



**Computer Science Technology - Apple App Development
Short-Term Certificate
M.A.P.**

Semester	Suggested Courses	Semester(s) Offered*	Credit Hours
Semester 1 10 credit hours	CIS 149 Introduction to Computers	Fall	3
	CIS 191 Introduction to Computer Programming Concepts	Fall	3
	CIS 193A Introduction to Computer Programming Lab	Fall	1
	CIS 157 Introduction to App Development with Swift	Fall	3
Semester 2 9 credit hours	CIS 251 C++ Programming (Recommended CST Elective)	Spring	3
	CIS 193B C++ Programming Lab (Recommended CST Elective)	Spring	1
	CIS 220 App Development with Swift I (Recommended CST Elective)	Spring	3
Semester 3 6 credit hours Apple App Development STC Achieved	CIS 159 Introduction to Graphic Design for Apps (Recommended CST Elective)	Fall	3
	CIS 227 App Development with Swift II (Recommended CST Elective)	Fall	3

*Course(s) may be offered in additional semesters, but are only assured to run in semester(s) indicated. It is **highly** recommended for course(s) to be completed in the semester(s) indicated.

Part-time and full-time students desiring to begin the CST program of study during a spring or summer semester should consult with an academic advisor to establish an alternate degree completion pathway.