THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Computational Thinking in Context: Mobile Applications

CSE 1212

Credit Hours:
3.00

Course Levels:
Undergraduate (1000-5000 level)

Course Components:
Lecture
Lab

Course Description:
Introduction to computational thinking, focusing on problem solving and programming concepts and skills needed to develop applications for mobile platforms; creativity and imagination encouraged.

Course Goals / Objectives:
- Be competent with using basic constructs provided by high-level imperative programming languages: sequencing, selection, and iteration
- Be familiar with algorithmic thinking
- Be familiar with using basic data structure interfaces such as arrays or lists in simple programs
- Be familiar with procedural composition
- Be exposed to procedural abstraction by defining new blocks
- Be familiar with many of the possibilities available for creative combination in programmed mobile applications
- Be familiar with working in a window-based computing environment
- Be familiar with using a modern interactive program development environment

Course Topics:

- Course introduction, software installation, and basic concepts
- Introduction to programming for mobile platforms
- Loops, new definitions, simple controls
- Loops, conditionals, Boolean expressions, advanced controls
- Nested loops, complex control structures
- User interaction with buttons and text boxes
- Course project: discussion and evaluation of preliminary ideas
- Course project: discussion of problems encountered and possible solutions
- Course project: presentation and evaluation of final projects

---

Designation:

Elective