Catalog 2013-2014 Information

COMSC-122   **Programming Concepts & Methodologies I**

54 total hours lecture   **3 Units**

ADVISORY: Eligibility for ENGL-090

This course introduces the discipline of computer science with practical hands-on problem solving using a "high-level" computer programming language. The course will include basic syntax and semantics of a "high-level" language, variables, types, expressions, assignment, basic computation, simple I/O, conditional and iterative control structures, functions and parameter passing, structured decomposition, program design, programming style, algorithms and problem solving strategies, overview of programming languages, binding, visibility, scoping, and lifetime management. May not be repeated. SC

LMC: DA

TRANSFER: CSU

COMSC-132   **Programming Concepts & Methodologies II**

54 total hours lecture   **3 Units**

PREREQUISITE: COMSC-122 or equivalent
ADVISORY: Eligibility for ENGL-090

This course covers techniques relevant to program design and selection of data structures for larger programs. Topics covered include design techniques, effective use of recursion, algorithmic efficiency and O-notation, linked-lists, stacks, queues, trees, hash tables, heaps, graphs and sorting and searching techniques. Extensive programming of a variety of data structures is required. May not be repeated. SC

LMC: DA

TRANSFER: CSU

COMSC-142   **Computer Architecture and Organization**

54 total hours lecture   **3 Units**

ADVISORY: Eligibility for ENGL-090

The organization and behavior of real computer systems at the assembly-language level. The mapping of statements and constructs in a "high-level" language into sequences of machine instructions is studied, as well as the internal representation of simple data types and structures. Numerical computation is examined, noting the various data representation errors and potential procedural errors. May not be repeated. SC

LMC: DA

TRANSFER: CSU