

Andlus UNIVERSITY

FACULTY OF INFORMATION TECHNOLOGY (FCIT)

Quality Assurance Unit (QUA)

DEPARTMENT OF INFORMATION TECHNOLOGY

PROGRAM OF INFORMATION TECHNOLOGY

Course Specification of Computer Program 2

Semester First year Second

2014

Template for Course Specification

I. Course Identification and General Information:						
1	Course Title:	Computer Programming 2				
2	Course Code &Number:					
3	Credit hours: 3	C.H			TOTAL	
		Th.	Seminar	Pr		Tr.
		2	-	2	-	4
4	Study level/Semester at which this course is offered:	2 st year – 1 st Semester				
5	Pre –requisite (if any):	Computer Programming 1				
6	Co –requisite (if any):	N/A				
7	Program (s) in which the course is offered:	Program in INFORMATION TECHNOLOGY				
8	Language of teaching the course:	English/Arabic				
9	Location of teaching the course:	Class and Lab				
10	Prepared By:	Dr. Saleh Alasali				
11	Date of Approval					

II. Course Description:

This course includes comparison of procedure oriented, structure oriented programming paradigms. Also this course dealing with one and two dimension Arrays, searching / sorting methods, pointers, strings and files.

III. Intended learning outcomes (ILOs) of the course:

By the end of the subject, students should be able to:

1. Understand the rules of using one / two dimensions array and Strings . A1
2. Explain Pointers . A2
3. Deal with one and two dimensions array. B1
4. Perform Searching and sorting methods by computer program language. B2
5. Write computer program to perform Searching and sorting. C1
6. Write computer program to deal with Files. C2
7. Write suitable computer program to solve some problems. D1

(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
A1- Understand the rules of using one / two dimensions array and Strings	Lecture and LAP The lecturer describes the rules of using one / two dimensions array and Strings	Mid-term exam Final Exam Homework Reports
A2- Explain Pointers in (C++)	Lecture and LAP The lecturer deals with Pointers and describes how to write programs with Pointers in (C++)	Mid-term exam Final Exam Homework Reports

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
B1 Deal with one and two dimensions array.	Lecture and LAP The lecturer deals with one and two dimensions array.one / two dimensions array and Strings and how to write programs in this regard.	Mid-term exam Final Exam Homework Reports
B2- Perform Searching and sorting methods by computer program language.	Lecture and LAP The lecturer describes some rules of Searching and sorting methods .	exam Final Exam Homework Reports

(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
C1- Write computer program to perform Searching and sorting	Lecture and LAP The lecturer deals with Searching and sorting methods and describes how to write programs in this regard.	Practical Exam Write a program and execute it in the lab Homework
C2- Write computer program to deal with Files	Lecture and LAP The lecturer describes types of files and deals with files and describes how to write programs in this regard.	Practical Exam Write a program and execute it in the lab Homework

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
D1- Write suitable computer program to solve some problems	Group Discussion	Presentation Project

IV. Course Content:					
A – Theoretical Aspect:					
Order	Units/Topics List	Learning Outcomes	Sub Topics List	Number of Weeks	contact hours
1	Loops review	A,B ,C	Review of for, while and do-while loops	1	2
2	One / two dimensions array	A,B ,C	Dealing with one / two dimensions array using program in C++	2	4
3	User made functions and arrays.	A,B ,C	Dealing with one dimensions array using user made functions in a program	3	6
4	Pointers , Pointers and array in (C++)	A,B ,C	Using Pointers in (C++).	1	2
			Pointers and array	1	2
5	Searching and sorting methods	A,B ,C	Perform Searching and sorting methods using user made functions	2	6
6	Strings	A,B ,C	Dealing with Strings in (C++).	2	4
7	Files	A,B ,C	Dealing with files in (C++)..	2	4
Number of Weeks /and Units Per Semester				14 week	

B - Practical Aspect: (if any)				
Order	Tasks/ Experiments	Number of Weeks	contact hours	Learning Outcomes
1	Programs deal with for, while and do-while loops	1	2	A,B,C
2	Programs deal with one and two dimensions array	2	4	A,B,C
3	Programs deal with User made functions	2	4	A,B,C
4	Programs deal with array using user made functions	2	4	A,B,C
5	Programs deal with pointers	2	4	A,B,C
6	Programs deal with Searching and sorting methods using user made functions	2	4	A,B,C
7	Programs deal with string and files	2	4	A,B,C
		13		
Number of Weeks /and Units Per Semester				

V. Teaching strategies of the course:

Lecture ,Discussion, Case study, Project ,Presentation

VI. Assignments:

No	Assignments	Aligned CILOs(symbols)	Week Due	Mark
1	Programs deal with for, while and do-while loops	A,B,C	2	1
2	Programs deal with one and two dimensions array	A,B,C	3	1
3	Programs deal with User made functions	A,B,C	5	1
4	Programs deal with array using user made functions	A,B,C	6	2
5	Programs deal with pointers	A,B,C	8	1
6	Programs deal with Searching and sorting methods using user made functions	A,B,C	10	2
7	Programs deal with string and files		14	2

VII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Homework		10	10%	A,B,C
2	Quizzes		5	5%	
3	Mid-term exam (practical)		5	5%	
4	Mid-term exam (theoretical)		15	15%	
5	Lab-reports				
6	Final exam (practical)		15	15%	
7	Final exam (theoretical)		50	50%	
8					
9					

VIII. Learning Resources:

- Written in the following order: (Author - Year of publication - Title - Edition - Place of publication - Publisher).

1- Required Textbook(s) (maximum two).

	<p>1. Timothy D'Orazio, "Programming in C++", McGraw Hill, 2009.</p> <p>2. D. S. Malik, "C++ programming", Second Edition, Thomson Publishing, 2012</p>
2- Essential References.	
	<p>1- Bruce Eckel, "Thinking in C++", Second Edition, Prentice Hall, 2010.</p> <p>2- Goran Svenk, "Object Oriented Programming using C++ for Engineering and Technology", Thomson publishing, 2012.</p> <p>3- Walter Savitch, "Problem Solving: The object of programming", Fourth Edition, Addison Wesley, 2009.</p>
3- Recommended Books and Reference Materials.	
	<p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p> <p>5.</p>
4- Electronic Materials and Web Sites etc.	
	<p>1.</p> <p>2.</p> <p>3.</p>
5- Other Learning Material.	
	<p>1.</p> <p>2.</p> <p>3.</p>

IX. Course Policies:	
1	Class Attendance: -
2	Tardy: -
3	Exam Attendance/Punctuality: -
4	Assignments & Projects: -
5	Cheating: -

6	Plagiarism:
7	Other policies: -

Template for Course plan (Syllabus)

I. - Information about Faculty Member Responsible for the Course:							
Name of Faculty Member	D/Sleh Alasali	Office Hours					
Location&Telephone No.	Sana'a 711914448	SAT	SUN	MON	TUE	WED	THU
E-mail							

11 Course Identification and General Information						
1	Course Title:	Computer Programming 2				
2	Course Code &Number:					
3	Credit hours: 3	C.H				TOTAL
		Th.	Seminar	Pr	Tr.	
		2	-	2	-	4
4	Study level/Semester at which this course is offered:	2 st year - first Semester				
5	Pre –requisite (if any):	Computer Programming1				
6	Co –requisite (if any):	N/A				
7	Program (s) in which the course is offered:	Program in Computer network				
8	Language of teaching the course:	English/Arabic				
9	Location of teaching the course:	Class and Lab				
10	Prepared By:	Dr. Saleh Alasali				
11	Date of Approval					

X. Course Description:

This course includes comparison of procedure oriented, structure oriented programming paradigms. Also this course dealing with one and two dimension Arrays, searching / sorting methods, pointers, strings and files.

XI. Intended learning outcomes (ILOs) of the course:

By the end of the subject, students should be able to:

1. Understand the rules of using one / two dimensions array and Strings . A1
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3. Deal with one and two dimensions array. B1
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5. Write computer program to perform Searching and sorting. C1
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7. Write suitable computer program to solve some problems. D1

(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
A1- Understand the rules of using one / two dimensions array and Strings	Lecture and LAP The lecturer describes the rules of using one / two dimensions array and Strings	Mid-term exam Final Exam Homework Reports
A2- Explain Pointers in (C++)	Lecture and LAP The lecturer deals with Pointers and describes how to write programs with Pointers in (C++)	Mid-term exam Final Exam Homework Reports

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
B1 Deal with one and two dimensions array.	Lecture and LAP The lecturer deals with one and two dimensions array.one / two dimensions array and Strings and how to write programs in this regard.	Mid-term exam Final Exam Homework Reports

B2- Perform Searching and sorting methods by computer program language.	Lecture and LAP The lecturer describes some rules of Searching and sorting methods .	exam Final Exam Homework Reports

(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
C1- Write computer program to perform Searching and sorting	Lecture and LAP The lecturer deals with Searching and sorting methods and describes how to write programs in this regard.	Practical Exam Write a program and execute it in the lab Homework
C2- Write computer program to deal with Files	Lecture and LAP The lecturer describes types of files and deals with files and describes how to write programs in this regard.	Practical Exam Write a program and execute it in the lab Homework

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
D1- Demonstrate the ability to work effectively as part of a group	Group Discussion	Presentation Project

Order	List of Topics	Week due	contact hours
1	Review of for, while and do-while loops	1	2
2	Dealing with one / two dimensions array using program in C++	2,3	4
3	Dealing with one dimensions array using user made functions in a program	4-6	6
4	Using Pointers in (C++).	7	2
5	Pointers and array	8	2
	Made term exam	9	
6	Perform Searching and sorting methods using user made functions	10,11	4
7	Dealing with Strings in (C++).	12,13	4
	Dealing with files in (C++)..	14,15	4
7	Final exam	1	2
	Number of Weeks /and Units Per Semester	16	32

B - Practical Aspect: (if any)				
Order	Tasks/ Experiments	Number of Weeks	contact hours	Learning Outcomes
1	Programs deal with for, while and do-while loops	1	2	A,B,C
2	Programs deal with one and two dimensions array	2	4	A,B,C
3	Programs deal with User made functions	2	4	A,B,C
4	Programs deal with array using user made functions	2	4	A,B,C
5	Programs deal with pointers	2	4	A,B,C
6	Programs deal with Searching and sorting methods using user made functions	2	4	A,B,C
7	Programs deal with string and files	2	4	A,B,C
		13		
Number of Weeks /and Units Per Semester				

XII. Teaching strategies of the course:
Lecture ,Discussion, Case study, Project ,Presentation

XIII. Assignments:				
No	Assignments	Aligned CILOs(symbol s)	Week Due	Mark
1	Programs deal with for, while and do-while loops	A,B,C	2	1
2	Programs deal with one and two dimensions array	A,B,C	3	1
3	Programs deal with User made functions	A,B,C	5	1
4	Programs deal with array using user made functions	A,B,C	8	2
5	Programs deal with pointers	A,B,C	10	1
6	Programs deal with Searching and sorting methods using user made functions	A,B,C	12	2
	Programs deal with string and files	A,B,C	14	2

XIV. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Homework		10	10%	A,B,C
2	Quizzes		5	5%	
3	Mid-term exam (practical)		5	5%	
4	Mid-term exam (theoretical)		15	15%	
5	Lab-reports				
6	Final exam (practical)		15	15%	
7	Final exam (theoretical)		50	50%	
8					
9					

XV. Learning Resources:

- *Written in the following order: (Author - Year of publication - Title - Edition - Place of publication - Publisher).*

1- Required Textbook(s) (maximum two).

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4. D. S. Malik, "**C++ programming**", Second Edition, Thomson Publishing, 2012

2- Essential References.

4- Bruce Eckel, "**Thinking in C++**", Second Edition, Prentice Hall, 2010.

5- Goran Svenk, "**Object Oriented Programming using C++ for Engineering and Technology**", Thomson publishing, 2012.

6- Walter Savitch, "**Problem Solving: The object of programming**", Fourth Edition, Addison Wesley, 2009.

3- Recommended Books and Reference Materials.

- 6.
- 7.
- 8.
- 9.
- 10.

4- Electronic Materials and Web Sites etc.

- 4.
- 5.
- 6.

5- Other Learning Material.

- 12
- 13
- 14

XVI. Course Policies:	
1	Class Attendance: -
2	Tardy: -
3	Exam Attendance/Punctuality: -
4	Assignments & Projects: -
5	Cheating: -
6	Plagiarism:
7	Other policies: -