King Fahd University of Petroleum and Minerals
Information and Computer Science Department
ICS 103: Computer Programming in C
Second Semester 2007-2008 (Term-072)

Instructor: Dr. Mohamed Balah
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Office Hours: S**UMT 10:00 -11:00 AM**
W 11:00AM-1:00 PM

Objective of Course: This course should provide Engineering Students with basic Knowledge of C-Programming.

Catalog Course Description:

Overview of computer hardware and software; Programming in C with emphasis on modular and structured programming technique; Problem solving and algorithm development; Simple engineering and scientific problems.

Textbook:

"C Program Design for Engineers" by Jeri R. Hanley, Elliot B. Koffman with Joan C. Horvath.

Course Learning Outcomes:

Having successfully completed this course, the student will be able to:

1- Understand and find the output of simple C programs that incorporate different types of variables, expressions (arithmetic and logical), selection, and iteration .

2- Understand and find the output of more complex C programs containing arrays and invoking (calling) functions having input and output arguments using pointers.

3- Design and implement simple programs using basic syntax of C language such as assignment, expressions, selection, and iterations.

4- Practice modular programming by developing more complex C programs made of functions passing data between them using arrays, input, and output arguments.

Grades Distribution:

Activity	Weight	
Lab	20%	Lab Work (6%), Lab Project (5%) **3 Lab Tests** (9%)
Lecture Quizzes (4)	10%	
Homework	5%	
Major Exam-I: **March 22, 2008 (Saturday)** **8:00 P.M to 10:00 P.M**	15%	
Major Exam-II: May 3, 2008 (Saturday) **8:00 P.M to 10:00 P.M**	20%	
Final Exam (Comprehensive)	30%	

Lecture Schedule:

Week of	Topic	Sections
February 16	Overview of Computers and Software	1.1-1.5, H1
February 16	Overview of C	2.1-2.2, H2
February 23	Assignment, Input and Output	2.3-2.5, H3
February 23	Arithmetic Expressions	3.1-3.3, H4
March 1	Simple Standard Functions	3.4,3.5, H5
March 1	Selection **Quiz-1**	4.1-4.5, H6
March 8	Selection	4.6-4.7
March 8	Repetition	5.1-5.5, H7
March 15	Repetition	5.6-5.8
March 15	Repetition **Quiz-2**	
Major Exam 1 – Saturday March 22, 2008 at 8:00 PM (Week 6)		
March 22	Data Files	2.6, H8
March 22	Function with input Arguments	6.1, H9
March 29	Function with input Arguments **(2 lectures)**	6.1
April 5	Functions with output parameters (Using pointers)	6.3 , 6.5, H10
April 5	Recursive Functions	6.6, H11
April 12-16 Break		
April 19	1-D Array **Quiz-3**	7.1-7.3, H12
April 19 , April 26	1-D Array elements as Function arguments **(2 lectures)**	7.4, H13
April 26	1-D Arrays as Function Arguments	7.5
Major Exam 2 – Saturday May 3, 2008 at 8:00 PM (Week 11)		
May 3	1-D Arrays [Linear & Binary Search (Iterative & recursive methods), Sorting (bubble & Selection sort)]	7.5, H14
May 3	Strings	7.6, H15
May 10	Strings **(2 lectures)**	7.6
May 17	Introduction of 2-D Array	8.1, H16
May 17	2-D Array	8.2,8.3, H17
May 24	2-D Array **(2 lectures) Quiz-4**	
May 31	Review	
May 31	Review	

H1, H2, .., H17 refer to handouts provided in addition to the textbook

Important Notes:

- Lectures and labs are integrated and they complement each other.
- To pass this course, the student **must pass the lab-component of the course.**
- Cheating in whatever form will result in **F** grade.
- Attendance will be checked at the beginning of each class.
- Every unexcused absence leads to a loss of **0.5%** of **total grade**. An official excuse must be shown in one week following return to classes.
- Late (more than **10** minutes) will be considering as **1/2** absence.
- Absence for **more than nine (09) unexcused lectures** in the course will result in a **DN** grade in the course.
- Absence for **three (03) or more unexcused labs** will result in a **DN grade** in the course.
- **No make-up of quizzes, home works & Exams.**