

Teaching Plan

Term Oct 2024
Module Name PROGRAMMING FUNDAMENTALS
Module Leader MALCOLM YAM

Malcolm Yam
 Celia Ong

Credit Units. 6
Contact 90hrs

No.	Date	Wk	Day	Time	Lecturer	Topics & Time Allocation	Suggested Exercises
1	12-Oct-24 (Sat)	1A	Sat	9am - 6pm	Malcolm Yam	Intro & Warmup Software setup and basics into Logical thinking	
2	12-Oct-24 (Sat)	1B	Sat	2pm - 6pm	Malcolm Yam	Understanding Programming through games	
3	16-Oct-24 (Wed)	1C	Wed	6:30pm - 9:30pm	Celia Ong	Introduction to JavaScript and Basic Concepts - Overview of JavaScript, setting up the environment, syntax, variables, data types, and simple input/output, operators - Introduction to control structures (if-else, switch, loops)	- Write simple programs for arithmetic calculations, basic string manipulation, console output formatting
4	19-Oct-24 (Sat)	2A	Sat	9am - 1pm	Malcolm Yam	Recap on Intro Control Structures and Basic Problem Solving - Functions, Recap - Arrays	- Build logic for a basic decision-making program (e.g., simple game choice). - Build a simple quiz application in the console
5	19-Oct-24 (Sat)	2B	Sat	2pm - 6pm	Malcolm Yam	Control Structures and Basic Problem Solving - Functions, Recap - Arrays	
6	23-Oct-24 (Wed)	2C	Wed	6:30pm - 9:30pm	Celia Ong	2D arrays IIFE functions, function expression,	2D array exercises Demo usage of IIFE functions, function expressions. Refactor existing functions to arrow functions

7	26-Oct-24 (Sat)	3A	Sat	9am - 1pm	Malcolm Yam	Recap of JS Hoisting Arrow functions Variable Scope Basic Web (HTML/CSS/DOM Basics) - Intro to HTML(Tags, Attributes, Semantic, Structure, Nav, Forms & Inputs), CSS Basics, DOM (Fundamentals) DOM Manipulation - Manipulating DOM Basics - Form Validation with HTML5 attributes >> then with JS - Basic Callbacks for async form submission & validation Test Prep	Build basic bio page with simple form input Add on with CSS DOM Manipulation: Selecting, editing elements Event Listeners & Event Propagation Write JavaScript to dynamically update the content of the personal bio page based on user input.
8	26-Oct-24 (Sat)	3B	Sat	2pm - 6pm	Malcolm Yam	Test (coverage on JS Fundamentals) CSS selectors, box model, styling, properties, floats Object oriented basics Advanced DOM & Events (Event Propagation)	Create objects literal objects, function based using JS.
9	30-Oct-24 (Wed)	3C	Wed	6:30pm - 9:30pm	Celia Ong	Understanding JSON Intro to APIs Callbacks with APIs, Promises Advanced Flow Control (Fetch, Async, Await) Axios Library	Demo using Thunderclient Create a simple application that fetches and displays data from a public API (e.g., weather, news).
10	02-Nov-24 (Sat)	4A	Sat	9am - 1pm	Malcolm Yam	Project Assignment (Simple web app or console based app that taps on API) Testing with JavaScript & Debugging - Blackbox - Automated testing	Create a simple responsive grid layout using flexbox (blog cards)

						Advanced Loops & Methods (Map, Set, Filter, Reduce)	
11	02-Nov-24 (Sat)	4B	Sat	2pm - 6pm	Malcolm Yam	Demo Applying HTML, CSS, JS in a cohesive project	
12	06-Nov-24 (Wed)	4C	Wed	6:30pm - 9:30pm	Celia Ong	Advanced CSS(Flex, media queries)	
13	09-Nov-24 (Sat)	5A	Sat	9am - 1pm	Malcolm Yam	Project simple demo on API integrations Common API issues	
14	09-Nov-24 (Sat)	5B	Sat	2pm - 6pm	Malcolm Yam	Recap on Responsive layouts Optimising for Web Standards	
15	13-Nov-24 (Wed)	5C	Wed	6:30pm - 9:30pm	Celia Ong	Intro to Web Storage Using Objects and Web Storage Recap on JSON	
16	16-Nov-24 (Sat)	6A	Sat	9am - 1pm	Malcolm Yam	Recap on Objects and intro to web storage (local storage) Building Simple responsive API driven App Project Consultation Peer review & instructor feedback	
17	16-Nov-24 (Sat)	6B	Sat	2pm - 6pm	Malcolm Yam	Project Consultation Peer review & instructor feedback	
18	20-Nov-24 (Wed)	6C	Wed	6:30pm - 9:30pm	Malcolm Yam	Project Consultation Instructor Feedback	
19	23-Nov-24 (Sat)	7A	Sat	9am - 1pm	Malcolm Yam	Project Consultation Peer review & instructor feedback	
20	23-Nov-24 (Sat)	7B	Sat	2pm - 6pm	Malcolm Yam	Project Consultation Peer review & instructor feedback	
21	30-Nov-24 (Sat)	8A	Sat	9am - 1pm	Malcolm Yam	Project Consultation Further development and polishing of the web application	
22	30-Nov-24 (Sat)	8B	Sat	2pm - 6pm	Malcolm Yam	Project Consultation Further development and polishing of the web application	
23	7-Dec-24 (Sat)	9A	Sat	9am - 1pm	Malcolm Yam	Project Consultation Assessment Demo	
24	7-Dec-24 (Sat)	9B	Sat	2pm - 6pm	Malcolm Yam	Project Consultation Assessment Demo	