

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Object Oriented Programming		Module Delivery
Module Type			☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	OOP213		
ECTS Credits			
SWL (hr/sem)	150		
Module Level	2	Semester of Delivery	1
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Name	e-mail	E-mail
Module Leader's Acad. Title	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	1/4/2026	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	
Module Objectives أهداف المادة الدراسية	To introduce the principles of object-oriented programming. To understand and apply core concepts such as classes, objects, inheritance, polymorphism, and encapsulation. To develop problem-solving skills using object-oriented To enhance programming proficiency in C++
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	- Demonstrate understanding of object-oriented programming concepts. - Apply principles of OOP to design and implement C++ programs. - Utilize C++ features such as classes, inheritance, and polymorphism effectively. - Analyze and solve problems using object-oriented techniques.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. -Introduction to Object_Oriented Progmming - classes and Objects - constructor and Destructors - Inheritance -Polymorphism - Operator Overloading - Template - Static variable and Static function -Exception Handling - File I/O - Standard Template Library(STL)

	Total hrs = 105 = SSWL - (Exam hrs) = 109 - 4 = 105 hr (Time table hrs x 15 weeks)
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	- Lectures :To introduce and explain key concepts and theories. - Lab Session: Hands-on Programming exercises to reinforce Learning. - Assignment : Regular assignments to apply Learned concepts. -Quizzes and Exams : Periodic assessments to evaluate understanding. -projects : Comprehensive projects to integrate various concepts.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	93	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	57	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	3
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

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 OOP and C++ Basics
Week 2	Classes and Objects
Week 3	Constructors and Destructors const object and const member function
Week 4	Friend Functions and Friend Classes
Week 5	Operator Overloading
Week 6	Inheritance
Week 7	Polymorphism
Week 8	Mid-term Review and Exam
Week 9	Advanced Inheritance (virtual base classes)
Week 10	Templates
Week 11	Static variable and Static function

Week 12	Exception Handling
Week 13	File I/O (Perform File operations in C++)
Week 14	Standard Template Library (STL) –Part 1
Week 15	Standard Template Library (STL) –Part 2
Week 16	Final Review and Exam Preparation

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Implement C++ program with basic I/O operation
Week 2	Lab 2: Implement a class represent a simple real-world entity
Week 3	Lab 3: Implement a class with various constructor and destructor
Week 4	Lab 4 : Implement operator overloading for class
Week 5	Lab 5: Implement a class hierarchy demonstrating inheritance
Week 6	Lab 6: Implement polymorphism using virtual functions and abstract classes
Week 7	Lab 7: Mid-term project Assignment
Week 8	Lab 8 :Implement a class hierarchy using virtual Inheritance
Week 9	Lab 9: Implement a template class
Week 10	Lab 10 : Implement exception handling in a program
Week 11	Lab 11 : Implement a program to read from and write to a file
Week 12	Lab 12 : Implement basic operations using STL vectors
Week 13	Lab 13 : Implement a program using STL maps and Algorithms
Week 14	Lab 14 : Final Project development and progress report
Week 15	Lab 15 : Final Lab Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Object Oriented Programming in C++ by Robert Lafore ,fourth Edition ,sams pub,2002	No
Recommended Texts	Object Oriented Programming with C++ by E Balagurusamy, fourth Edition 2008 , published by Tata McGraw –Hill.	No
Websites	-Cplusplus.com -Greeks for Greeks C++ Section	

Grading Scheme

مخطط الدرجات

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