



MAURITIUS QUALIFICATIONS AUTHORITY

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**NATIONAL CERTIFICATE**

**LEVEL 5**

**IN**

**SOFTWARE DEVELOPMENT**

## **National Certificate Level 5 in Software Development**

1. Level: 5
2. Total Credits: 147
3. Review Date: May 2026
4. Access to qualification

### **4.1 Entry Information**

National Certificate Level 4 in IT

**or**

An alternative qualification at Level 4 of the NQF

### **4.2 Recognition of Prior Learning [RPL]**

The qualification will not be accessible through Recognition of Prior Learning.

### **4.3 Award of Qualification Requirements**

<b>Unit No.</b>	<b>Unit Standard Title</b>	<b>Level</b>	<b>Credit</b>
<b>Technical Mathematics</b>			
1	Demonstrate Knowledge in Algebra	5	3
2	Demonstrate Basic Knowledge in Statistics	5	4
3	Demonstrate knowledge in Calculus	5	4
<b>Fundamentals of Computer Technology</b>			
4	Explain the evolution of Computer Technology	5	2
5	Explain the basics of Computer Programming	5	4
6	Demonstrate Understanding of the concepts of Algorithm design and problem-solving	5	4
7	Demonstrate knowledge of Virtualization and Cloud Computing	5	2
8	Explain the features of Windows Operating System	5	2
9	Demonstrate knowledge of Security in Computer Technology	5	2

<b>Java Programming</b>			
10	Explain the Java Basics	5	3
11	Explain how to write programs using Methods and Operators	5	4
12	Write Programs using selection statements	5	3
13	Demonstrate how to write Java programs using loops	5	5
14	Demonstrate how to write Java programs using arrays	5	2
<b>Fundamentals of Database Systems</b>			
15	Demonstrate the importance of a database system	5	3
16	Write SQL Statements	5	5
17	Design an ER Diagram using crow's foot notation	5	4
18	Perform Data Manipulation using queries	5	4
<b>Technical Communication</b>			
19	Explain the Fundamentals of Technical Communication	5	3
20	Develop Skills for Business Communication	5	5
21	Develop Presentation Skills	5	2
<b>Software Engineering</b>			
22	Demonstrate an Understanding of Software Engineering	5	1
23	Demonstrate knowledge of Software development process	5	3
24	Demonstrate understanding of the concept of Requirements and Specification	5	3
25	Demonstrate understanding of Software Design	5	2
26	Demonstrate understanding of various types of Software testing and maintenance measures	5	2
27	Demonstrate Understanding of Software Project Management	5	2
<b>Object-Oriented Programmimg with Java</b>			
28	Write simple Java programs using access modifiers	5	4

29	Implement Inheritance concepts in Java programs	5	3
30	Implement polymorphism concepts in Java programs	5	3
31	Connect a Java program to a Database	5	4
<b>Teamwork and Cyber Ethics</b>			
32	Demonstrate understanding of the stages of team development	5	2
33	Explain Functions of a team	5	2
34	Describe the Workflow of an online team	5	3
35	Give an overview of ethical theories	5	1
36	Demonstrate knowledge of Cyber Ethics governing bodies	5	1
37	Demonstrate knowledge of privacy and civil liberties	5	1
<b>IT Project</b>			
38	Demonstrate understanding of Microsoft Office Advanced Concepts and Techniques	5	1
39	Develop a project plan to an agreed specification	5	4
40	Develop a solution using applications software	5	20
41	Deliver and Evaluate the Project	5	5
<b>Safety and Health</b>			
42	Demonstrate knowledge of a supportive Working Environment	5	3
43	Demonstrate understanding of the Occupational Health and Safety Procedures	5	3
44	Demonstrate knowledge pertaining to relevant ICT and Health and Safety Law and Legislations	5	2
45	Demonstrate the importance of Ethics and Professionalism for the Computer Industry	5	2
<b>Total Credits</b>			<b>147</b>

**Purpose:**

The qualification aims to impart knowledge and skills required to develop applications by coding, testing, debugging using an object-oriented programming approach. Learners shall acquire to perform in various roles such as Junior Java Developer, Junior Mobile app developer or DBA assistant.

**Qualification Pathway:**

Learners who possess the National Certificate Level 5 in Software Development can choose to enrol for National Qualifications (National Diploma Level 6 in Information Technology) and accredited foreign qualification at Level 6 of the National Qualifications Framework (NQF).