

EASTERN MEDITERRANEAN UNIVERSITY

COURSE OUTLINE

COURSE CODE	CMPE 104	COURSE LEVEL	Fall 2008
COURSE TITLE	Fundamentals of Programming		
COURSE TYPE	Area Core		
LECTURER(S)	Assoc. Prof. Dr. Hasan H. ÖNDER		
CREDIT VALUE	(3,1)3	ECTS VALUE	
PREREQUISITES	CMPE 103		
COREQUISITES	---		
DURATION OF COURSE	14 weeks		
WEB LINK	http://ie.emu.edu.tr/HasanOnder/cmpe104.htm		

CATALOGUE DESCRIPTION

Fundamentals of algorithms and data structuring; programming in the Pascal language. The concepts of source and object programs, compilation, data and program distinction. Also included: Pascal data types, pseudo-code software, block structured programming, assignment statements, type matching, fundamental control structures, basic data structures: arrays, indexing. Students will be required to complete a number of program design and implementation assignments.

AIMS & OBJECTIVES

The main aim of this course is:

- To teach the students fundamentals of algorithmic design and computer programming for problem solving using a procedural language Turbo Pascal.
- To teach problem analysing and finding solution approaches are in the scope and preparing special purpose programs using a programming language also are under consideration

GENERAL LEARNING OUTCOMES (COMPETENCES)

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

Programming principles, good style of and methodical approach to program development using Pascal programming language.

(Data types, constants and variables, arithmetic operations and functions, The assignment statements, program composition. Sequential structure, Boolean data types. Control statements. Selection structure (If, If-Then-Else statements). Repetition structure (While statement). Other control statements Multi-alternative selection structure (Case statement). Repetition structure (Repeat Until statement). Repetition structure (For statement). Built-in functions, user defined functions. Arrays. Strings. Records. Files. Array processing. Pointers and linked lists. The students will be able to write Pascal program to solve problems).

GRADING CRITERIA

Exams: All examinations will be based on lectures, tutorials, labs, assigned readings, project study or other work. To pass these exams students will need to have studied the material well in advance in order to understand the concepts, procedures and techniques. To discourage last minute cramming, the instructor and the assistants will not answer any

questions from students on the day of an examination. Exam results will be announced on the notice boards and course web page as soon as the exam papers have been evaluated. Descriptions of these examinations are as follows:

- Pop Quizzes: There will be a plenty of lecture and lab. pop quizzes those are not announced. They will be of closed-book/closed-notes type but all required material will be supplied.
- Midterm Exam: There will be one midterm examination that covers all the material up to the date of the examination. The midterm exam may consist of two sections: a standardized question section (multiple-choice, true/false, matching, etc.), and a section which includes questions from the Lab study. The midterm exam will be scheduled for a day in the designated mid-term exams week.
- Final Exam: The final examination will cover all the material studied throughout the semester, and has the same structure as in the midterm examination. It will also be used to determine letter grades. Like the midterm exam, the final exam will be scheduled for a day in the designated final exams week.
- Make-up Exam: No make-up examination will be given to students who miss quizzes. Make-up examination will only be offered (at the end of the semester) to students who missed the final or midterm exam and provided adequate documentation for the reason for their absence within three working days at the latest after the examination date. A student's illness will only be accepted as a valid excuse if it is supported by a written report of two physicians of any State Hospital in Northern Cyprus. The reports given by private medical doctors will not be accepted.

RELATIONSHIP WITH OTHER COURSES

CMPE103, Fundamentals of computing is a prerequisite for this course.

LEARNING /TEACHING METHOD

Teaching will be based on enabling the students to understand the concepts and procedures in each topic section and to be able to apply them. To do this the course will be organized into two modules: Lectures and Tutorials/Laboratory sessions.

Lectures: In lectures the instructor will attempt to summarize and explain only selected important concepts and points as clearly as possible. To be familiar with the material presented in lectures and participate in class discussions, students are expected to read the material covered in the previous lectures prior to the class meeting. Students will then find the lectures more interesting, and will benefit from the discussion if they come well prepared.

Tutorials: In addition to the regular lectures, there will be tutorial sessions conducted in the classroom by the assistants, according to the perceived need. In these hours the assistants will do extra example problems. Obviously, the best tutorials are those that meet the learning needs of students. The people who best understand your learning needs are you. Please contact the assistants regarding what you would like to see in the tutorials. Tutorial content will then be determined, and the tutorial date will be announced accordingly.

Laboratory Work: Throughout the semester, there will be several laboratory sessions, which will be conducted by the assistants, to do various computer exercises. Laboratory sessions will always be held in the Department's PC Labs and their dates announced in advance.

Office Hours: The students' timetables will be a base for determining appropriate time slots with zero clash (or minimum number of clashes) as much as possible. If students have difficulty in understanding any material after they have tried their best, they should consult their assistants and instructor during their office hours only. However, if you wish to meet the instructor outside of their office hours, please call them by phone or send an e-mail first to make an appointment.

ASSIGNMENTS

Besides the textbook material, there will be some reading assignments, which will support the lectures. For any type of examination, students are also responsible from studying all assigned readings, even if they might not be discussed in class.

METHOD OF ASSESSMENT

Although the student's overall grade will be based on the general assessment of the instructor, the following percentages may give an idea about the relative importance of various assessment tools.

Lecture Pop Quizzes	10%
Lecture Mid-term Exam	15%
Lecture Final Exam	25%
Lab Pop Quizzes	10%
Lab works	10%
Lab Mid-term Exam	10%
Lab Final Exam	20%
TOTAL	100 points

Note that the instructor reserves the right to modify these percentages in case he finds it necessary. Letter grade equivalents of numerical performances will be announced by the Registrar's Office after the last day for the submission of letter grades.

NG (Nil-grade): Conditions that might lead to NG (Nil-grade):

1. Not attending the Final Exam or its Make-up Exam.
2. Not attending the Mid-term Exam without a valid excuse.
3. In case of an overall grade F or D-, having an attendance to lectures/tutorials/labs less than 60%.

Objections: Any form of document concerning work that is to be used by the instructor as the basis of grading will be shown to the student upon request, within a week following the announcement of the grade. The objection to any grade must be made to the assistants within that period. If, after an exam has been graded, you think an error was made in grading or you have questions about the grading of the material, please examine the exam solutions first, and then write your questions or comments on a separate sheet of paper and turn this paper to the assistants.

ATTENDANCE

Regular attendance is necessary and it will be taken every lecture hour and tutorial/lab session.

TEXTBOOK/S

Students must have the following textbook:

"TURBO PASCAL, 5th Ed.", Elliot B. KOFFMAN, Addison Wesley, 2003.

Lecture Notes: Students are expected to make their own notes. Lecture notes and/or overheads used in class will not be made available for copying. Material presented in class taken from other than the textbook will be made available on the web page of the course (refer to <http://ie.emu.edu.tr>).

INDICATIVE BASIC READING LIST

"TURBO PASCAL Programming and Problem Solving, 2nd Ed", Sanford Leestma and Larry Nyhoff, Prentice Hall, 1993.

"A Laboratory Course for TURBO PASCAL, Second edition", Nell Dale, D. C. Heath and Company, 1996.

"TURBO PASCAL 7.0 The Complete Reference", S.K.O'Brien, S.Namereof and Osborne, McGraw Hill, 1993

"Concepts of Programming Languages", Robert W., Sebesta, Addison–Wesley, Logman, Inc., 1999.

"Complete Turbo Pascal", J. Duntemann, Scott, Foresman and Company, 1987.

"Turbo Pascal 7", Gürcan Banger, Bilim Teknik and Yayınevi, 1993

EXTENDED READING LIST

Note that aside from these books, EMU Library has quite a good collection of books on the intermediate and advanced levels in the related fields of industrial engineering discipline.

SEMESTER OFFERRED

2008-2009 Fall Semester

CONTENT & SCHEDULE

Lectures will be held on Wednesday's (10:30-12:20) in lab3 and Thursday's tutorial/lab (14:30-16:20) in Lab3. Another Tutorial/Lab session will be held on Friday's (12:30-14:20) in Lab3 (Departmental PC Laboratory). The lecture and lab topics within the semester are as in the following schedule:

Lecture sessions

WEEK	DATE	TOPICS
1		Introduction to Basic Pascal Elements. Data types, constants and variables, arithmetic operations and functions, The assignment statements, program composition.
2		Structured Programming, Sequential structure, Boolean data types. Control statements. Selection structure (If, If-Then-Else statements).
3		Repetition structure (While statement).
4		Repetition structure (Repeat Until statement).
5		Repetition structure (For statement).
6		Multi-alternative selection structure (Case statement).
7		Functions, Built-in functions, user defined functions.
8		MIDTERM EXAM WEEK
9		Procedures
10		Arrays, single arrays and multi dimensional arrays
11		Strings
12		Records.
13		Files
14		Array processing. Pointers and linked lists
15		FINAL EXAM WEEK

Lab sessions: During the lab sessions, topics which have been seen in lecture sessions will be applied on the computer on specific problems.

PLAGIARISM & CHEATING

This is intentionally failing to give credit to sources used in writing regardless of whether they are published or unpublished. Plagiarism (which also includes any kind of cheating in exams) is a disciplinary offence and will be dealt with accordingly. Any act not suitable for a university student will not be tolerated and may lead to formal disciplinary action. Example of this are: getting someone else to take the examinations for you, misrepresentation of your own answer sheet as another's work, cheating, knowingly assisting other students to cheat, abusing the tolerance or breaking the discipline of the class.