

Digital Literacy: Coding

Various forms of digital literacy are introduced throughout Spartan Studies. This particular requirement focuses on digital literacy from a coding perspective. All students are required to take a course related to computer coding. Learning to code helps students practice solving problems through a consistent, step by step process. Thinking through a process for problem solving is useful in many contexts beyond coding. Students are encouraged and expected to transfer the concept of a problem-solving process when viewing and solving problems in other courses, their personal lives and after graduation. Most students will meet this requirement using the online course UTAMPA 200 Digital Literacy: Coding. However, students can meet this Spartan Studies requirement by taking one of the following courses as part of a major or minor: CSC 101, ITM 251, MAT 285, PHY 180.

UTAMPA 200 Digital Literacy: Coding

This digital literacy course introduces students to the fundamentals of computer programming through rudimentary instruction in a computer language such as Python. By the end of the course, students should be able to demonstrate a basic understanding of and competency in computer programming. (1 credit)

CSC 101 The Science of Computing I

An introduction to computing. Topics include problem solving, algorithm analysis and development, computer programming in Python, high-level data structures, computer organization and architecture, and the object-oriented paradigm. (4 credits)

ITM 251 Application Development

Studies the fundamentals of designing and writing computer programs to solve problems. Emphasizes the principles of software design, development, and testing. Using a pragmatic and hands-on approach, students will apply structured programming and object-oriented methods using contemporary programming languages. (4 credits)

MAT 285 Programming with Mathematical Applications

This course teaches programming fundamentals such as program design and modularity, with an emphasis on mathematical applications. Mathematical fields from which problems will be drawn include number theory, linear algebra, statistics, differential equations, multivariate calculus and modeling. (4 credits)

PHY 180 Introduction to Programming for the Physical Sciences

This course provides an introduction to the Python programming language and the LaTeX typesetting system for students with little or no programming experience. This course is designed to prepare you for upper-level coursework in the physical sciences. (2 credits)