

Software and Application Design (CS 3-4)
Scope & Sequence: Year 2

Semester 1		Semester 2	
Quarter 1	Quarter 2	Quarter 3	Quarter 4
<p>Technical Standards: 1, 2, 3, 4, 5 Professional Standards: 1, 2, 3, 4, 5, 6, 7</p> <p>Unit 1</p> <p>Introduction to Swift & XCode</p> <ul style="list-style-type: none"> • Computer Use and Expectations • Swift Command Line, REPL, Playgrounds and XCode • Data Types & Operators • Control Flow • Debugging and Comments <p>Professional Standards: 8</p> <p>Unit P1</p> <p>Professional 1: Legal Ethical Copyright, trademark and patent.</p> <p>Technical Standards: 6, 7, 18, 12, 13 Professional Standards: 1, 2, 3, 4, 5, 6, 7</p> <p>Unit 2</p> <p>UIKit</p> <ul style="list-style-type: none"> • Strings & string manipulation • Functions • Classes, Structures and inheritance • Collections and loops • UIKit • Data, controls and layout • Project: Apple Pie 	<p>Technical Standards: 1, 11, 12, 14, 18 Professional Standards: 1, 2, 3, 4, 5, 6, 7</p> <p>Unit 3</p> <p>Navigation and Workflows</p> <ul style="list-style-type: none"> • Optionals • Type Casting • Guarding Conditionals • Variable Scope • Navigation Controllers & Segues • Tab Controllers • View Controller Lifecycle • Building workflows • Project: Personality Quiz <p>Technical Standards: 1, 2, 11, 12, 14, 17 Professional Standards: 1, 2, 3, 4, 5, 6, 7</p> <p>Unit 4</p> <p>AR Applications</p> <ul style="list-style-type: none"> • AR Apps with XCode • SceneKit • Finding Flat Surfaces • Interacting with AR • Interacting with AR • Image Recognition in AR • Project: Drawing in AR <p>Professional Standards: 7</p> <p>Unit P2</p> <p>Professional 2: Resume Learn how resumes change over time. Update resume from year 1.</p>	<p>Technical Standards: 1, 8, 11, 12 Professional Standards: 1, 2, 3, 4, 5, 6, 7</p> <p>Unit 5</p> <p>Tables and Persistence</p> <ul style="list-style-type: none"> • Protocols • App Lifecycle • Model ViewController • Scroll and Table views • System View Controllers • Saving Data • Complex input screens • Project: ListTracker <p>Technical Standards: 9, 10, 16 Professional Standards: 1, 2, 3, 4, 5, 6, 7</p> <p>Unit 6</p> <p>Web Applications</p> <ul style="list-style-type: none"> • Closures • Extensions • Practical Animation • HTTP and URL sessions • JSON • Concurrency • Project: Restaurant App <p>Professional Standards: 1, 2, 4, 6</p> <p>Unit P3</p> <p>Professional 3: Applying for a Job. Conduct mock interviews. *Technical Skills Assessment Industry Certification Testing</p>	<p>Technical Standards: 11, 14, 15 Professional Standards: 1, 2, 3, 4, 5, 6, 7</p> <p>Unit 7</p> <p>Prototyping and Planning</p> <ul style="list-style-type: none"> • App Personalities • The Design Cycle • Project Planning <p>Professional Standards: 9</p> <p>Unit P4</p> <p>Professional 4: Financial Startups in technology. Cost of developing an application.</p> <p>Technical Standards: 11, 12, 13, 19 Professional Standards: 1, 2, 3, 4, 5, 6, 7</p> <p>Unit 8</p> <p>Final Project</p> <ul style="list-style-type: none"> • App Design • Milestones • Testing • Final App