

CS 121 – Introduction To Programming

Credit Hours: 4

Scheduled hours per week

Lecture: 3

Lab: 1

Other:

Catalog Course Description: Students study and learn the fundamentals of computer programming techniques to solve problems. Topics include: programming language structure, syntax, style, types of data, variables, functions, control structures, and algorithms

Pre-requisites: Math 125 or Math 126 or Math 128 or Math 129 or Math 150 or Math 155 or Math 156 or Math 211 must be passed with a grade of C or better or taken concurrently

Co-requisites: Math 125 or Math 126 or Math 128 or Math 129 or Math 150 or Math 155 or Math 156 or Math 211 must be passed with a grade of C or better or taken concurrently

Course Learning Outcomes:

Students should have an understanding of and be able to apply the following concepts:

- Introduce computer programming concepts, tools and techniques, algorithm design, and programming paradigms
- Learn the C programming language, its syntax and rules, and best practices in computer programming

Topics to be studied:

- Introduction to C and Programming
- Software Development, Data Types, and Expressions
- Control Statements
- Arrays
- Strings and Text Files
- Design with Functions
- Simple menus and user interface

Relationship of Course to Program or Discipline Learning Outcomes:

Computer Science

✓	Ability to understand and use elements of good programming style and best practices
✓	Understanding of programming paradigms, such as imperative, functional, and object oriented design
✓	Ability to understand and use variables with different data types and control structures
✓	Ability to perform top-down design, use modular programming, string processing, elementary data structures, basic disk I/O, and recursion
✓	Ability to use data structures and algorithms to represent data relationships, data manipulation, searching, sorting, and solving complex problems
	Ability to design, configure, troubleshoot, and manage database tables, normalize data, and store and retrieve object attributes in a database

For general education courses, a listing of the general education competencies that are met.)

Relationship of Course to General Education Learning Outcomes:	
Composition and Rhetoric Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	
Science & Technology Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	✓
Mathematics & Quantitative Skills Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	✓
Society, Diversity, & Connections Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	
Human Inquiry & the Past Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	
The Arts & Creativity Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
5/3/2016	

Special requirements of the course:

You will need a computer with an Internet connection.

Additional information:

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