Kingdom of Saudi Arabia
Ministry of Higher Education
Najran University

Najran Community College
Department of Computer
Program: Information Systems

Programming -1 (3-عال202)

Course Specifications
(CS)

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Course Specifications

Institution: Najran University	Date of Report: 01/06/2014
College/Department : Najran Community College / Computer	

A. Course Identification and General Information

1. Course title and code: Programming – 1(***3-عال202)***
2. Credit hours: 2 + 1 = 3
3. Program(s) in which the course is offered: Information Systems
(If general elective available in many programs indicate this rather than list programs)
4. Name of faculty member responsible for the course: ZAKIR HUSSAIN
5. Level/year at which this course is offered: Level - 3
6. Pre-requisites for this course (if any): Introduction to Computers/Information Technology
7. Co-requisites for this course (if any)
8. Location if not on main campus
9. Mode of Instruction (mark all that apply)

a. Traditional classroom	√	What percentage?	*100*
b. Blended (traditional and online)		What percentage?	
c. e-learning		What percentage?	
d. Correspondence		What percentage?	
f. Other		What percentage?	

Comments:

B Objectives

1. What is the main purpose for this course? The main purpose of this course is to learn computer programming.
2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)

C. Course Description (Note: General description in the form to be used for the Bulletin or handbook should be attached)

1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
Unit 1: Problem - Solving Techniques • Steps for Problem – Solving • Algorithm, Features of Algorithm • Flowcharts, Basic Symbols used in Flowchart Design	1	2
Unit 2: Basics of C++ Programming Language • What is a Program • Features of C++ • Structure of a C++ Program, • Writing, compiling and running a C++ Program, • Syntax and Semantic Errors • Diagrammatic Representation of Program Execution Process	1	2
Lab: demonstration for how to open C++ editor, writing simple programs, compile and debug errors and get the output	1	2

Unit 3: Variables and Constants • Character Set • Identifiers and Keywords, • Rules for Forming Identifiers, • Data Types and Storage • Variables, Declaring Variables, Initialising Variables, • Constants, Integer Constants, Floating Point Constants, Character Constants, String Constants, Symbolic Constants Lab: writing programs for simple operations like printing texts and simple addition and subtraction using different data type.	1 1	2 2
Unit 4: Expressions and Operators • Assignment Statements, • Arithmetic Operators • Relational Operators • Logical Operators • Comma and Conditional Operators Lab: programs for arithmetic, relational and logical operators	1 1	2 2
Unit 5: Decision and Loop Control Statements • Decision Control Statements The *if* Statement The *switch* Statement • Loop Control Statements The *while* Loop The *do-while* Statement The *for* Loop Lab: programs to demonstrate if then else, switch and all while loops	2 2	4 4

Unit 6: Arrays • Array Declaration Syntax of Array Declaration Size Specification • Array Initialization Initialization of Array Elements in the Declaration Character Array Initialization • Processing the Arrays • Multi-Dimensional Arrays Lab: program to show how to implement arrays	1 1	2 2
Unit 7: Functions • Definition of a Function • Declaration of a Function • Function Prototypes The Return Statement • String and Maths functions(Built-In functions) • Recursion Lab: programs to declare functions, built in functions and recursion	2 2	4 4
Unit 8: Classes and Objects • Structure of a class • Defining a class • Data member and member functions • Accessibility within class(private, public and protected) • Friend functions, this function • Constructors and destructors Lab: programs to show how to declare class and objects, constructors and destructors	2 2	4 4

2. Course components (total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	28			26		54
Credit	2			1		3

3. Additional private study/learning hours expected for students per week.	

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Define the main concepts of the Computer programming and problem solving		
1.2	Describe the different methods and techniques of programming		
1.3	Write programs and develop programming skills		
2.0	**Cognitive Skills**		
2.1	Design programs to solve problems		
2.2	Write flowcharts to understand the program modules		
2.3	Develop the ability to find errors in the programs and fix them		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Demonstrate projects and assignments in team work for designing and developing programs for solving problems		
3.2			
4.0	**Communication, Information Technology, Numerical**		
4.1	Illustrate knowledge for developing student critical thinking through written and practical exercises on solving problems.		

5.0	**Psychomotor**		
5.1			
5.2			

5. Schedule of Assessment Tasks for Students During the Semester

	Assessment task (e.g. essay, test, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Assignment	4, 7, 11	3%
2	Group report	11	7%
3	Lab report	5,8,12	5%
4	First Monthly Exam	8	15%
	Second Monthly exam	11	15%
5	Practical exam	14	15%
6	Final exam	15	40%

D. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week):

10 office hours

E. Learning Resources

1. List Required Textbooks

Paul Deitel , Harvey Deitel (Authors), C++ How to Program [Paperback]
Publisher : Pearson, 2011 , ISBN : 978-0132662369, Edition: 8

2. List Essential References Materials (Journals, Reports, etc.)

3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)

1) Bjarne Stroustrup (Author)
The C++ Programming Language[Paperback]
Publisher: Addison Wesley, May 2013
ISBN: 978-0321563842| Edition: 4

2) Walter J Savitch(Author) Problem Solving with C++: The Object of Programming [Paperback] Publisher: Addison-Wesley Longman, Incorporated, 2005 | ISBN-10: 0321268652| ISBN-13: 9780321268655| Edition: 5
4. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)
5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)
2. Computing resources (AV, data show, Smart Board, software, etc.)
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching Student Evaluation Questionnaires

2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor Brainstorming
3 Processes for Improvement of Teaching Quality workshops in Deanship of Development and Quality
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) Crosscheck of exam marks by a committee

5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.

Faculty or Teaching Staff: ZAKIR HUSSAIN

Signature: _____ **Date Report Completed: _____**

Received by: _____ **Dean/Department Head**

Signature: _____ **Date: _____**