

Coding

An increasing number of businesses rely on computer code and on individuals who are versed in a range of programming languages. Coding is not a skill limited to the technology sector. Individuals with coding skills may find careers in hospitals or manufacturing, as well as high-tech companies.

Course Code	Course Title	CEUs
CPC-640E	Introduction to Coding and Computer Programming	0.6
CPC-641E		1.2
CPC-642E		1.8
CPC-637E		1.2
CPC-643E		1.2
WDA-246E	PHP Introduction	0.6
WDA-247E	Introduction to AWS Cloud	0.6
CPC-631E	Introduction to R Programming	0.6
CPC-603E	Advanced R Programming for Data Science	1
CPC-624E	Visual Basic Applications in Excel	0.6

For information on current course offerings and how to register, go to www.ccm.edu/workforce/ (<https://www.ccm.edu/workforce/>)

Courses

Introduction to Coding and Computer Programming

If you are new to programming or want to learn more about this in-demand field, you will benefit from this introductory course that provides an overview of programming methodology. Topics covered will include computer science fundamentals (data types, data structures, input/output, functions, sorting/searching, program structure, etc.) and basic algorithms. This course is offered in a flexible format that includes online sessions live with the instructor and additional assignments for students to complete. CPC-640E.

PHP Introduction

PREREQUISITE: Introduction to Coding and Computer Programming or prior coding experience. PHP, Hypertext Preprocessor, is a widely used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. PHP is a good language to learn for both beginners and advanced students. It is widely used to add scripting capabilities to static web pages and to access databases with massive amounts of data. In this course, approach PHP step by step, look at similarities to Python and develop practical skills needed in corporate web programming. WDA-246E.

Introduction to AWS Cloud

All large and small corporations are embracing cloud computers and Amazon Web Services (AWS) is one of the most widely used cloud platforms. Begin by looking at the big picture of how the Internet works. From that foundation, learn popular operating system

commands and build a virtual server with Web, PHP and Python scripting. Add a database using PHP and Python programming skills. Students will get a great foundation for AWS cloud server setup and administration. WDA-247E.

Introduction to R Programming

PREREQUISITE: Proficient knowledge of MS Excel. R's widespread popularity to analyze large data sets makes it an essential tool in almost every field. The course will cover exploratory data analysis techniques, visualization methods, modeling and ideas in reproducible research using packages from base R. Students will learn the basic syntax for R and how functions and packages work. CPC-631E.

Advanced R Programming for Data Science

PREREQUISITE: Proficient knowledge of MS Excel and the Introduction to R Programming course or some programming knowledge. Expanding on the topics covered in the Introduction to R Programming course, students learn the use of the Tidyverse and the ggplot2, dplyr and tidyr packages. In addition, advanced data science methods such as k-means, clustering and dendrograms will be covered. CPC-603E.

Visual Basic Applications in Excel

PREREQUISITE: Proficient knowledge of MS Excel. Learn to record macros, read, write, and debug VB code, pass lists and floating variables though VB, use conditional statements, and create input and message boxes. At the end of this course, students will be familiar with the VBA programming language as it applies to Microsoft Excel and will apply this knowledge to make interactive and fully functional spreadsheets. CPC-624E.
