BOARD APPROVED 10/2006

COMPUTER PROGRAMMING GRADES 9-12

BUSINESS EDUCATION CURRICULUM SUMMARY

The purpose of the Business Education Curriculum Summary is to present an overview of the Computer Programming Curriculum. Parents are the intended audience of the Computer Programming Curriculum.

Computers and Object-Oriented Concepts

- History of Computers
- Components -Hardware/Software
- Data and Instruction Representations
- Interpreters, Compilers, Compiling Source Code

Structure of the Program

- Structure elements of a program
- Object oriented programming OOP
- Classes
- Data types, variables, strings
- Java Statements
- Importing Classes/Java doc.

UML Designs

- Organization
- Pre-Planning
- If/Then
- Flowcharting
- Logical thinking

I/O and Exception Handling

- Input/ Output
- Exception Handling
- Casting input methods
- Inheritance

Math Operations

- Arithmetic operators and orders of operations
- Core algorithms
- Mixed Data Types
- Overflow, underflow

Decision Making

- True / False
- Comparison operators
- Logical operators
- Selection structures
- Nested structures
- Switch structure

Control Loops

- Incrementing / decrementing
- For Loop
- While Loop
- Do While Loop
- Nesting Loops

Documenting Programs

- Statements of purpose / problem
- Visual representation
- Commenting the source code
- Include source code

Analyzing Blocks of Code

- Testing
- Checking for errors
- Verifying input
- Writing source code