



Principles of Information Technology

Introductory computer course that empowers students to create authentic products and engage with computers and computer science as a medium for creativity, communication, problem solving and fun.

<p>1st Six Weeks</p> <ul style="list-style-type: none"> • Intro to Problem Solving • The Problem Solving Process • Exploring Problem Solving • What is a Computer? • Input and Output • Processing & Storage • Apps and Problem Solving • Project - Propose an App • Exploring Websites • Websites for Expression • Intro to HTML • Headings • Digital Footprint • Lists • Intellectual Property and Images 	<p>2nd Six Weeks</p> <ul style="list-style-type: none"> • Clean Code and Debugging • Project - Multi-Page Websites • Styling and CSS • Styling Elements with CSS • Sources and Search Engines • RGB Colors and Classes • Project - Personal Portfolio Website • Programming for Entertainment • Plotting Shapes • Drawing in Game Lab • Shapes and Randomization • Variables • Sprites • The Draw Loop 	<p>3rd Six Weeks</p> <ul style="list-style-type: none"> • The Counter Pattern • Sprite Movement • Booleans • Conditionals • Keyboard Input • Other Forms of Input • Project - Interactive Card • Velocity • Collision Detection • Complex Sprite Movement • Collisions • Functions • The Game Design Process • Using the Game Design Process • Project - Design a Game
<p>4th Six Weeks</p> <ul style="list-style-type: none"> • Analysis of Design • Understanding Your User • User-Centered Design Micro Activity • User Interface and Prototype Testing • Feedback and Prototypes • Identifying User Needs • Project - Paper Prototype • Designing Apps for Good • Market Research • Paper Prototypes • Prototype Testing • Digital Design • Event Driven Programming • Basic App Functionality • Testing the App • Improving and Iterating • App Presentation 	<p>5th Six Weeks</p> <ul style="list-style-type: none"> • Representation Matters • Patterns and Representation • ASCII and Binary Representation • Representing Images • Representing Numbers • 8-bit Numbers • Combining Representations • Project - Create a Representation • Problem Solving and Data • Making Decisions with Data • Interpreting Data • Automating Data Decisions • Problem Solving with Big Data • Project - Solve a Data Problem • Computing Innovations • Input • Event Types 	<p>6th Six Weeks</p> <ul style="list-style-type: none"> • Getters and Setters • The Circuit Playground • Lists • Lights • For Loops • Lists and For Loops • Timed Loops • Project - Board Output • Physical Input • Analog Input • Sensor Applications • Project - Prototype and Innovation

