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

ATTACHMENT 5.

Course Specifications
(CS)

Introduction to Computers (011CSM-3)

Course Specifications

Institution: **King Khalid University, Abha, Kingdom of Saudi Arabia**   Date of Report: **08-02-2018**
College/Department : **Computer Science / Department of Computer Science**

A. Course Identification and General Information

1. Course title and code	: **Introduction to Computers: 011CSM-3**
2. Credit hours	: **3 Hours**
3. Program(s) in which the course is offered	: **Computer Science + Information Systems**
4. Name of faculty member responsible for the course:	
5. Level/year at which this course is offered	: **Level 1/ 1st year.**
6. Pre-requisites for this course (if any)	: **NA**
7. Co-requisites for this course (if any)	: **NA**
8. Location if not on main campus	: Male Campus: Mahaala Female Campus: Alsameer

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?	
e.	Other		what percentage?	

Comments:
1. All the lectures are uploaded every week for the students reference and particularly for absent students.
2. Instructions are given through black board announcements at different time intervals
3. Quizzes and Assignments are online through blackboard.

B. Objectives

1. What is the main purpose for this course?

- This course provides an overview of selected major areas of current computing technology, organization and use.
- Topics include the history of computing, data representation and storage, hardware and software organization, communications technologies, and fundamental problem solving and programming skills.

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)

- The course has an accompanying lab component that integrates hands-on experience.
- Encourage students to use internet to look for related websites, computer software, and references of computer science.
- The students will be able to design flowcharts and algorithms for different problems.
- Finally, they will be able to convert these algorithms into C++ programs and execute.

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

Course Description:

The course introduces students to the basic working of the computers - hardware, software, networks and its connectivity. The different features of computer and its main components are described. It also explains the various type of data its representations. Moreover, the student will learn how to write algorithms for solving problems using flowcharts, pseudocode, structured programming language concepts. Some concepts of about assembler, interpreter and compiler are also given. Includes introductory topics about C++ Programing language.

Students also gets familiar with using Windows, Microsoft word, Microsoft Power point, Microsoft Excel. , and Introduction to C++ programming in the Laboratory.

1. Topics to be Covered

Topic	Week	Contact hours
• An Introduction to Computer Science.	1	2
• Computer Systems Organization.	2	4
• The Building Blocks Binary Numbers, Boolean Logic, and Gates.	2	4
• The Algorithmic Foundations of Computer Science.	1	2
• Introduction to High-Level Language Programming.	1	2
• Introduction to C++	4	8

• Introduction to computer networking.	1	2
• An Introduction to System Software and Virtual Machines.	2	4
• Revision	1	2

SYLLABUS AND SCHEDULE FOR THE LAB WORK

Topics/Labs	Week	Contact hours
• Introduction to Windows	2	4
• Introduction to Microsoft office - Microsoft Word	3	6
• Introduction to Microsoft office - Microsoft Power point	1	2
• Introduction to Microsoft office - Microsoft Excel	2	4
• Introduction to C++	6	12
• Revision	1	2

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

	Lecture	Tutorial	Laboratory or Studio	Practical	Other:	Total
Contact Hours	30	0	30	0	0	60
Credit	2	0	1	0	0	3

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

4

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	Understand the definition of computer science.	Lectures	Exams, Quizzes
1.2	Enumerate the characteristics of the Von Neumann architecture; describe non-Von Neumann parallel processing systems.	Lectures + video	Exams, Quizzes
1.3	Learn about Software Development Life Cycle and High-Level Language.	Lectures + Lab	Exams, Lab, Quizzes
1.4	Learn about C++ Programming Language.	Lectures+ Lab	Exams, Quizzes, Assignments,
1.5	Acquainted with Network topology, Network peripherals, hardware and software.	Lectures	Exams, Quizzes
1.6	Know what are Virtual Machine and System Software.	Lectures + Lab	Exams, Lab, Quizzes
2.0	**Cognitive Skills**		
2.1	Be able to understand how an electronic (or magnetic) device can store information.	Lectures+ videos	Exams, Quizzes
2.2	Be able to write and evaluate algorithms, able to define abstraction and top-down design.	Lectures + Lab	Exams, Quizzes, Assignments,
3.0	**Interpersonal Skills & Responsibility**		
4.0	**Communication, Information Technology, Numerical**		
5.0	**Psychomotor**		

5. Map course LOs with the program LOs. (Place course LO #s in the left column and program LO #s across the top.)

Course LOs #	Program Learning Outcomes (Use Program LO Code #s provided in the Program Specifications)											
	a1	**a2**	**b1**	**b2**	**b3**	**b4**	**c1**	**c2**	**c3**	**c4**	**d1**	**d2**
1.1	✔		✔									
1.2	✔											
1.3	✔		✔	✔								
1.4	✔											
1.5	✔				✔	✔						
1.6	✔			✔						✔		✔
2.1				✔								
2.2	✔	✔										

6. 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	**Quiz1**	**4**	**2**
2	**Assignment 1**	**5**	**3**
3	**First Mid- Term Exam**	**7**	**10**
4	**Quiz2**	**9**	**2**
5	**Assignment 2**	**11**	**3**
6	**Second Mid- Term Exam**	**12**	**10**
7	**Final Practical Exam (Marks distribution for various assessment is done the Practical Instructor)**	**16**	**20**
8	**Final Examination**	**18**	**50**
9	**Total Marks**	**-**	**100**

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)
- For Theory and Lab office hours are depends on teaching staff office hours, but there is office hour correspond with every lecture hour.
- All students can send Course Message on formal communication tool Blackboard and teacher responds each one promptly.

E Learning Resources

1. List Required Textbooks
- Invitation to Computer Science, G. Michael Schneider & Judith L. Gersting   7th Edition, ISBN-13: 9781133190820
- Greg Perry. C++ by Example. ISBN 1-56529-038-0.

2. List Essential References Materials (Journals, Reports, etc.)
- Nell Dall, Chip Weems and Mark Headington. Programming and problem solving with C++. ISBN 0-7637-1063-6

3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)
- Yahia Halabi & Talib Sarie. Introduction to computer science and problem solving. Dar WAEl 2001. Amman Jordan. ISBN 9957 - 11 - 163 – 9

4. List Electronic Materials, Web Sites, Facebook, Twitter, etc.	

- Website address:
- 1. http://www.explainthatstuff.com/howcomputerswork.html
- 2. https://www.programiz.com/cpp-programming
- Youtube videos of "How computers Work" etc.

5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.
   - CDs accompanied with the Books - "How Computers Works", "How Network works", etc.

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 Room with a capacity of More than 50 Chairs and Tables for Students and 1 Teacher's Table and Chair and 1 Projector/Screen.
   - Laboratories with 30 Computers for students and 1 for Lab Instructor and Lab Assistant with Computer Table/Chair with the same number and 1 Projector/Screen.

2. Computing resources (AV, data show, Smart Board, software, etc.)
   - Laboratories computer with Microsoft office package and C++ compiler.
   - Projectors, Computer for Theory Classes and Practical Sessions.

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)
   - None

G   Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching
   - Performance appraisal form filled up by each student for the course teacher elaborating expectation from the course teacher and what is the level of fulfillment.
   - Confidential completion of standard course evaluation questionnaire.
   - Focus group discussion with small groups of students.

2 Other Strategies for Evaluation of Teaching by the Instructor or by the Department
   - Observation and assistance from the colleagues.
   - Independent assessment of students through lab activities.

• Student's evaluation through oral quiz questionnaire
3 Processes for Improvement of Teaching • Cross correction and monitoring of exam papers of students with other faculty members. • Check marking of a sample of examination papers or assignment tasks. • All Exams' Question Paper should be monitored by Course Coordinator and then Department head prior to exam. • Question Paper with its Solution should be approved by the Course Coordinator and Submitted to Exam Committee prior to exam.
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) • Cross correction and monitoring of exam papers of students with other faculty members. • Check marking of a sample of examination papers or assignment tasks. • All Exams' Question Paper should be monitored by Course Coordinator and then Department head prior to exam. • Question Paper with its Solution should be approved by the Course Coordinator and Submitted to Exam Committee prior to exam.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. • Feedback from the students after completion of this course. • Feedback from the teaching collogues about their experience during the teaching period of the course. • Planning for the improvement based on the above feedbacks. • Acquiring information about the course in other prestigious universities and their effective teaching methodologies.

Name of Instructor:

Signature: Date Report Completed: _____

Program Coordinator:

Signature: _____   Date Received: _____