هيئة تقويم التعليم
Education Evaluation Commission
المركز الوطني للتقويم والاعتماد الأكاديمي
National Center for Academic Accreditation and Evaluation

ATTACHMENT 5.

T6. COURSE SPECIFICATIONS (CS)

012CSM-3: Computer Programming-1

هيئة تقويم التعليم
Education Evaluation Commission

Course Specifications

Institution: King Khalid University ,Abha, Kingdom Of Saudi Arabia	Date: 04/02/2019
College/Department : College of Computer Science/Department of Computer Science	

A. Course Identification and General Information

1. Course title and code: Computer Programming-I, 012CSM - 3
2. Credit hours: 3 hours
3. Program(s) in which the course is offered.
(If general elective available in many programs indicate this rather than list programs)
Bachelor Degree (Department of Computer Science)
4. Name of faculty member responsible for the course
5. Level/year at which this course is offered: Level-2
6. Pre-requisites for this course (if any): 011CSM - 3
7. Co-requisites for this course (if any):NA
8. Location if not on main campus: Gregar, Mahala & Al-Sameer - Abha
9. Mode of Instruction (mark all that apply):

a. traditional classroom	✓	What percentage?	90
b. blended (traditional and online)		What percentage?	
c. e-learning	✓	What percentage?	10
d. correspondence		What percentage?	
f. other		What percentage?	

Comments:
The Assessment part of Quizzes and Assignment is conducted through LMS – Black board system of KKU portal.

B Objectives

1. What is the main purpose for this course?
Computer Programming-1 course is a course about basic programming concepts to begin with students its fundamental concepts of programming using structured Programming language introducing programming language C++. Learns the syntax and semantics of a programming language. Topics covered include basic programming tools, variable names, data types, operators and operands, conditional and iterative structures, Types of Arrays and operations on 1D and 2D arrays, program composition of functions and function definitions, parameter passing to functions, library function concepts are introduced, introduction to file manipulation and Class concepts,.

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)

- completion of 10% of this course by blended E-Learning
- Increased use of IT or web-based reference materials
- Using web for uploading teaching materials
- Using multimedia overhead projectors, and electronic screen.
- Delivering updated teaching material soft copy or hard copy to the students.

C. Course Description (Note: General description in the form used in Bulletin or handbook)

Course Description:

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Programming and Problem-Solving: Topics to be covered: Algorithms and Flowchart Program Design, Introduction to C++, Origins of C++ Language	1	2
Data Types and Operators : Topics to be covered: C++ Basics: Variables and Assignments, Variables, Names: Identifiers Variable Declarations, Assignment Statements Data Types and Expressions: The Types int and double, Other Number Types, The type char, The type Boolean, Type Compatibilities, Arithmetic Operators and Expressions and Logical Operators and , Increment and decrement Operators	1	2

Input and Output: Output Using Cout, Include Directives and Namespaces, Escape Sequences, Formatting for Numbers with a Decimal Point, Input Using Cin, Designing Input and Output	1	2
Simple if nested if and switch statements. Topics to be covered: Conditional Statements: if Selection Statement if...else Double selection Statement, Multiple Selection Statements Switch Case.	1	2
Looping Structures : While loop, do while loop and for loop. Topics to be covered: Looping / Control Statements: For, While and do while Repetition statements.	2	4
Midterm-l Examination		
Initializing and Declaring an 1 DArray Topics t o be covered: Introduction to Arrays Declaration	1	2
Searching and sorting using Arrays Topics to be covered :Operations over arrays (Searching and Sorting)	1	2
2-D or Multi-Dimensional Arrays Topics to be covered: Multi-Dimensional Arrays and Operations on Matrices	1	2
Functions, parameter passing , call by value and call by reference Topics to be covered: User Defines Functions, passing values to functions by value and by reference	2	4
File Processing i.e file opening , editing saving and closing. Topics to be covered: File Processing (input/output)	1	2
Midterm -2 Examination		
Structures: Defining, assigning values, referring structures. Topics to be covered: Defining Structure	1	2
Classes & Objects Topics to be covered: Defining Classes and Objects	2	4

2. Course components (total contact hours and credits per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other:	Total
Contact Hours	Planed	30			30		60
	Actual	30			30		60
Credit	Planed	2			1		3
	Actual	2			1		3

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

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

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Define the concept of Algorithm And flowchart design, implementing the same using C++ programming software	Class room lectures	Exams, Assignment, Quizzes
1.2	Explain programming concepts and describe how they are supported by C++ including identifying the features and peculiarities of the C++ programming language	Lectures and practical	Assignment and examinations
2.0	**Cognitive Skills**		
2.1	Design and implement programs using C++	Lectures and practical	Assignment and examinations
2.2	Apply C++ features to program design and implementation	Lectures and practical	Assignment and examinations
	Analyze a problem description and design and build software solution using good coding practices and techniques		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Group Interaction with the demonstration use to communicate each other	Lectures and practical	Project
3.2			
4.0	**Communication, Information Technology, Numerical**		
4.1	Interpret the recent research in the area of data structure and algorithms	Lectures and practical	Project
4.2			
5.0	**Psychomotor**		
5.1	NA		
5.2	NA		

5. Schedule of Assessment Tasks for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Midterm Examination - I	5	10%
2	Midterm Examination - II	9	10%
3	Lab Activity	Every Week	10%
4	Final Practical Exam	14	10%
5	Assignments (2 assignments)	6, 11	4%
6	Quizzes (3 quizzes)	5,9,11	6%
7	Final Examination	16	50%
8			

D. Student Academic Counseling and Support

1. 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) Every week 3 hours the staff is available for clarifying doubts and discussions.

E Learning Resources

1. List Required Textbooks Problem Solving with C++, Walter Savitch. Ninth Edition, 2014.
2. List Essential References Materials (Journals, Reports, etc.) Problem Solving with C++, Walter Savitch. Ninth Edition, 2014. The C++ Programming Language, Bjarne Stroustrup, Fourth Edition 2013 C++ Primer Plus, Stephen Prata, 6th Edition, 2012
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc. l. Thinking in C++ (vol 1 &,2), Bruce Eckel, Second Edition, 2003 2. The C++ Programming Language, Bjarne Stroustrup, Fourth Edition 2013
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. http://www.learncpp.com, http://www.w3schools.in, http://www.cprogramming.com, https://www.tutorialspoint.com

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.) Lecture rooms - 09 Number of seats in each class room - 50 Laboratories - 12 Accessories - Overhead projector
2. Technology resources (AV, data show, Smart Board, software, etc.) data show , Microsoft Visual C++ software for implementing programs , Internet connection
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) Overhead projector Computer for individual students Internet access Networked laboratory systems

G Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching • Confidential completion of standard course evaluation questionnaire assessed by students. Conversation in group discussion with small groups of students so as to get the feedback
2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department Observations and assistance from colleagues, independent assessment of standards achieved by students, independent advice on assignment tasks, etc.
3. Processes for Improvement of Teaching Workshops on teaching methods, review of recommended teaching strategies.
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) Monitoring the marking of individual staff member of a sample of student work, periodic exchange and remarking of tests or a sample of assignments based on marking and evaluations done by staff), Check marking of a sample of examination papers.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. Implementing in the course strategies the application oriented problems and exercises that enables students to adhere to the Concepts and program solving logically. Different strategies can be selected to align with the curriculum taught, owing the needs of students, and the intended learning outcomes. lab demonstrations, Analysis methods for programming, example illustrations, individual presentation, brainstorming, and a wide variety of hands-on activities all this supports to enhance the course effectiveness.

Name of Course Instructor:

Signature: _____ Date Specification Completed:

Program Coordinator: _____

Signature: _____ Date Received: _____