

Standards and Competencies for JAVA (Course # 3761)

	Begin-End Yr
Standard 1 - The student will demonstrate proficiency in the background knowledge of computers and programming	2009 -
1.1 - Discuss the history of computers and programming languages.	2009 -
1.2 - Discuss the components of the computer.	2009 -
1.3 - Summarize the characteristics of the JAVA programming language	2009 -
1.4 - Critique the role of computer programming in society.	2009 -
1.5 - Discuss the use of JAVA on the web.	2009 -
1.6 - Distinguish between a JAVA application and a JAVA applet	2009 -
1.7 - Discuss the concept of Object Oriented Programming.	2009 -
Standard 2 - The student will research and apply knowledge of ethical and legal issues within the industry	2009 -
2.1 - Demonstrate work ethics that include integrity, honesty, and perseverance to be accepted by industry	2009 -
2.2 - Research benefits and consequences resulting from the practice of business ethics.	2009 -
2.3 - Comprehend copyright laws and their applications to text, visual art, design, and photography	2009 -
2.4 - Research legal responsibilities associated with the use of the Internet as required by federal and state government agencies	2009 -
Standard 3 - The students will use Program Development Tools as they relate to the programming development cycle. (Alg I 1.0, 3.0, 5.0)	2009 -
3.1 - Create a storyboard.	2009 -
3.2 - Illustrate a process using a flowchart.	2009 -
3.3 - Demonstrate the use of Pseudocode.	2009 -
3.4 - Develop a detailed logic plan.	2009 -
Standard 4 - The student will apply system operations in executing JAVA programs	2009 -
4.1 - Demonstrate computer start-up and shut-down procedures.	2009 -
4.2 - Discuss the execution of programs.	2009 -
4.3 - Explain the storage, retrieval and deletion of programs	2009 -
4.4 - Install and use a JAVA compiler.	2009 -
Standard 5 - The student will write and document an executable program in JAVA Programming Language	2009 -
5.1 - Identify names for variables and their data types.	2009 -
5.2 - Recognize and apply the symbols for mathematical operations.	2009 -
5.3 - Demonstrate the various methods of obtaining input/output and formatting output	2009 -
5.4 - Analyze the task and implement a detailed logic plan	2009 -
5.5 - Demonstrate the use of control statements.	2009 -
5.6 - Identify, illustrate and perform operations using arrays.	2009 -
5.7 - Identify and apply virtual functions and polymorphism.	2009 -
5.8 - Read and/or write data files for input/output purposes.	2009 -
5.9 - Debug the program and verify the output of the program.	2009 -
Standard 6 - The student will work as a team member to develop an integrated application using JAVA Programming Language	2009 -
6.1 - Define the roles of each team members.	2009 -
6.2 - Solve a complex task using JAVA.	2009 -
6.3 - Compare and contrast the advantages of working as a group.	2009 -
Standard 7 - The student will apply concepts and guidelines for typography, design, layout, and composition in developing a computer program.	2009 -
7.1 - Analyze composition processes.	2009 -
7.2 - Illustrate how to apply typographical commands to text.	2009 -
7.3 - Evaluate the effectiveness of typography in publications.	2009 -
7.4 - Compare and contrast the typography from at least two print sources.	2009 -
Standard 8 - The student will develop and demonstrate human relations, self-management, organizational and professional leadership skills.	2009 -
8.1 - Demonstrate self-initiative through group projects.	2009 -
8.2 - Examine the value of leadership skills.	2009 -
8.3 - Illustrate image building and public relations techniques	2009 -
8.4 - Assess decision-making skills.	2009 -
8.5 - Demonstrate effective teamwork and group thinking applying conflict resolution techniques	2009 -
8.6 - Demonstrate parliamentary procedure skills through group activities	2009 -
8.7 - Demonstrate teamwork skill in developing a JAVA program for a specific problem	2009 -
8.8 - Analyze the goals and apply the principles of a co-curricular student organization	2009 -