

CS 1103: Computer Programming(A)

Required Course: Elective
Course Number: CS 1103
Course Name: Computer Programming
Credit Hours: 3
Lecture Hours: 3
Lab Hours: 0
Instructors: Matthew E.Orr

Book Title(s): A Byte of Python
Book Author(s): Swaroop C H
Book Year(s):

Course Description: Introduction to computer programming using a high-level computer language, including subprograms and arrays. Principles of problem solving, debugging, documentation, and good programming practice. Elementary methods of searching and sorting. No prior programming or computing experience needed. Previously offered as CS 2103.

Course Prerequisites: Math 1513(College Algebra) or higher, each with a grade of “C” or better.

Course Goals:

- For students to learn the basics of computer programming using the python programming language.
 - To be introduced to more advanced topics so that you are aware of what is possible when attempting to solve real world problems in the future.
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Course Topics:

- Command line, Interactive python, Tabs vs Spaces and IDEs.
- Print statements, code comments, variables, data types and math operations.
- Type conversions, string concatenation and string operations.
- Collections, collection operations and value vs reference.
- Boolean logic and conditional logic.
- Looping and comprehensions.
- Methods and functions.
- Recursion.

- Function scope and main method.
- Object oriented and class inheritance.
- Libraries and exception handling.
- Files and file formats.
- Databases, encryption, web etc.