CSC 101 Articulation Competencies

*Introduction to Programming (5 Credits)*

**Introduction to computer programming. Intended for non-science majors. Explores the basics of computer programming using the BASIC language. Topics include console I/O, variables, expressions, decisions, arrays, repetition, console graphics, file I/O and functions.**

*Upon completion of this course, successful students will score 80% or better on the following competencies to receive WVC college credits.*

Student Learning Outcomes:

**CATEGORIES**

1. **Problem Solving**: A. Critical Thinking 3. **Social Interaction**: A.Collaboration

B. Creative Thinking B. Ethical Conduct

C. Quantitative Reasoning C.Professional Conduct

D. Qualitative Reasoning D. Cultural Diversity

1. **Communication**: A. Oral Expression 4. **Inquiry: A.** Information Literacy

B. Written Expression B. Research

C. Artistic Expression C. Documentation

Course Competencies Checklist:

* Apply programming skills to provide solutions to data processing tasks. (1A)
* Apply stepwise logic to general problems. (1A)
* Understand the software development lifecycle. (1A)
* Apply variables and expressions in a computer programming application. (1A)
* Apply logic based decision making and repetition in a computer programming application. (1A)
* Understand and apply the concept of problem decomposition using top-down design. (1A)

Program Outcomes:

Students taking computer science classes will be able to:

* Have a beginning knowledge of a computer programming language
* Work independently to write a basic computer program
* Diagnose and troubleshoot computer programming code
* Develop a foundation on which to build further knowledge of computer programming and computer science

Course Topics:

* Data types and expressions
* Variables
* Console I/O
* Decisions (If and select case statements)
* Repetition (while and for statements)
* Basic computer graphics
* Arrays
* Sequential File I/O
* Functions and subroutines