MASTERY CODING × Kentucky Department of EDUCATION

Kentucky CTE Programs Solutions

Who is Mastery Coding?

Founded by a California Teacher of the Year Award Winner, Mastery Coding provides expertly-crafted coding curriculum to K-12 schools. Our students learn coding and technology skills aligned to modern workforce needs. This way, students can step into high-paying jobs with the critical aptitudes employers desperately seek.

Our Mission

To provide schools with coding curriculum that is accessible, engaging, data-driven, standards-based, and sustainable for years to come.

What We Do

Mastery Coding provides expert coding curriculum that allows:

Students with no prior coding experience to learn to integrate academic and technical skills that focus on and reinforce the concepts that are needed in the increasingly digital workplace. Kentucky students have the opportunity to work in an industry-based coding landscape that offers Industry Recognized Credentials and transferable skills with endless potential for stackable credentials.

Teachers with no prior coding experience to successfully teach a series of project-based coding classes with confidence, and be supported with the resources necessary to engender academic achievement.

Districts to onboard a comprehensive turnkey curriculum that offers cutting-edge coding courses for elementary, middle and high school students (including several Kentucky CTE Programs).

Computer Programming

Mastery Coding has developed a 3-year course sequence solution to support the Kentucky Computer Programming pathway utilizing the following courses:

MC-KY Introduction to Programming	Available NOW
MC-KY Object Oriented Programming I	Available NOW
MC-KY Object-Oriented Programming II	BTS 2022

These courses incorporate the following Kentucky standards, preparing students to apply skills including C# scripting, program customization, program analysis, and application design. Industry standards are used in all Mastery Coding courses providing real world programming experience for students in the following areas:

- Logic, Critical Thinking, and Problem Solving
- Beginning Application Development (Coding)
- Advanced Application Development (Database, Files, Security, Storage)
- Program Analysis and Design
- Programming Fundamentals and Syntax
- Leadership and Teamwork

Computer Programming

MC-KY Introduction to Programming

MC-KY Introduction to Programming leverages the excitement of creating games to teach students computer science, mathematics, and problem-solving. Upon completion of this course, students will be proficient in JavaScript, computational thinking, 2D and 3D graphics, animations, and game development principles. Students will also complete multiple code projects to build an online portfolio.

Topics Include: JavaScript Coding, Cartesian Coordinate Systems, Vector Arithmetic, 2D Animation, User Interface, Game Development Organization

MC-KY Object Oriented Programming I

MC-KY Object Oriented Programming I teaches C# coding and game design with the Unity 3D Engine. Upon course completion students will have the ability to create a 3D game from scratch on their own.

Topics Include: Object Oriented Programming, C#, game physics, vector arithmetic, programming best practices, git version control, asset management, 3D modeling, animation, cross-platform input support.

Certifications: Unity User: Programmer, Unity User: Artist

MC-KY Object-Oriented Programming II

MC-KY Object-Oriented Programming II focuses on the full development lifecycle of an application. From design, to asset creation, to coding tools and behaviors. Students learn new skills and techniques in C# and Unity.

Topics Include: Intermediate C#, git version control, asset management, 3D modeling, animation, code collaboration, cross-platform input support.

Prerequisites: MC-KY Object Oriented Programming I

Certifications: Unity Certified Associate: Game Developer