Türkçe Ders Kitabı, Ankara University Press, 2009).
All reading material will be provided weekly by the instructor.

Weekly Schedule / Summary of Topics	
Week 1	Turkish Alphabet, Phonetic Structure of Turkish Language. Meeting and Greetings. Exercises in Pronunciation.
Week 2	Vocal Harmony. Plural Suffix. Simple Negative and Interrogative Sentences.
Week 3	Adjectives. Exercises in Vocabulary and Pronunciation.
Week 4	Locative and Ablative Cases. Listening Exercises.
Week 5	Numbers. Conjugation of Verbs in Present Simple and Continuous. Conversational Exercises.
Week 6	Exercises in Reading and Listening Quiz 1.
Week 7	Revision of Quiz 1. Exercises in Listening and Speaking.
Weeks 8-9	Midterm Exam Period
Week 10	Mid-Term Revision. The Verb "to be" with Professions and Adjectives.
Week 11	Case Endings. Related Exercises.
Week 12	Time Related Expressions.
Week 13	Reading-Writing-Speaking Exercises. Quiz 2.
Week 14	Revision of Quiz 2. Oral Presentation.
Week 15	Week 14: Cultural Trip to Historical Sites in TRNC and Related Prepared Conversation.
Week 16-18	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	**Productive Skills**	**Quizzes**	**Midterm Exam**	**Final Exam**
Percentage	20 %	20 %	25 %	35 %