

**Northwest Arkansas Community College**  
Business and Computer Information Systems Division

**Discipline Code**

PROG

**Course Number**

1003

**Course Title**

Programming Logic I

**Catalog Description**

(F, S, On Demand) An introductory lab course on computer program design and development. The student will write computer programs as tools for problem solving. Programs will be written using hierarchy, flow charts and programming codes. Programs will be tested and debugged. (Outside lab time will be required.) Prerequisites/Co-requisites: MATH 0103, or higher, (excluding MATH 1313). Math placement scores not sufficient, student must have passed MATH 0103 class.

**Prerequisites/Co-Requisites:**

MATH 0103- Math placement scores not sufficient, student must have passed MATH 0103 class.

**Credit Hours**

3

**Contact hours**

45

**Load hours**

3

**Semesters Offered**

Fall, Spring, On Demand

**ACTS Equivalent**

None

**Grade Mode**

A-F

## **Learning Outcomes**

The student will:

- Create an appropriate flowchart for a program to solve the task
- Design and code the appropriate program given a flowchart
- Describe an appropriate menu for a multi-part program description
- Describe the purpose of a given program
- Debug a program
- Create a program to read data from an external file
- Create a program to write data to an external file

## **General Education Outcomes Supported**

None

## **Standard Practices**

### **Topics list**

- Flowcharting and program organization techniques
- Appropriate programming language syntax and structure
- Decision-making programming constructs
- Looping programming constructs

### **Learning activities**

- Assignments and Projects
- This course requires some in class, hands-on work and also additional hands-on work in a virtual or on-campus computer lab.

### **Assessments**

- Homework
- Programming Projects
- Chapter quizzes or programs
- Exams
- Final programming project.

### **Grading guidelines**

- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69%
- F = 0-59%