

# MODULE DESCRIPTION FORM

## نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	<b>Computer ProgrammingI</b>		Module Delivery
Module Type	Core		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	<b>CSIT0101</b>		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	1	Semester of Delivery	
Administering Department	CIS	College	CSIS
Module Leader	BAHAA MUNEER	e-mail	Bahaa_muneer@yahoo.com
Module Leader's Acad. Title	Assist	Module Leader's Qualification	MSc
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p><b>Module Objectives</b></p> <p>أهداف المادة الدراسية</p>	<ol style="list-style-type: none"><li>1. Learn of programming languages provides added insight into other fields.</li><li>2. Learn an understanding of the effective and responsible use and management of program language is important for managers and other business knowledge workers in today's global information Society.</li><li>3. Learn that people must understand the components of programming language and how all of these components work together to bring value to an organization.</li><li>4. We need to turn our attention to the role that programming language play in today's global information Society..</li><li>5. The competitiveness of most companies is in a large degree based on the effective use of information systems, therefore we must to think about what advantages and disadvantages Can bring to the businesses and society the integrating information system.</li><li>6. what a programming language ? A language is a group of interrelated statement working together toward a common goal by accepting inputs and producing outputs in an organized transformation process</li><li>7. why learning algorithm?</li><li>8. why learning Flow chart?</li><li>9. Why learn about Basic input/output? - Cin/cout.</li><li>10. Why learn about loop type? - for..loop - while..loop</li><li>11. Why Learn about functions? - Defining a Function, Calling a Function, Function Arguments(Call by value, Call by Reference)</li></ol>
<p><b>Module Learning Outcomes</b></p> <p>مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"><li>1- Give the student the most important skills to become a C++ power users have a broad understanding of C++ language and they know which tool or function is best used in a given situation.</li><li>2- Learn the most important skills to deal with if statement and nested if statement.</li><li>3- Learn the most important skills to deal with for statement and nested for statement.(Loop types)</li><li>4- Learn how to write and use the most important functions</li></ol>
<p><b>Indicative Contents</b></p> <p>المحتويات الإرشادية</p>	<p>Indicative content includes the following.</p> <ul style="list-style-type: none"><li>- <u>Principles of electronic</u></li></ul>

	<p>How can use C++ program , entering of variable types , basic input/output statement, and type of operators.</p> <ul style="list-style-type: none"> <li>- <b>IF TYPE</b> If statement,nested if statement.</li> <li>- <b>LOOP TYPES</b> For loop,nested for loop ,while,do while .</li> <li>- <b>Function</b> Defining a Function, Calling a Function, Function Arguments(Call by value, Call by Reference)</li> </ul>
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<b>Learning and Teaching Strategies</b> استراتيجيات التعلم والتعليم	
<b>Strategies</b>	<p>The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes and the lab, interactive tutorials, and by considering types of simple experiments involving some sampling activities that are interesting to the students.</p>

<b>Student Workload (SWL)</b> الحمل الدراسي للطالب محسوب ل ١٥ أسبوعا			
<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	62	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعيا	4
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	113	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	<b>175</b>		

## Module Evaluation

### تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

## Delivery Plan (Weekly Syllabus)

### المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Computer Programming language
Week 2	Algorithm Design
Week 3	Flowcharts
Week 4	COMMENTS IN C++
Week 5	DATA TYPES
Week 6	VARIABLE TYPES
Week 7	CONSTANTS/LITERALS
Week 8	BASIC INPUT/OUTPUT
Week 9	OPERATORS

<b>Week 10</b>	DECISION-MAKING STATEMENTS
<b>Week 11</b>	LOOP TYPES (for ..loop)
<b>Week 12</b>	LOOP TYPES(while..loop)
<b>Week 13</b>	LOOP TYPES(Do..while loop)
<b>Week 14</b>	FUNCTIONS
<b>Week 15</b>	FUNCTIONS(void)
<b>Week 16</b>	Exam

### Delivery Plan (Weekly Lab. Syllabus)

#### المنهاج الاسبوعي للمختبر

	Material Covered
<b>Week 1</b>	Lab 1: learning how can use program C++
<b>Week 2</b>	Lab 2: execute many examples of statements BASIC INPUT/OUTPUT
<b>Week 3</b>	Lab 3: execute many examples of VARIABLE TYPES
<b>Week 4</b>	Lab 4: execute many examples of if statement
<b>Week 5</b>	Lab 5: execute many examples of nested if statement
<b>Week 6</b>	Lab 6: execute many examples of switch statement
<b>Week 7</b>	Lab 7: execute many examples of for..loop statement
<b>Week 8</b>	Lab 8 execute many examples of for..loop statement
<b>Week 9</b>	Lab9: execute many examples of nested for..loop statement
<b>Week 10</b>	Lab 10: execute many examples of nested for..loop statement
<b>Week 11</b>	Lab 11: execute many examples of While..loop statement
<b>Week 12</b>	Lab 12: execute many examples of Do..While..loop statement
<b>Week 13</b>	Lab 13:execute many examples of functions

<b>Week 14</b>	Lab 14: execute many examples of functions(void)
<b>Week 15</b>	Lab15: execute many examples of functions(void)

<b>Learning and Teaching Resources</b>		
مصادر التعلم والتدريس		
	Text	Available in the Library?
<b>Required Texts</b>	1. Fundamentals of Programming C++, Richard L. Halterman, school of Computing Southern Adventist University, December 2, 2018. 2. A first book of c++ by Gary Bronson, 4th edition, 2012 by Gary Bronson 3. Problem solving with c++ by Walter Savitch, 7th edition, 2009. 4. C++: The Complete Reference by Herbert Schildt, 4th edition, 2003	Yes
<b>Recommended Texts</b>	تعلم لغة ( C++ ) للمبتدئين ; لغات البرمجة للمبتدئين	Yes
<b>Websites</b>	<a href="https://www.programiz.com/cpp-programming">https://www.programiz.com/cpp-programming</a>	

## Grading Scheme

### مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
<b>Success Group</b> <b>(50 - 100)</b>	<b>A – Excellent</b>	امتياز	90 - 100	Outstanding Performance
	<b>B - Very Good</b>	جيد جدا	80 - 89	Above average with some errors
	<b>C – Good</b>	جيد	70 - 79	Sound work with notable errors
	<b>D - Satisfactory</b>	متوسط	60 - 69	Fair but with major shortcomings
	<b>E – Sufficient</b>	مقبول	50 - 59	Work meets minimum criteria
<b>Fail Group</b> <b>(0 – 49)</b>	<b>FX – Fail</b>	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	<b>F – Fail</b>	راسب	(0-44)	Considerable amount of work required

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

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معلومات المادة الدراسية			
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Module Type	Core		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	<b>CSIT0101</b>		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	1	Semester of Delivery	
Administering Department	CIS	College	CSIS
Module Leader	BAHAA MUNEER	e-mail	Bahaa_muneer@yahoo.com
Module Leader's Acad. Title	Assist	Module Leader's Qualification	MSc
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	



## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p><b>Module Objectives</b></p> <p>أهداف المادة الدراسية</p>	<p>12. Learn of programming languages provides added insight into other fields.</p> <p>13. Learn an understanding of the effective and responsible use and management of program language is important for managers and other business knowledge workers in today's global information Society.</p> <p>14. Learn that people must understand the components of programming language and how all of these components work together to bring value to an organization.</p> <p>15. We need to turn our attention to the role that programming language play in today's global information Society..</p> <p>16. The competitiveness of most companies is in a large degree based on the effective use of information systems, therefore we must to think about what advantages and disadvantages Can bring to the businesses and society the integrating information system.</p> <p>17. what a programming language ? A language is a group of interrelated statement working together toward a common goal by accepting inputs and producing outputs in an organized transformation process</p> <p>18. why learning algorithm?</p> <p>19. why learning Flow chart?</p> <p>20. Why learn about Basic input/output? - Cin/cout.</p> <p>21. Why learn about loop type? - for..loop - while..loop</p> <p>22. Why Learn about functions? - Defining a Function, Calling a Function, Function Arguments(Call by value, Call by Reference)</p>
<p><b>Module Learning Outcomes</b></p> <p>مخرجات التعلم للمادة الدراسية</p>	<p>5- Give the student the most important skills to become a C++ power users have a broad understanding of C++ language and they know which tool or function is best used in a given situation.</p> <p>6- Learn the most important skills to deal with if statement and nested if statement.</p> <p>7- Learn the most important skills to deal with for statement and nested for statement.(Loop types)</p> <p>8- Learn how to write and use the most important functions</p>
<p><b>Indicative Contents</b></p> <p>المحتويات الإرشادية</p>	<p>Indicative content includes the following.</p>

	<ul style="list-style-type: none"> <li>- <u>Principles of electronic</u> How can use C++ program , entering of variable types , basic input/output statement, and type of operators.</li> <li>- IF TYPE If statement,nested if statement.</li> <li>- <u>LOOP TYPES</u> For loop,nested for loop ,while,do while .</li> <li>- <u>Function</u> Defining a Function, Calling a Function, Function Arguments(Call by value, Call by Reference)</li> </ul>
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<b>Learning and Teaching Strategies</b> استراتيجيات التعلم والتعليم	
<b>Strategies</b>	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes and the lab, interactive tutorials, and by considering types of simple experiments involving some sampling activities that are interesting to the students.

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<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	62	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعيا	4
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	113	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	<b>175</b>		

## Module Evaluation

### تقييم المادة الدراسية

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Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
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Total assessment			100% (100 Marks)		

## Delivery Plan (Weekly Syllabus)

### المنهاج الاسبوعي النظري

	Material Covered
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Week 2	Algorithm Design
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<b>Week 14</b>	FUNCTIONS
<b>Week 15</b>	FUNCTIONS(void)
<b>Week 16</b>	Exam

### Delivery Plan (Weekly Lab. Syllabus)

#### المنهاج الاسبوعي للمختبر

	Material Covered
<b>Week 1</b>	Lab 1: learning how can use program C++
<b>Week 2</b>	Lab 2: execute many examples of statements BASIC INPUT/OUTPUT
<b>Week 3</b>	Lab 3: execute many examples of VARIABLE TYPES
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<b>Week 5</b>	Lab 5: execute many examples of nested if statement
<b>Week 6</b>	Lab 6: execute many examples of switch statement
<b>Week 7</b>	Lab 7: execute many examples of for..loop statement
<b>Week 8</b>	Lab 8 execute many examples of for..loop statement
<b>Week 9</b>	Lab9: execute many examples of nested for..loop statement
<b>Week 10</b>	Lab 10: execute many examples of nested for..loop statement
<b>Week 11</b>	Lab 11: execute many examples of While..loop statement
<b>Week 12</b>	Lab 12: execute many examples of Do..While..loop statement
<b>Week 13</b>	Lab 13:execute many examples of functions

<b>Week 14</b>	Lab 14: execute many examples of functions(void)
<b>Week 15</b>	Lab15: execute many examples of functions(void)

<b>Learning and Teaching Resources</b>		
مصادر التعلم والتدريس		
	Text	Available in the Library?
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<b>Recommended Texts</b>	تعلم لغة ( C++ ) للمبتدئين ; لغات البرمجة للمبتدئين	Yes
<b>Websites</b>	<a href="https://www.programiz.com/cpp-programming">https://www.programiz.com/cpp-programming</a>	

## Grading Scheme

### مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
<b>Success Group</b> (50 - 100)	<b>A – Excellent</b>	امتياز	90 - 100	Outstanding Performance
	<b>B - Very Good</b>	جيد جدا	80 - 89	Above average with some errors
	<b>C – Good</b>	جيد	70 - 79	Sound work with notable errors
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**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# MODULE DESCRIPTION FORM

## نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	<b>Mathematics for Information Systems</b>		Module Delivery	
Module Type	Core		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	<b>UoB12345</b>			
ECTS Credits	6			
SWL (hr/sem)	<b>150</b>			
Module Level	1	Semester of Delivery		1
Administering Department	CIS	College	CSIS	
Module Leader	Dr. Heidar J. Fadhel		e-mail	heidar.fadhil@uobasrah.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.	
Module Tutor	Name (if available)		e-mail	E-mail
Peer Reviewer Name	Name		e-mail	E-mail
Scientific Committee Approval Date	01/06/2023	Version Number	1.0	

Relation with other Modules				
العلاقة مع المواد الدراسية الأخرى				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p><b>Module Objectives</b></p> <p>أهداف المادة الدراسية</p>	<ol style="list-style-type: none"> <li>1. Gain the necessary mathematical knowledge to deal with the language of computers.</li> <li>2. The skill of using mathematical laws and expressing them in scientific mathematical symbols</li> <li>3. Understanding of mathematical structures, especially the numerical, algebraic and geometric systems.</li> <li>4. Awareness of the integration of experience represented in the investment of mathematical knowledge in other fields of study.</li> <li>5. Understanding the nature of mathematics as an integrated system.</li> </ol>
<p><b>Module Learning Outcomes</b></p> <p>مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"> <li>6. Understand quadratic, cubic, exponential, logarithmic and hyperbolic functions.</li> <li>7. Understand the inverse of the previous functions and their graphs.</li> <li>8. Learning limits, continuity.</li> <li>9. Learning derivatives and their applications.</li> <li>10. Learning integrations and its applications.</li> </ol>
<p><b>Indicative Contents</b></p> <p>المحتويات الإرشادية</p>	<p><u>Functions</u></p> <p>Functions and Their Graphs, Trigonometric Functions [8 hrs]</p> <p><u>Limits and Continuity</u></p> <p>Limit of a Function and Limit Laws, The Precise Definition of a Limit, One-Sided Limits, Continuity [8 hrs]</p> <p><u>Derivatives</u></p> <p>The Derivative as a Function, Differentiation Rules, Derivatives of Trigonometric Functions, The Chain Rule, Implicit Differentiation. [9 hrs]</p> <p><u>Applications of Derivatives</u></p> <p>Extreme Values of Functions on Closed Intervals, The Mean Value Theorem, Monotonic Functions and the First Derivative Test, Concavity and Curve Sketching, Applied Optimization. [10 hrs]</p> <p><u>Integrals</u></p> <p>The Definite Integral, The Fundamental Theorem of Calculus, Indefinite Integrals and the Substitution Method, Definite Integral Substitutions and the Area Between Curves.[10 hrs]</p>



## Learning and Teaching Strategies

### استراتيجيات التعلم والتعليم

<b>Strategies</b>	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by solving exercises.
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## Student Workload (SWL)

### الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	47	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعيا	3
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	103	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	<b>150</b>		

## Module Evaluation

### تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
<b>Formative assessment</b>	<b>Quizzes</b>	2	20% (10)	5 and 10	LO #1, #2 and #10, #11
	<b>Assignments</b>	2	20% (10)	2 and 12	LO #3, #4 and #6, #7
	<b>Projects / Lab.</b>	0	0% (0)		
	<b>Report</b>		0% (0)		
<b>Summative assessment</b>	<b>Midterm Exam</b>	2hr	10% (10)	7	LO #1 - #7
	<b>Final Exam</b>	3hr	50% (50)	16	All
<b>Total assessment</b>			100% (100 Marks)		

## Delivery Plan (Weekly Syllabus)

### المنهاج الاسبوعي النظري

	Material Covered
<b>Week 1</b>	Functions and Their Graphs, Trigonometric Functions
<b>Week 2</b>	Rates of Change and Tangent Lines to Curves, Limit of a Function and Limit Laws, The Precise Definition of a Limit
<b>Week 3</b>	One-Sided Limits, Continuity
<b>Week 4</b>	Tangent Lines and the Derivative at a Point, The Derivative as a Function, Differentiation Rules
<b>Week 5</b>	The Derivative as a Rate of Change, Derivatives of Trigonometric Functions
<b>Week 6</b>	The Chain Rule, Implicit Differentiation
<b>Week 7</b>	Mid-term Exam
<b>Week 8</b>	Area and Estimating with Finite Sums, Sigma Notation and Limits of Finite Sums
<b>Week 9</b>	The Definite Integral
<b>Week 10</b>	The Fundamental Theorem of Calculus
<b>Week 11</b>	The Fundamental Theorem of Calculus
<b>Week 12</b>	Indefinite Integrals and the Substitution Method
<b>Week 13</b>	Indefinite Integrals and the Substitution Method
<b>Week 14</b>	Indefinite Integrals and the Substitution Method
<b>Week 15</b>	Preparation before final exam
<b>Week 16</b>	

### Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

### Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Calculus, George B. Thomas, Pearson 14 <sup>th</sup> edition	Yes
Recommended Texts	Calculus, Vol.1, EDWIN "JED" HERMAN	No
Websites	<a href="https://www.coursera.org/learn/introduction-to-calculus">https://www.coursera.org/learn/introduction-to-calculus</a>	

## Grading Scheme

### مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
<b>Success Group</b> <b>(50 - 100)</b>	<b>A – Excellent</b>	امتياز	90 - 100	Outstanding Performance
	<b>B - Very Good</b>	جيد جدا	80 - 89	Above average with some errors
	<b>C – Good</b>	جيد	70 - 79	Sound work with notable errors
	<b>D – Satisfactory</b>	متوسط	60 - 69	Fair but with major shortcomings
	<b>E – Sufficient</b>	مقبول	50 - 59	Work meets minimum criteria
<b>Fail Group</b> <b>(0 – 49)</b>	<b>FX – Fail</b>	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	<b>F – Fail</b>	راسب	(0-44)	Considerable amount of work required

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# MODULE DESCRIPTION FORM

## نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	<b>Information System Principles</b>		Module Delivery	
Module Type	Core		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	<b>CSITCIS103</b>			
ECTS Credits	6			
SWL (hr/sem)	<b>150</b>			
Module Level	1	Semester of Delivery		1
Administering Department	CIS	College	CSIS	
Module Leader	Aliaa Saad Aljubair		e-mail	Aliaa.yaseen@uobasrah.edu.iq
Module Leader's Acad. Title	Ass. Prof.		Module Leader's Qualification	A.P.
Module Tutor	Name (if available)		e-mail	E-mail
Peer Reviewer Name	Name		e-mail	E-mail
Scientific Committee Approval Date	01/06/2023	Version Number	1.0	

Relation with other Modules				
العلاقة مع المواد الدراسية الأخرى				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p><b>Module Objectives</b></p> <p>أهداف المادة الدراسية</p>	<ol style="list-style-type: none"> <li>1. Learn having an understanding of information Systems provides added insight into other fields.</li> <li>2. Learn an understanding of the effective and responsible use and management of information systems is important for managers and other business knowledge workers in today's global information Society.</li> <li>3. Learn that people must understand the components of information systems and how all of these components work together to bring value to an organization.</li> <li>4. We need to turn our attention to the role that information systems play in an Organization.</li> <li>5. The competitiveness of most companies is in a large degree based on the effective use of information systems, therefore we must to think about what advantages and disadvantages Can bring to the businesses and society the integrating information system</li> </ol>
<p><b>Module Learning Outcomes</b></p> <p>مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"> <li>1. Identify components of an information systems infrastructure and their role in achieving organization goals. (SO:0; PI:0.1)</li> <li>2. 2. Relate how information systems are enabling new forms of commerce and collaboration between individuals, organizations, and governments. (SO:6; PI:6.2)</li> <li>3. 3. Explain the use of information system in an organization and its value in supporting organizational processes and decision making. (SO:6; PI:6.1)</li> <li>4. 4. Analyze security, professional, social and ethical issues in development, deployment and usage of an information system. (SO:4; PI:4.2) CYS (SO:6; PI:6.2)</li> <li>5. 5. Show responsibility for their own learning and continuing personal and professional development. (SO:4; PI:4.1)</li> </ol>
<p><b>Indicative Contents</b></p> <p>المحتويات الإرشادية</p>	<p>Indicative content includes the following.</p> <ul style="list-style-type: none"> <li>- Use of Information System in Organization</li> <li>- Careers in information systems</li> <li>- Hardware and software concepts</li> <li>- Software development concepts and detailed stages</li> <li>- Database and data modeling concepts</li> <li>- Internet and WWW</li> <li>- Knowledge Management and Specialized Information Systems</li> <li>- Valuing Information System and Globalization</li> <li>- Information and Decision Support Systems</li> <li>- Business Intelligence</li> <li>- Security, Privacy and Ethical issues of Information System</li> </ul>

## Learning and Teaching Strategies

### استراتيجيات التعلم والتعليم

<b>Strategies</b>	Type something like: The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by solving exercises.
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## Student Workload (SWL)

### الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	32	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعيا	2
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	118	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعيا	7
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	<b>150</b>		

## Module Evaluation

### تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
<b>Formative assessment</b>	<b>Quizzes</b>	2	20% (10)	5 and 10	LO #1, #2 and #10, #11
	<b>Assignments</b>	2	20% (10)	2 and 12	LO #3, #4 and #6, #7
	<b>Projects / Lab.</b>	0	0% (0)		
	<b>Report</b>		0% (0)		
<b>Summative assessment</b>	<b>Midterm Exam</b>	2hr	10% (10)	7	LO #1 - #7
	<b>Final Exam</b>	3hr	50% (50)	16	All
<b>Total assessment</b>			100% (100 Marks)		

## Delivery Plan (Weekly Syllabus)

### المنهاج الاسبوعي النظري

	Material Covered
<b>Week 1</b>	Why information system are important
<b>Week 2</b>	Is framework for business professionals.
<b>Week 3</b>	The components of information system
<b>Week 4</b>	The role of information Systems
<b>Week 5</b>	Advantages and disadvantages of information system
<b>Week 6</b>	Careers in information systems
<b>Week 7</b>	Mid-term Exam
<b>Week 8</b>	Information technology concepts
<b>Week 9</b>	Classification of information
<b>Week 10</b>	System concepts
<b>Week 11</b>	Hardware
<b>Week 12</b>	Internal and external memory
<b>Week 13</b>	Software
<b>Week 14</b>	Application software
<b>Week 15</b>	Cloud computing
<b>Week 16</b>	



## Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

## Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Ralph, M. Stair, George W. Reynolds, Thomas Chesney, "Principles of Business Information Systems", 3rd Edition, 2018. ISBN 9781473748415	Yes
Recommended Texts	Joseph Valacich , Christoph Schneider, "Information Systems Today: Managing in a Digital World" 7th Edition, 2015 ISBN-13: 978-0133940473 ISBN-10: 01339404705	No
Websites		

## Grading Scheme

### مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
<b>Success Group</b> <b>(50 - 100)</b>	<b>A – Excellent</b>	امتياز	90 - 100	Outstanding Performance
	<b>B - Very Good</b>	جيد جدا	80 - 89	Above average with some errors
	<b>C – Good</b>	جيد	70 - 79	Sound work with notable errors
	<b>D – Satisfactory</b>	متوسط	60 - 69	Fair but with major shortcomings
	<b>E – Sufficient</b>	مقبول	50 - 59	Work meets minimum criteria
<b>Fail Group</b> <b>(0 – 49)</b>	<b>FX – Fail</b>	راسب (فيد المعالجة)	(45-49)	More work required but credit awarded
	<b>F – Fail</b>	راسب	(0-44)	Considerable amount of work required

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# MODULE DESCRIPTION FORM

## نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	<b>Discrete Structures</b>		Module Delivery	
Module Type	Core		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	<b>CSITCIS108</b>			
ECTS Credits	6			
SWL (hr/sem)	<b>150</b>			
Module Level	1	Semester of Delivery		2
Administering Department	Type Dept. Code	College	Type College Code	
Module Leader	Zahra Salman Bloshi		e-mail	zahraa.csit@avicenna.uobasrah.edu.iq
Module Leader's Acad. Title	Assistant teacher		Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)		e-mail	E-mail
Peer Reviewer Name	Name		e-mail	E-mail
Scientific Committee Approval Date	01/06/2023		Version Number	1.0

Relation with other Modules				
العلاقة مع المواد الدراسية الأخرى				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<b>Module Objectives</b> أهداف المادة الدراسية	This course aims at teaching students how to think mathematically. Students will learn a set of mathematical facts and techniques as well as some major discrete structures that related with computers. They will also learn how to use these facts, techniques and discrete structures to design computer-based solutions for real life problems.
<b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية	<ul style="list-style-type: none"><li>• Developing the acquisition of some acquired skills from inflammation Everyday life.</li><li>• Developing mathematical skills (skills that help form mathematical sense) skills Estimation, mental calculation, judging the reasonableness of the results, etc.).</li><li>• Acquiring various methods of conducting operations.</li><li>• Develop the ability to seriously classify and collect numerous data, tabulate and read them representation and interpretation.</li><li>•</li></ul>
<b>Indicative Contents</b> المحتويات الإرشادية	<ul style="list-style-type: none"><li>✓ Self-learning skills</li><li>✓ Skills to work in a team</li><li>✓ Thinking skills with mathematical logic</li><li>✓ Report writing skills</li></ul>

## Learning and Teaching Strategies

### استراتيجيات التعلم والتعليم

<b>Strategies</b>	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by solving exercises..
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### Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ أسبوعا

<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطلاب خلال الفصل	32	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطلاب أسبوعيا	2
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطلاب خلال الفصل	118	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطلاب أسبوعيا	6
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطلاب خلال الفصل	<b>150</b>		

### Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
<b>Formative assessment</b>	<b>Quizzes</b>	2	20% (10)	5 and 10	LO #1, #2 and #10, #11
	<b>Assignments</b>	2	20% (10)	2 and 12	LO #3, #4 and #6, #7
	<b>Projects / Lab.</b>	0	0%	Continuous	All
	<b>Report</b>	0	0%	13	LO #5, #8 and #10
<b>Summative assessment</b>	<b>Midterm Exam</b>	2hr	10% (10)	7	LO #1 - #7
	<b>Final Exam</b>	3hr	50% (50)	16	All
<b>Total assessment</b>			100% (100 Marks)		

## Delivery Plan (Weekly Syllabus)

### المنهاج الاسبوعي النظري

	Material Covered
Week 1	<ul style="list-style-type: none"><li>• Sets</li><li>• Subsets</li><li>• Operations on sets</li><li>• Computer Representation of Sets</li></ul>
Week 2	<ul style="list-style-type: none"><li>• Cartesian product</li><li>• Sequences</li><li>• Properties of Integers</li></ul>
Week 3	<ul style="list-style-type: none"><li>• Matrices</li><li>• Propositional and Logical Operations</li><li>• Conditional Statements</li></ul>
Week 4	<ul style="list-style-type: none"><li>• Conditional Statements</li><li>• Mathematical Induction</li><li>• Product sets and Partitions</li></ul>
Week 5	<ul style="list-style-type: none"><li>• Methods of Proving Theorems</li><li>• Recursive</li><li>• Relations</li></ul>
Week 6	<ul style="list-style-type: none"><li>• Properties of Relations</li><li>• Operations Relations</li><li>• Computer Representation of Relations</li></ul>
Week 7	<ul style="list-style-type: none"><li>• Properties of Relations</li><li>• Equivalence Relations</li><li>• Computer Representation of Relations and Digraphs</li><li>• Operations and Relations</li></ul>
Week 8	<ul style="list-style-type: none"><li>• Functions</li><li>• Functions for Computer Science</li><li>• Domain and codomain of the function</li></ul>

<b>Week 9</b>	<ul style="list-style-type: none"> <li>• Range of the function</li> <li>• Graph of function</li> <li>•</li> <li>• Functions types</li> </ul>
<b>Week 10</b>	<ul style="list-style-type: none"> <li>• Permutation Functions</li> <li>• Graph</li> <li>• The types of graphs</li> </ul>
<b>Week 11</b>	<ul style="list-style-type: none"> <li>• Some Special Simple Graphs</li> <li>• Representing Graphs</li> <li>• Isomorphism and Isomorphic of graphs</li> </ul>
<b>Week 12</b>	<ul style="list-style-type: none"> <li>• Common graphs</li> <li>• Some important concepts</li> </ul>
<b>Week 13</b>	<ul style="list-style-type: none"> <li>• Kinds of graphs</li> <li>• More graphs</li> </ul>
<b>Week 14</b>	<ul style="list-style-type: none"> <li>• Trees</li> <li>• Labeled Trees</li> </ul>
<b>Week 15</b>	<ul style="list-style-type: none"> <li>• Tree Searching</li> <li>• Undirected Trees</li> </ul>
<b>Week 16</b>	<ul style="list-style-type: none"> <li>• Tree Traversal</li> <li>• Traversal Algorithms</li> <li>• Infix, Prefix, and Postfix Notation</li> </ul>

### Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

### Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Kolman, Busby, and Ross (2008). Discrete Mathematical Structures, 6th ed. Prentice Hall.	Yes
Recommended Texts	Kenneth Rosen (2012). Discrete Mathematics and Its Applications, 7th ed. Mc-Graw Hill.	No
Websites		



## Grading Scheme

### مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
<b>Success Group</b> <b>(50 - 100)</b>	<b>A - Excellent</b>	امتياز	90 - 100	Outstanding Performance
	<b>B - Very Good</b>	جيد جدا	80 - 89	Above average with some errors
	<b>C - Good</b>	جيد	70 - 79	Sound work with notable errors
	<b>D - Satisfactory</b>	متوسط	60 - 69	Fair but with major shortcomings
	<b>E - Sufficient</b>	مقبول	50 - 59	Work meets minimum criteria
<b>Fail Group</b> <b>(0 - 49)</b>	<b>FX – Fail</b>	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	<b>F – Fail</b>	راسب	(0-44)	Considerable amount of work required

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# MODULE DESCRIPTION FORM

## نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	<b>Computer Application In Business</b>		Module Delivery
Module Type	Core		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	<b>CSITCIS107</b>		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	1	Semester of Delivery	
Administering Department	CIS	College	CSIS
Module Leader	Dr.Aliea S.Sabir	e-mail	<a href="mailto:aliea.sabir@uobasrah.edu.iq">aliea.sabir@uobasrah.edu.iq</a>
Module Leader's Acad. Title	Assist Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	CSITCIS102	Semester	1
Co-requisites module	None	Semester	

## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p><b>Module Objectives</b> أهداف المادة الدراسية</p>	<ol style="list-style-type: none"> <li>1. Plan, create, modify, and presented spreadsheets</li> <li>2. Organize, edit, and enhance data in spreadsheets to achieve business standards, and recognize and resolve many types of errors.</li> <li>3. Use formulas and built-in functions appropriately and correctly to solve problems and critically assess the results</li> <li>4. Learn the logical function to solve the selection problems. Logical functions use to compare values and give logical results only (True, False)</li> <li>5. Learn the Statistical functions, The functions in this category perform statistical analysis on ranges of data, like average, count, countIf, Mean, etc.</li> <li>6. Learn Math functions, This category contains a wide variety of functions that perform mathematical and trigonometric calculations like, sum, sumif , round, etc.</li> <li>7. Learn the information functions, Each of these functions, referred to collectively as the information functions, checks the specified value and returns TRUE or FALSE depending on the outcome.like , ISBLANK , ISERROR , ISTEXT,..etc.</li> <li>8. Learn the text function, The functions in this category perform very important processes to the textual information, like, search, mid, replace, find, left,..etc.</li> <li>9. Learn Lookup and Reference Functions, Functions in this category are used to find (look up) values in lists or tables. A common example is a tax table. You can use the VLOOKUP function to determine a tax rate for a particular income level.</li> <li>10. Learn Date and time functions, Functions in this category are used to deal with date and time values like, today, date, now, datedif, ..etc.</li> <li>11. Plan, organize, create, and present spreadsheet data in graphic form, Microsoft Office Excel supports numerous types of charts to help you display data in ways that are meaningful to your audience. When you want to create a chart or change an existing chart, you can choose from a wide range of chart subtypes available for each of the following chart types.</li> <li>12. Learn some Advanced Tools, like, Tables, Conditional format, Data validation, and What-If Analysis</li> </ol>
<p><b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"> <li>1- Give the student the most important skills to become an Excel <b>power users</b> have a broad understanding of Excel's functionality and they know which tool or function is best used in a given situation. Power users create complex workbooks for their use and are often called on to help develop workbooks for their colleagues, or to identify why their colleagues' workbooks don't work as intended.</li> <li>2- Learn the most important skills to deal with worksheets and workbooks.</li> <li>3- Learn how to deal with and solve formula errors.</li> <li>4- Learn how to write and use the most important functions in many categories.</li> <li>5- Learn how to use chart graphical representation to analyze the data.</li> <li>6- Learn additional advanced skills and tools like tables, data validation, and other tools to enhance the student's ability level.</li> </ol>
<p><b>Indicative Contents</b> المحتويات الإرشادية</p>	<ul style="list-style-type: none"> <li>- <u>Principles of electronic</u> Worksheet creation and formatting, entering of data, formulas, error handling, and type of operators.</li> </ul>

	<ul style="list-style-type: none"> <li>- <u>Functions</u> Logical, statistical, math, text, lookup, and reference functions and data and time function</li> <li>- <u>Graphical representations</u> Column, line, Bar, Area, and many other types</li> <li>- <u>Advance tool</u> Tables, conditional format, data validation, and what-if analyses</li> </ul>
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## Learning and Teaching Strategies

### استراتيجيات التعلم والتعليم

<b>Strategies</b>	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes and the lab, interactive tutorials, and by considering types of simple experiments involving some sampling activities that are interesting to the students.
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## Student Workload (SWL)

### الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	62	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعيا	4
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	113	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعيا	7.5
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	<b>175</b>		

## Module Evaluation

### تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
<b>Formative assessment</b>	<b>Quizzes</b>	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	<b>Assignments</b>	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	<b>Projects / Lab.</b>	1	10% (10)	Continuous	All
	<b>Report</b>	1	10% (10)	13	LO #5, #8 and #10
<b>Summative assessment</b>	<b>Midterm Exam</b>	2hr	10% (10)	7	LO #1 - #7
	<b>Final Exam</b>	3hr	50% (50)	16	All
<b>Total assessment</b>			100% (100 Marks)		

## Delivery Plan (Weekly Syllabus)

### المنهاج الاسبوعي النظري

	Material Covered
<b>Week 1</b>	General introduction about how to handle worksheets and workbooks and Worksheet creation and formatting, entering of data, formulas, types of operators, and error solving
<b>Week 2</b>	Logical functions
<b>Week 3</b>	Statistical functions
<b>Week 4</b>	Statistical functions
<b>Week 5</b>	Math functions
<b>Week 6</b>	Information functions
<b>Week 7</b>	Mid-term Exam + lab exam
<b>Week 8</b>	Lookup and reference function
<b>Week 9</b>	Lookup and reference function
<b>Week 10</b>	Text function
<b>Week 11</b>	Text function
<b>Week 12</b>	Date and time function
<b>Week 13</b>	Date and time function
<b>Week 14</b>	Basic chart
<b>Week 15</b>	Advanced tools
<b>Week 16</b>	<b>Preparatory week before the final Exam</b>

## Delivery Plan (Weekly Lab. Syllabus)

### المنهاج الاسبوعي للمختبر

	Material Covered
<b>Week 1</b>	Lab 1: Worksheet creation and formatting; entering of data
<b>Week 2</b>	Lab 2: execute many examples of logical functions and make weakly practice exam
<b>Week 3</b>	Lab 3: execute many examples of statistical functions
<b>Week 4</b>	Lab 4: execute many examples of statistical functions and make weakly practice exam
<b>Week 5</b>	Lab 5: execute many examples of math functions and make weakly practice exam
<b>Week 6</b>	Lab 6: execute many examples of information functions and make weakly practice exam
<b>Week 7</b>	Lab 7: mid term lab exam

<b>Week 8</b>	Lab 8: execute many examples of lookup and reference functions and make weakly practice exam
<b>Week 9</b>	Lab9: execute many examples of lookup and reference functions and make weakly practice exam
<b>Week 10</b>	Lab 10: execute many examples of text functions
<b>Week 11</b>	Lab 11: execute many examples of text functions and make weakly practice exam
<b>Week 12</b>	Lab 12: execute many examples of date and time functions
<b>Week 13</b>	Lab 13:execute many examples of date and time functions and make weakly practice exam
<b>Week 14</b>	Lab 14:execute many examples of the basic chart
<b>Week 15</b>	Lab15: execute many examples of advanced tools

### Learning and Teaching Resources

#### مصادر التعلم والتدريس

	Text	Available in the Library?
<b>Required Texts</b>	Excel Data Analysis, Modeling and Simulation, Second Edition, Hector Guerrero College of William & Mary, Mason School of Business, Williamsburg, VA, USA, 2019	Yes
<b>Recommended Texts</b>	اكسل 2019 ، الدليل السهل ، 2019 ، نضال الشامي	Yes
<b>Websites</b>	<a href="http://excel-easy.com">Excel VBA Tutorial - Easy Excel Programming (excel-easy.com)</a>	

### Grading Scheme

#### مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
<b>Success Group (50 - 100)</b>	<b>A - Excellent</b>	امتياز	90 - 100	Outstanding Performance
	<b>B - Very Good</b>	جيد جدا	80 - 89	Above average with some errors
	<b>C - Good</b>	جيد	70 - 79	Sound work with notable errors
	<b>D - Satisfactory</b>	متوسط	60 - 69	Fair but with major shortcomings
	<b>E - Sufficient</b>	مقبول	50 - 59	Work meets minimum criteria
<b>Fail Group (0 - 49)</b>	<b>FX – Fail</b>	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	<b>F – Fail</b>	راسب	(0-44)	Considerable amount of work required

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# MODULE DESCRIPTION FORM

## نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	<b>Computer Fundamentals</b>		Module Delivery
Module Type	Core		<input checked="" type="checkbox"/> Theory
Module Code	<b>CSITCIS109</b>		<input checked="" type="checkbox"/> Lecture
ECTS Credits	6		<input checked="" type="checkbox"/> Lab
SWL (hr/sem)	150		<input type="checkbox"/> Tutorial
			<input type="checkbox"/> Practical
			<input type="checkbox"/> Seminar
Module Level	1	Semester of Delivery	2
Administering Department	CIS	College	CSIT
Module Leader	Dr. Muslim Mohsin Khudhair	e-mail	Muslim.khudhair@uobasrah.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	15/06/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<b>Module Objectives</b> أهداف المادة الدراسية	<ol style="list-style-type: none"> <li>1. Describe the parts of typical desktop personal computers.</li> <li>2. Describe the essential elements and duties of computer operating systems.</li> <li>3. Determine the standards that qualified computer technicians adhere to.</li> <li>4. Microsoft Windows installations, maintained, configured, and installed.</li> <li>5. Introduced to the analysis of the architecture of a computer system and its components such as the execution unit, arithmetic and logical (ALU) unit, and memory unit.</li> <li>6. Gives more details about the number system and logic gates and design it.</li> </ol>
<b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none"> <li>1. Identify the components of standard desktop personal computers.</li> <li>2. Identify fundamental components and functions of personal computer operating systems.</li> <li>3. Identify best practices followed by professional personal computer technicians.</li> <li>4. Install and configure computer components.</li> <li>5. Install and configure system components.</li> <li>6. Maintain and troubleshoot peripheral components.</li> <li>7. Troubleshoot system components.</li> <li>8. Install and configure operating systems.</li> <li>9. Maintain and troubleshoot installations of Microsoft Windows.</li> <li>10. Students will be introduced to the design and analysis of the hardware of a computer system and its components such as the execution unit, arithmetic and logical (ALU) unit, and memory unit.</li> <li>11. The characteristics of instruction sets and the architecture of RISC and CISC machine.</li> <li>12. Gives the students more details about the number system and logic gates and design it.</li> </ol>
<b>Indicative Contents</b> المحتويات الإرشادية	<ol style="list-style-type: none"> <li>1. Personal Computer Components:</li> <li>2. Operating System Fundamentals</li> <li>3. Personal Computer Technician Professional Best Practices</li> <li>4. Installing and Configuring Peripheral Components</li> <li>5. Maintaining and Troubleshooting Peripheral Components</li> <li>6. Troubleshooting System Components</li> <li>7. Installing and Configuring Operating Systems</li> <li>8. Introduction to Computer Architecture.</li> <li>9. Computer Instruction Set.</li> <li>10. Memory Organization.</li> <li>11. Introduction to number systems</li> <li>12. Coding systems</li> <li>13. Logic gates</li> <li>14. Simplify using gates</li> </ol>



## Learning and Teaching Strategies

### استراتيجيات التعلم والتعليم

<b>Strategies</b>	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by solving exercises.
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## Student Workload (SWL)

### الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

<b>Structured SWL (hr/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	62	<b>Structured SWL (hr/w)</b> الحمل الدراسي المنتظم للطالب أسبوعيا	4
<b>Unstructured SWL (hr/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	88	<b>Unstructured SWL (hr/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
<b>Total SWL (hr/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	150		

## Module Evaluation

### تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
<b>Formative assessment</b>	<b>Quizzes</b>	2	10% (10)	5 and 10	#1, #2 and #10, #11
	<b>Assignments</b>	2	10% (10)	2 and 12	#3, #4 and #6, #7
	<b>Projects / Lab.</b>	1	10% (10)	Continuous	All
	<b>Report</b>	1	10% (10)	13	#5, #8 and #10
<b>Summative assessment</b>	<b>Midterm Exam</b>	2hr	10% (10)	7	#1 - #7
	<b>Final Exam</b>	3hr	50% (50)	16	All
<b>Total assessment</b>			100% (100 Marks)		

## Delivery Plan (Weekly Syllabus)

### المنهاج الاسبوعي النظري

	Material Covered
Week 1	<b>Personal Computer Components</b> <ul style="list-style-type: none"><li>• Personal Computer Components</li><li>• System Unit Components</li><li>• Storage Devices</li><li>• Personal Computer Connection Methods</li></ul>
Week 2	<b>Operating System Fundamentals</b> <ul style="list-style-type: none"><li>• Personal Computer Operating Systems</li><li>• Windows User Interface Components</li><li>• Windows File System Management</li><li>• Windows System Management Tools</li></ul>
Week 3	<b>PC Technician Professional Best Practices</b> <ul style="list-style-type: none"><li>• Tools of the Trade</li><li>• Electrical Safety</li><li>• Environmental Safety and Materials Handling</li><li>• Perform Preventative Maintenance</li><li>• Diagnostics and Troubleshooting</li><li>• Professionalism and Communication</li></ul>
Week 4	<b>Installing and Configuring Peripheral Components</b> <ul style="list-style-type: none"><li>• Install and Configure Display Devices</li><li>• Install and Configure Input Devices</li><li>• Install and Configure Adapter Cards</li><li>• Install and Configure Multimedia Devices</li></ul>
Week 5	<b>Installing and Configuring Peripheral Components</b> <ul style="list-style-type: none"><li>• Install and Configure Storage Devices</li><li>• Install and Configure Power Supplies</li><li>• Install and Configure Memory</li><li>• Install and Configure CPUs</li><li>• Install and Configure System Boards</li></ul>
Week 6	<b>Maintaining and Troubleshooting Peripheral Components</b> <ul style="list-style-type: none"><li>• Troubleshoot Display Devices</li><li>• Maintain and Troubleshoot Input Devices</li></ul>

	<ul style="list-style-type: none"> <li>• Troubleshoot Adapter Cards</li> <li>• Troubleshoot Multimedia Devices</li> </ul>
<b>Week 7</b>	<p><b>Troubleshoot Storage Devices</b></p> <ul style="list-style-type: none"> <li>• Troubleshoot Power Supplies</li> <li>• Troubleshoot Memory</li> <li>• Troubleshoot CPUs</li> <li>• Troubleshoot System Boards</li> </ul>
<b>Week 8</b>	<p><b>Installing and Configuring Operating Systems</b></p> <ul style="list-style-type: none"> <li>• Install Microsoft Windows</li> <li>• Upgrade Windows</li> <li>• Add Devices to Windows</li> <li>• Optimize Windows</li> </ul>
<b>Week 9</b>	<p><b>Introduction to Computer Architecture.</b></p> <ul style="list-style-type: none"> <li>• Von Neumann Architecture.</li> <li>• Hardware, Software, and Firmware.</li> <li>• Basics of Computer Architecture.</li> <li>• Computer Structures.</li> </ul>
<b>Week 10</b>	<p><b>Computer Instruction Set.</b></p> <ul style="list-style-type: none"> <li>• Instruction Types. <ul style="list-style-type: none"> <li>• Data Transfer Instructions.</li> <li>• Arithmetic Instructions.</li> <li>• Logical Instructions.</li> <li>• Program-control Instructions.</li> <li>• System-control Instructions.</li> </ul> </li> </ul> <p>I/O Instructions.</p> <ul style="list-style-type: none"> <li>• RISC and CISC.</li> </ul>
<b>Week 11</b>	<p><b>Memory Organization.</b></p> <ul style="list-style-type: none"> <li>• Memory Types.</li> <li>• Access Modes.</li> <li>• RAM Types.</li> <li>• Multilevel Memories (Memory Hierarchy).</li> <li>• Cache Memory.</li> <li>• Elements of Cache Design.</li> <li>• Associative Memory.</li> <li>• Memory Interleaving.</li> </ul>

<b>Week 12</b>	<p><b>Introduction to number systems</b></p> <ul style="list-style-type: none"> <li>• Place values and binary to decimal conversion</li> <li>• Decimal to binary conversion</li> <li>• Octal to decimal conversion  (and vice versa)</li> <li>• Hexadecimal to decimal conversion  (and vice versa)</li> <li>• Arithmetic operations in binary</li> </ul>
<b>Week 13</b>	<p><b>Coding systems</b></p> <ul style="list-style-type: none"> <li>• Ascii</li> <li>• Excess-3 code</li> <li>• Gray code</li> </ul>
<b>Week 14</b>	<p><b>Logic gates</b></p> <ul style="list-style-type: none"> <li>• (And, Or, Xor, Not) gates</li> <li>• (Nor, Nand, Xnor) gates</li> </ul>
<b>Week 15</b>	<b>Simplify using gates</b>
<b>Week 16</b>	<b>Preparatory week before the final Exam</b>

<b>Delivery Plan (Weekly Lab. Syllabus)</b> المنهاج الاسبوعي للمختبر	
	<b>Material Covered</b>
<b>Week 1</b>	First Look at Computer Parts and Tools
<b>Week 2</b>	Introducing Windows Operating Systems
<b>Week 3</b>	All about Motherboards & Supporting Processors and Upgrading Memory
<b>Week 4</b>	Supporting Hard Drives
<b>Week 5</b>	Installing Windows
<b>Week 6</b>	Satisfying Customer Needs
<b>Week 7</b>	PC Maintenance and Troubleshooting Strategies

<b>Week 8</b>	Maintaining Windows and Optimizing Windows
<b>Week 9</b>	Troubleshooting Windows and Applications and Troubleshooting Windows Startup Problems
<b>Week 10</b>	Troubleshooting Hardware Problems
<b>Week 11</b>	Memory addressing
<b>Week 12</b>	Perform various encryption operations.
<b>Week 13</b>	Learn how to deal with logical design programs.
<b>Week 14</b>	How to design logic gates.
<b>Week 15</b>	Simple logical design project.

## Learning and Teaching Resources

### مصادر التعلم والتدريس

	Text	Available in the Library?
<b>Required Texts</b>	<p><b>Textbook:</b></p> <ol style="list-style-type: none"> <li>1. (Wiley series on parallel and distributed computing) Abd-El-Barr M., El-Rewini H. - Fundamentals of Computer Organization and Architecture-Wiley (2005)</li> <li>2. Michael Meyers-Mike Meyers CompTIA A+ Guide_ Essentials Lab Manual, Third Edition (Exam 220-701) (Mike Meyers' Computer Skills) (2010)</li> <li>3. CH Roth Jr, LL Kinney, EB John. Fundamentals of logic design- Cengage Learning (2013)</li> </ol>	Yes (E-copy)

## Grading Scheme

### مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
<b>Success Group</b> <b>(50 - 100)</b>	<b>A - Excellent</b>	امتياز	90 - 100	Outstanding Performance
	<b>B - Very Good</b>	جيد جدا	80 – 89	Above average with some errors
	<b>C - Good</b>	جيد	70 – 79	Sound work with notable errors
	<b>D - Satisfactory</b>	متوسط	60 – 69	Fair but with major shortcomings
	<b>E - Sufficient</b>	مقبول	50 – 59	Work meets minimum criteria
<b>Fail Group</b> <b>(0 – 49)</b>	<b>FX – Fail</b>	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	<b>F – Fail</b>	راسب	(0-44)	Considerable amount of work required

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# MODULE DESCRIPTION FORM

## نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	<b>Computer ProgrammingII</b>		Module Delivery
Module Type	Core		<input checked="" type="checkbox"/> Theory
Module Code	<b>CSITCIS106</b>		<input checked="" type="checkbox"/> Lecture
ECTS Credits	7		<input checked="" type="checkbox"/> Lab
SWL (hr/sem)	175		<input type="checkbox"/> Tutorial
			<input checked="" type="checkbox"/> Practical
			<input type="checkbox"/> Seminar
Module Level	1	Semester of Delivery	2
Administering Department	CIS	College	CSIS
Module Leader	NOOR MOHAMMED JUMAA	e-mail	noor.mohammed@uobasrah.edu.iq
Module Leader's Acad. Title	Assist lac.	Module Leader's Qualification	MSc
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	CSITCIS101	Semester	1
Co-requisites module	None	Semester	

## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p><b>Module Objectives</b></p> <p>أهداف المادة الدراسية</p>	<ol style="list-style-type: none"> <li>1. Learn of programming languages provides added insight into other fields.</li> <li>2. Understanding the practical and responsible use and management of program language is important for managers and other business knowledge workers in today's global information Society.</li> <li>3. Learn that people must understand the components of programming language and how all of these components work together to bring value to an organization.</li> <li>4. We need to turn our attention to the role that programming language plays in today's global information Society.</li> <li>6. in this course we will cover basic concepts and techniques for programming including arrays and strings.</li> <li>7. Why learn about loop types? <ul style="list-style-type: none"> <li>- For..loop.</li> <li>- While..loop.</li> <li>- Do while loop.</li> <li>- Nested loop.</li> </ul> </li> <li>8. Why learn about series?</li> <li>9. Why learn about Shape?</li> <li>10. Why learn about strings?</li> <li>11. Why Learn about functions? <ul style="list-style-type: none"> <li>- Defining a Function, Function Declarations, Calling a Function, Function Arguments(Call by value, Call by Reference)</li> </ul> </li> <li>12. Why learn about Array? <ul style="list-style-type: none"> <li>- One and Two-dimensional array.</li> </ul> </li> </ol>
<p><b>Module Learning Outcomes</b></p> <p>مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"> <li>7- Give the student the most important skills to become a C++ power users have a broad understanding of C++ language and they know which tool or function is best used in a given situation.</li> <li>8- At the end of this course, students should be able to design, write and test a C++ program to implement a working solution to a given problem.</li> <li>9- Learn the most important skills to deal with loop types, functions, strings</li> </ol>
<p><b>Indicative Contents</b></p> <p>المحتويات الإرشادية</p>	<p>Indicative content includes the following:</p> <ul style="list-style-type: none"> <li>- <u>Principles of electronic</u></li> </ul> <p>How can use a C++ program, entering of variable types, basic input/output the statement, and type of operators.</p> <ul style="list-style-type: none"> <li>- <u>Shapes</u></li> </ul> <p>If statement, nested if statement, For loop, nested for loop, while, and do while.</p> <ul style="list-style-type: none"> <li>- <u>Series</u></li> </ul>



	<p>If statement, nested if statement, For loop, nested for loop, while, and do while.</p> <ul style="list-style-type: none"> <li>- <u>Function</u> Defining a Function, Calling a Function, Function Arguments(Call by value, Call by Reference)</li> <li>- <u>Strings</u> <ul style="list-style-type: none"> <li>• Declaration, String function, Array of string</li> </ul> </li> <li>- <u>Arrays</u> <ul style="list-style-type: none"> <li>• One-dimensional array</li> <li>• Two-dimensional array</li> </ul> </li> </ul>
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### Learning and Teaching Strategies

#### استراتيجيات التعلم والتعليم

<b>Strategies</b>	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes and the lab, interactive tutorials, and by considering types of simple experiments involving some sampling activities that are interesting to the students.
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### Student Workload (SWL)

#### الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	77	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعيا	5
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	98	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	<b>175</b>		

## Module Evaluation

### تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

## Delivery Plan (Weekly Syllabus)

### المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Computer Programming II
Week 2	Loop type (break with continue)
Week 3	Series in C++
Week 4	Use Function with Series in C++
Week 5	Shape in C++
Week 6	Function with Shape in C++
Week 7	String in C++
Week 8	String function
Week 9	One dimension array

<b>Week 10</b>	One dimension array with search
<b>Week 11</b>	One dimension array with Sort
<b>Week 12</b>	One dimension array with Function
<b>Week 13</b>	Two-dimension array
<b>Week 14</b>	Two-dimension array with Array sort and search
<b>Week 15</b>	Two-dimension array with Function
<b>Week 16</b>	<b>Exam</b>

### Delivery Plan (Weekly Lab. Syllabus)

#### المنهاج الاسبوعي للمختبر

	<b>Material Covered</b>
<b>Week 1</b>	Lab 1: execute many examples of Loop type
<b>Week 2</b>	Lab 2: execute many examples of Loop type (break with continue)
<b>Week 3</b>	Lab 3: execute many examples of Use Series in C++
<b>Week 4</b>	Lab 4: execute many examples of Use Series in C++
<b>Week 5</b>	Lab 5: execute many examples of Use Function with Series in C++
<b>Week 6</b>	Lab 7: execute many examples of Shape in C++
<b>Week 7</b>	Lab 8 execute many examples of Function with Shape in C++
<b>Week 8</b>	Lab 6: execute many examples of String
<b>Week 9</b>	Lab9: execute many examples of One dimension array
<b>Week 10</b>	Lab 10: execute many examples of One dimension array with a search
<b>Week 11</b>	Lab 11: execute many examples of One dimension array with a sort
<b>Week 12</b>	Lab 12: execute many examples of One dimension array with Function
<b>Week 13</b>	Lab 13:execute many examples of two dimension

<b>Week 14</b>	Lab 14: execute many examples of Two dimension array with a sort and search
<b>Week 15</b>	Lab15: execute many examples of Two dimension array with Function

<b>Learning and Teaching Resources</b>		
مصادر التعلم والتدريس		
	Text	Available in the Library?
<b>Required Texts</b>	1. Fundamentals of Programming C++, Richard L. Halterman, school of Computing Southern Adventist University, December 2, 2018. 2. A first book of c++ by Gary Bronson, 4th edition, 2012 by Gary Bronson 3. Problem solving with c++ by Walter Savitch, 7th edition, 2009. 4. C++: The Complete Reference by Herbert Schildt, 4th edition, 2003	Yes
<b>Recommended Texts</b>	تعلم لغة ( C++ ) للمبتدئين ; لغات البرمجة للمبتدئين	Yes
<b>Websites</b>	<a href="https://www.programiz.com/cpp-programming">https://www.programiz.com/cpp-programming</a>	

## Grading Scheme

### مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
<b>Success Group</b> <b>(50 - 100)</b>	<b>A – Excellent</b>	امتياز	90 - 100	Outstanding Performance
	<b>B - Very Good</b>	جيد جدا	80 - 89	Above average with some errors
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