



Course Title: Intro to Coding

Description: This course aims to teach basic programming and computational concepts to students with little or no previous coding experience. Students will develop confidence in their ability to apply programming techniques and logical reasoning to solve problems in a broad range of fields. It is hoped that this course will provide the student with a "taste-testing" opportunity to gauge their interest in further study of computer science. This course uses Scratch, MIT App Inventor and possibly VBA for Excel. This course OR Computer Applications is a requirement for graduation from UHS.

Iowa CTE Standards #2 and #5

<u>Reporting Topic</u>	<u>Course Level Standards</u>	<u>Competency Statement</u>
<u>Problem Solving</u>	<ul style="list-style-type: none"><li>• Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.</li><li>• Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.</li><li>• Develop a plan to troubleshoot an identified technical issue. IT 2.2.1</li><li>• Demonstrate initiative to independently solve problems and trouble-shoot.IT 2.2.2</li><li>• Understand the resources available to troubleshoot an issue. IT 2.2.3</li><li>• Demonstrate the ability to (obtain information from a user to) identify the root cause of an issue. IT 2.2.4</li><li>• Implement steps to prevent the issue from happening in the future. IT 2.2.5</li><li>• Demonstrate the function and purpose of the project you are designing using constructs such as procedures, modules, and/or objects. IT 2.6.4</li></ul>	Students will develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.



<p><b><u>Debugging</u></b></p>	<ul style="list-style-type: none"><li>• Understand the unique needs of accessibility to all users.IT 2.6.10</li><li>• Use logic to solve problems and demonstrate trouble-shooting skills. (3A-CS-03)IT 2.2</li><li>• Demonstrate initiative to independently solve problems and trouble-shoot.IT 2.2.2</li></ul>	<p>Students will Improve readability, efficiency, or correctness of code from other people</p>
<p><b><u>Web Design</u></b></p>	<ul style="list-style-type: none"><li>• Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.</li><li>• Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams.</li></ul>	<p>Students will be able to Employ basic web programming knowledge</p>
<p><b><u>JavaScript</u></b></p>	<ul style="list-style-type: none"><li>• Demonstrate the ability to code a program/application. IT 5.3.1</li><li>• Demonstrate the relationship between different numbering systems (binary, decimal, hex).IT 2.4.1</li><li>• Use lists to simplify solutions, generalizing computational problems instead of repeatedly using simple variables.IT 2.6.3</li></ul>	<p>Students will, through application of proper JavaScript fundamentals, use current knowledge to solve problems.</p>