Arduino Course for Absolute Beginners Syllabus:
Core Curriculum (1st Edition)

Module 1: Introduction and Familiarization
- Course Introduction
- Hardware Overview
- Download and Install the Arduino IDE
- Arduino IDE and Sketch Overview
- Understanding Arduino Syntax

Module 2: Basics
- Understanding and Using Variables
- Blink an LED
- Challenge Discussion
- digitalRead() and Serial Port Communication
- Challenge Discussion
- analogRead() and Serial Port Communications
- Challenge Discussion
- Reading Analog Pins and Converting the Input to a Voltage
- Challenge Discussion
- Fade an LED with Pulse Width Modulation using analogWrite()
- Challenge Discussion

Module 3: Control
- If-Else Statement, Comparison Operators and Conditions
- Challenge Discussion
- For Loop Iteration
- Challenge Discussion
- How to Use Arrays
- Challenge Discussion
- Switch Case Statement and Using a Keyboard for Data Collection
- Challenge Discussion

Module 3: Control (Continued)
- While Statement
- Challenge Discussion

Module 4: Digital
- Blink an LED Without using the delay() Function
- Challenge Discussion
- Using Buttons
- Challenge Discussion
- State Change Detection and the Modulo Operator
- Challenge Discussion
- Debouncing a Button
- Challenge Discussion

Module 5: Analog
- Analog I/O and Serial Communications
- Challenge Discussion
- Analog Input
- Challenge Discussion
- Calibration
- Challenge Discussion
- Smoothing Data
- Challenge Discussion