## OATTACHMENT 2 (e)

## Course Specifications

## Kingdom of Saudi Arabia

## The National Commission for Academic Accreditation \& Assessment

## Course Specifications (CS)

## Course <br> Specifications

College/Department Science College - Mathematic Department
A. Course Identification and General Information

1. Course title and code: Introduction to Programming
2. Credit hours 3
3. Program(s) in which the course is offered.
(If general elective available in many programs indicate this rather than list programs)
4. Name of faculty member responsible for the course

A specific team from the Computer department
5. Level/year at which this course is offeredfourth level / second year
6. Pre-requisites for this course (if any)

No Pre-requisites
7. Co-requisites for this course (if any) No Co-requisites
8. Location if not on main campus

College Of Science for girls in Dammam
9. Mode of Instruction (mark all that apply)
a. traditional classroom
classoom What percentage?
50\%
b. blended (traditional and online)

What
percentage?
c.
e-1 e arning
What percentage? d. correspondence
What percentage?
$\underset{50 \%}{\mathrm{f} \text {. other } \quad \text { studio What percentage? }}$

Comments:

## B Objectives

1. What is the main purpose for this course?

Use the Programming languages and get benefit from them in solving mathematical problems
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)

Applied software solutions to some of the aspects of life, take advantage of the Internet to support and clarify this matter
C. Course Description (Note: General description in the form used in Bulletin or
handbook) Course Description:
Programming language in $\mathrm{C}++$, Used $\mathrm{C}++$ to solve some problems in mathematic

| 1. Topics to be Covered |  |  |
| :--- | :---: | :---: |
| List of Topics | No. of <br> Weeks | Contact hours |
| An Overview of Computers and Programming Languages | 1 | 3 |
| Basic Elements of C++ | 2 | 6 |
| Control Structures I (Selection) | 2 | 6 |
| Control Structures II (Repetition) | 3 | 9 |
| User-Defined Functions I | 2 | 6 |


| User-Defined Functions II | 2 | 6 |
| :--- | :---: | :---: |
| Strings | 1 | 3 |
| Arrays | 2 | 6 |


| 2. Course components (total contact hours and credits per semester): |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Lectur <br> e | Tutorial | Laborator <br> y <br> or Studio | Practical | Other: | Total |
| Contact <br> Hours |  |  | $15^{*} 3$ | $15^{*} 2$ |  | 75 |
| Credit |  |  | 3 | 2 |  | 3 |

3. Additional private study/learning hours expected for students ${ }_{3}$ per week.
4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and

T
e
a
c
h
i
n
g
S
t
r
a
t
e
g
y
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. Thịrd, 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.)

| Cod <br> e <br> $\#$ | NQF Learning Domains <br> And Course Learning Outcomes | Course Teaching <br> Strategies | Course <br> Assessment <br> Methods |
| :---: | :--- | :--- | :--- |
| $\mathbf{1 . 0}$ | Knowledge |  |  |
| 1.1 | Characterization of the knowledge to <br> be gained | Lectures and <br> laboratory | Examinations and <br> quizzes |
| 1.2 |  |  |  |
| $\mathbf{2 . 0}$ | Cognitive Skills |  |  |


| 2.1 | Characterization of the cognitive skills <br> to be development |  | By Research |
| :---: | :--- | :--- | :--- |
| 2.2 | Interpersonal Skills \& Responsibility  That is the shift from <br> law enforcement to <br> use the style of <br> and the ability to take responsibility to <br> be developed <br> simulations for use <br> in the district needs <br> is easier to shift from <br> the traditional form <br> in the completion of <br> transactions to deal <br> with them in <br> electronic way  <br> 3.1 Description of the   <br> 3.2    |  |  |


| 4.0 | Communication, Information Technology, Numerical |  |  |
| :---: | :--- | :--- | :--- |
| 4.1 | Characterization of the skills you want <br> to develop in this area | Training in C + + |  |
| 4.2 | $\mathbf{5 . 0}$ Psychomotor There is no <br> comment to the <br> skills to be developed and the level of <br> difficulty of <br> assessmentThere is no <br> comment to the <br> difficulty of <br> assessment |  |  |
| 5.1 | Charance required |  |  |
| 5.2 |  |  |  |

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


| 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 | Theoretical Mid Term Exam | Eighth week | 20\% |
| 2 | Practical Exam | Eighth week | 10\% |
| 3 | Final Practical Exam | Week 15 | 20\% |
| 4 | Final Theoretical Exam | Week 16 | 50\% |
| 5 |  |  |  |
| 6 |  |  |  |


| 7 |  |  |  |
| :--- | :--- | :--- | :--- |
| 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)

6
h
o
u
r
s

## E Learning Resources

```
1. List Required Textbooks
C++ Programming: From Problem Analysis to Program Design
                                    D. S. Malik2010Fifth
                                    Edition
```

2. List Essential References Materials (Journals, Reports, etc.)
3. C++ common knowledge : essential intermediate programming/ C++ (Computer program language) , Dewhurst, Stephen C. Addison-Wesley, Upper Saddle River, N. J.: 2005.
4. C++ programming cookbook Herb Schildt's C++ programming cookbook /

C++ (Computer program language), Schildt, Herbert. McGraw-Hill, New York: c2008.
3. Problem solving with C++: The object of programming/ C++ (Computer program language) . Savitch, Walter. Pearson Addison Wesley, Boston: 2005. Fifth Edition (International ed.)
4. C++ programming : From Problem Analysis to Program Design /

C plus plus programming. : Malik, D S. Course Technology, Boston, MA : c2009. Fourth Edition.
5. Problem solving with C++ / Savitch, Walter J, 1943- Pearson/Addison-Wesley, Boston : c2006.Sixth Edition.
3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)

Ac
m
eb
SC
0
4. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

## www.ieee.c

## om

www.acm.C
om
www.ebsco.com
5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

Take advantage of the educational sites and forums on the Internet

## 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.)
    Classro
    oms
    laborato
    ries
    2. Computing resources (AV, data show, Smart Board, software, etc.)
    data show, Smart Board, software
    3. Other resources (specify, e.g. if specific laboratory equipment is required, list
    requirements or
    attach list)
    Xclass
    Software
```

G Course Evaluation and Improvement Processes
1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching

Questioner, survey

2 Other Strategies for Evaluation of Teaching by the Instructor or by the Department

Workshops and seminars

## 3 Processes for Improvement of Teaching

Through the use of modern methods of education networking such as creating blogs and private collections of communication between the students, such as Facebook and Twitter
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)

The existence of committees to review the exam

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

This is done through the exchange of experiences with other universities

Name of Course Instructor: Nashat Ali Al-Refai
Signature:
Date Report Completed: 1-6-2014
Program Coordinator:

Signature:
Date Received:

