CS 103 - PROGRAMMING FUNDAMENTALS

College/Institute	College of Business Studies
Scientific Department	Computer and Information Systems
Course Title	Programming Fundamentals / أساسيات برمجة
Course Number	CS 103
Language of Instruction	English
Prerequisites	none
Credits	4
Hours	5
Theoretical Hours per week	3
Practical Hours per Week	2
Category	Major Core

COURSE DESCRIPTION

This course is an introductory course in basic programming, emphasis on pseudo code development and problem solving. It starts with manipulating abstract data types moving gradually toward object data types. Then, the course will take an in depth look at programming concepts and techniques of control and repetition structures. The course will adopt a practical hands-on approach when examining programming styles where the student will get familiarized with the use of command prompt editor to compile, debug, and run Object Oriented Programs.

COURSE OBJECTIVES

1. Learn the fundamental concepts, basic techniques of input and output.
2. Understand how basic math equations used in programming.
3. Become competent in the use of control structures (Selection and Repetition).
4. Define user methods and logically divide problems into integrated programmable modules.
5. Work with strings and characters.
6. Define Objects.

Outline of Topics and Sequence

Sequence	Topics	Week#	Theoretical Hours	Practical Hours
1	Create Your First Class (Running and Debugging)	1	3	2
2	Class Documentation and Reference Documentation	2	1	2
3	Use Data Within a Program	3	3	2
4	Use Methods, Classes and Objects	4 ,5	8	4
5	Advanced Object Concepts	6, 7 ,8	9	6
6	Make Decisions	8, 9	4	3
7	Iterations' Structures	10 , 11	5	3
8	Characters and Strings Manipulation	12,13, 14	9	6
Total Theoretical and Practical Hours			**42**	**28**

Delivery Methods

- Lectures: 3 hours per week (i.e. 3 credit)
- Laboratories: 2 hours per week (i.e. 1 credit)

Recommended Text / other Learning Materials / and References

[Text] Java Programming Guided Learning with Early Objects [Author] D.S Malik & Robert P. Burton
[Publisher] Course Technology Incorporated [ISBN13] 978-1-4239-0162-4 [ISBN10] 1-4239-0162-2

Evaluation Methods

Students will be evaluated as follows:

Evaluation Method	Percentage
Lab Work	10%
Homework OR Quizzes	10%
Midterm Exam (2 Exams " Theoretical or Practical ")	30%
Final Examination (Theoretical or Practical)	50%
Total	100%