**REF: JNTI/QSF/7.5.1/CD-03**

**JEREMIAH NYAGAH NATIONAL POLYTECHNIC**

**LEARNING PLAN**

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| **UNIT OF COMPETENCE** | **Develop computer program** | **TERM** | **MAY - NOV** |
| **UNIT CODE** | **IT/CU/ICT/CR/10/6** | **DEPARTMENT** | **ICT** |
| **QUALIFICATION** |  | **SESSION** |  |
| **QUALIFICATION CODE** |  | **CLASS** | **ICTL 6 23S** |
| **LEVEL** | **6** | **DATE OF PREPARATION** | **19/05/2025** |
| **PREPARED BY** | **EDWARD MURITHI** | **DATE OF REVISION** |  |
| **SKILL OR JOB TASK:** | | | |
| **BENCHMARK OR CRITERIA TO BE USED:** | | | |

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| **Week** | **Session No.** | **Session Title** | **Learning Outcome (Objectives)** | **Trainer Activities** | **Trainee Activities** | **Resources and References** | **Learning Checks/Assessments** | **Reflections and Date** |
| **1** | **1** | 1. Introduction to Programs 2. Basic Programming Concepts | Define program and programming  Identify basic programming concepts: structure, syntax, control | Explain with examples, discuss real-world uses of programs  Demonstrate program structure on projector, draw flowcharts | Listen, take notes, ask questions  Group discussions, draw sample flowcharts | CS50 Introduction to computer science.  Notes  Sample code, Notes | Oral questioning, observation  Written test, observation checklist | Trainees engaged well – 12/05/2025 |
| **1** | **2** | 1. Programming Languages | Identify types of programming languages | Present different paradigms with examples (OOP, Functional, etc.) | Research and classify programming languages | Internet, slides | Written tests. | Concepts clear – 13/05/2025 |
| **2** | **3** | 1. Approaches to Program Development 2. Phases of Program Development – Part 1 | Explain programming development approaches  Identify program development phases: Planning & System Analysis | Discuss Waterfall, Agile, Spiral models; group discussion  Guide students through phases using diagrams and real-world cases | case study discussions  Draw diagrams, analyze a case study | Diagrams, YouTube video, notes  SDLC chart, projector, worksheets | Oral questions | Most understood well – 27/05/2025 |
| **2** | **4** | Phases of Program Development – Part 2 | Identify remaining phases: Development, Testing, Implementation | Continue with real-life examples, review with past software case study | Create project plan for a sample application | Diagrams,  Whiteboard drawings | Written test, Project evaluation checklist | Active discussion – 19/05/2025 |