Everyone Can Code @ Laboratoria

Syllabus

Second Generation

2020

<Course Syllabus - Swift>

1. **Week 1**
    a. Basic Elements:
        i. Constants, variables, data types, strings
        ii. Tuples
        iii. Basic Operators
    b. Collections
    c. Control Flow
    d. Functions
    e. Structures and Classes
2. **Week 2**
    a. Closures
    b. Enumerations
    c. Properties
    d. Methods
3. **Week 3**
    a. Extensions
    b. Protocols
    c. Inheritance
4. **Week 4**
    a. Initialization
    b. Deinitialization
    c. Optional Chaining
    d. Type Casting
5. **Week 5**
    a. Generics
6. **Week 6**
    a. Opaque Types
7. **Week 7**
    a. Automatic Reference Counting (ARC)
8. **Week 8**

a. Memory Safety

9. **Week 9**
    a. Access Control
10. **Week 10**
    a. Advanced Operators

<Course Syllabus – App Development>

1. **Getting Started with App Development**
    a. Xcode
    b. Building, Running and Debugging
    c. Documentation
    d. Interface Builder
2. **Introduction to UIKit**
    a. UIKit
    b. Displaying Data
    c. Controls
    d. Auto Layout and Stack Views
3. **Navigation and Workflows**
    a. Segues and Navigation Controllers
    b. Tab Bar Controllers
    c. View Controller Life Cycle
    d. Workflows
4. **Tables and Persistence**
    a. App Anatomy and Life Cycle
    b. Model View Controller
    c. Table Views
    d. Intermediate Table Views
    e. Saving Data
    f. Complex Input Screens
5. **Working with the Web**
    a. HTTP and URLSession
    b. Decoding JSON
    c. Concurrency
6. **Protyping and Project Planning**
    a. App Personality
    b. Design Cycle and Project Planning

<Extra topics covered>

1. **Working with Git and Github**
    a. Basic commands
    b. Branches
2. **Project Management principles**
    a. Requirement analysis
    b. Software design
    c. Development and implementation
    d. Testing
    e. Software evolution
3. **Computer Science principles**
    a. Formal Languages and Automata Theory
    b. Compilers
    c. Operating Systems
    d. Databases
4. **Process to upload an app to the App Store**