**Chapter 1**

**Knowledge Goals**

* To learn what computer programming is.
* To learn the major components of a computer and how they work together.
* To learn about the function of an operating system
* To understand binary and hexadecimal number systems and the Unicode Character Set.
* To learn about various programming languages.
* To understand how programs are created and executed.
* To learn about program design with pseudocode.

**Skill Goals**

*To be able to:*

* List the major hardware components of a computer.
* List the major functions of an operating system.
* Name three or four operating systems.
* Convert a number between binary, hexadecimal and decimal number systems.
* Look up the Unicode value for a given character.
* Identify several programming languages and their major uses.
* Describe the difference between a compiler and an interpreter.
* List the functions of the Java compiler and Java Virtual Machine.
* Write pseudocode to solve a simple problem.
* Write, compile, and execute a first Java program
* Distinguish among compiler errors, logic errors, and runtime errors.