


Sub.	Course Description – توصيف مقرر دراسي	الموضوع	 كلية المعرفة ALMAAREFA COLLEGE
Date		التاريخ	

Course Code & No	Comp111	111 حاسب	رقم المقرر ورمزه
Course Name	Computer Programming-I	برمجة الحاسبات -1	اسم المقرر
Credit Hours	3 (2 + 1 + 0)	(0 + 1 + 2) 3	عدد الساعات المعتمدة
Pre-requisite	None	لا يوجد	المتطلب السابق


General Description	توصيف عام
<p>This course aims at introducing the students with:</p> <p>Modern computer programming language, software development process, variables and constants within a program, programming logic (flowcharts and pseudo codes) ,basic program elements of processes, loops, and sequences, Programming Paradigms (Procedural vs. Object Oriented Programming Languages),primitive variable types, input / output process, control structures. Design, write, compile, execute, and debug computer programs using an object oriented programming language such as Java.</p>	

Course Objectives	أهداف المقرر
<ul style="list-style-type: none"> • Outline different area of knowledge in computer programming principles. • Recognize the fundamental syntax and semantics of the object oriented programming language. • Recognize programming Paradigms - Procedural vs. Object Oriented Programming Languages. • Define the basic program elements such as processes, loops, and control and selection statements. • Develop a design of the object oriented solution according to the real world requirements. • Write object oriented programs that use selection (if, switch, conditional operator) • Write object oriented programs that use repetition structure (loops) 	

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<ul style="list-style-type: none"> • Write object oriented programs that make use of methods for program modularization. • Write object oriented programs using objects and classes. • Illustrate the professional and ethical responsibilities of computer programming field. • Demonstrate student ability to blend in a project environment and work as part of a software development team. • Students will be able to asses correct problem solutions using algorithms, UML and object oriented programs. 	
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Course Outlines <ul style="list-style-type: none"> a) An introduction: <ul style="list-style-type: none"> • An introduction to computer programming and computer programming languages. • Software development process: The steps involved in computer programming. • Designing Solutions to Computer Solvable Problems • Program Development Phases: Analysis of The Problem, Design of Solution, Conversion of the Solution To Computer Program • Programming Logic: The use of Flowcharts and Pseudo codes in the development of programs b) OOP language fundamentals: program’s structure, Hello program, Constants, Variables and Built-in data types, The arithmetic, assignment, increment and decrement operators.\ c) Control Structures I: Relational and logical operators, Boolean expressions, Conditional statements. d) Logical Operations: Designing Solution with Conditions. e) Iteration Constructs (loops): Designing Solutions Using Loops. f) Methods: Passing parameters, Constructors, 	مفردات المقرر
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<p>Setters.</p> <p>g) Introduction to Objects and Classes: Classes and object definition, UML representation of a class, Declaration of objects (Instance variables), Primitive Types and Reference Types</p> <p>h) Classes & objects in depth: Object oriented principles: encapsulation & information hiding, Methods and the message passing principles, Getters.</p>	
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References	المراجع
<ul style="list-style-type: none"> • Liang, D.Y., Introduction to Java Programming. 10th edition, 2014. Pearson. • Deitel & Deitel , Java: How to Program. Prentice Hall; 9th edition (March 7, 2011). • Farrell, Joyce. Programming Logic and Design. 3rd edition. 	