

TRAINING ROADMAP

<u>Module</u>	<u>Focus Area</u>
Module 1	WLAN Theory & Networking
Module 2	Python Automation
Module 3	Android System & Debugging
Module 4	Packet & Log Analysis

Module 1: WLAN & Networking Basics

Session 1 *WLAN Fundamentals & Networking*

- OSI & TCP/IP models
- IP addressing/subnetting/DHCP/DNS/NAT,
- WLAN Basics: Terminologies, IEEE 802.11 standards, frequency bands, SSID/BSSID, basic Wi-Fi flow

Session 2 *802.11 Protocols & WLAN Tools*

- 802.11 protocols: a/b/g/n/ac/ax
- Wi-Fi security: WPA2, WPA3, EAP
- Frame types (beacon, probe, auth), connection flow

Module 2: Python for Test Automation

Session 1 | *Python Basics* |

- Data types, control flow, functions, OOP principles, file operations - files, json
- exception handling, logging, decorators

Session 2 | *Python Scripting for Automation* |

- modules, subprocess, adb automation, CLI tools
- external libraries-pyshark, requests,
- robot framework, unit test, pytest

- automating test case execution & report generation

■ Module 3: Android Internals & Debugging |

Session 1 | *Android basics* |

- Android architecture & AOSP overview, adb/fastboot, adb commands

Session 2 | *Wi-Fi Testing & Logcat Debugging* |

- types of testing, types of logs, manual testing
- Android Wi-Fi test cases, adb logcat, filters, bugreport basics |

■ Module 4: Wireshark & Log Analysis

Session 1 | *Wireshark for WLAN* |

- packet capture
- 802.11 frame analysis
- Filters, color rules, flow graph, packet dissection
- Packet filters, connection analysis, EAP/4-way handshake, frame dissection |

Session 2 | *Log Correlation + Final Assessment* |

- Correlating pcap + logcat, issue triage (DHCP fail, deauth), hands-on evaluation|