

**Arab Academy for Science and Technology and Maritime Transport
Computer Science Curriculum
Course Syllabus**

Course Code: CS111	Course Title: Introduction to Computers	Classification:	Coordinator's Name: Dr. Mohamed Mostafa Lecturer Name:	Credit Hours: 3
Pre-requisites: None	Co-requisites: None	Schedule: Lecture: 2 hours Tutorial-Lab: 2 hours		
Office Hours:				
Course Description: This course provides an introduction to computers and computing. It is designed to give students an understanding of how computers work, their capabilities, limitations, and applications. It includes computer system components, numbering systems, systems and applications software, and programming concepts. Course topics including simple problem solving with algorithm design. The implementation of the algorithms in real programming application using the C language.				
Textbook: Behrouz A. Forouzan, Foundations of Computer Science, Cengage Learning				

References:

- ❑ Paul Deitel and Harvey Deitel, c how to program, 8th edition, Pearson Education Limited.
- ❑ David I. Schneider, Introduction to Computer Programming Using Visual Basic, Prentice Hall.
- ❑ Deborah Morley and Parker S. Charles, Understanding Computers Today and Tomorrow, Course Technology.

Course Objective/ Course Learning Outcomes:	Contribution to Program Student Outcomes:
1. Understand and state the importance of computers and computation.	(SO-1) Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions. (SO-4) Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
2. Understand the capabilities and limitations of computers.	
3. Identify and explain what computers are and how they work, including the computer hardware components and their types and specifications.	
4. Understand and use numbering systems.	
5. Understand system and application software with examples.	

<p>6. Understand the use algorithms and flowcharts.</p>	<p>(SO-2) Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.</p>
<p>7. Develop simple programs using a high level programming language.</p>	
<p>Course Outline:</p> <p>Week 1. Introduction</p> <p>Week 2. Data Storage and numbering systems</p> <p>Week 3. Computer organization and operating systems</p> <p>Week 4. Algorithms and Flowcharts</p> <p>Week 5. Algorithms and Flowcharts (cont.)</p> <p>Week 6. Programming Languages. The C Language</p> <p>Week 7. 7th Week Exam</p> <p>Week 8. I/O, Data types</p>	<p>Week 9. Operations, expressions, and assignment</p> <p>Week 10. Decisions in C</p> <p>Week 11. Loops in C</p> <p>Week 12. 12th Week Exam</p> <p>Week 13. Arrays</p> <p>Week 14. Functions</p> <p>Week 15. Struct</p> <p>Week 16. Final Exam</p>