



**CAREERS**  
BUSINESS INSTITUTE

[www.cb institute.co.za](http://www.cb institute.co.za)

# Occupational Certificate: Software Developer (NQF 5)



**SOFTWARE  
DEVELOPMENT**

Careers Business Institute has been empowering the community since its inception in 1991. We provide a comprehensive range of Management, Office Administration, Financial and IT courses that have been designed to help you launch your successful career. The Careers Training Group has campuses in Umhlanga Ridge and at the Chatsworth Centre in Kwazulu Natal

**Microsoft**  
CERTIFIED  
Partner

**sage**  
Pastel  
Business Partner  
Authorised  
Training Centre

 **QCTO**  
Quality Council for Trades & Occupations

## Occupational Certificate: Software Developer (NQF 5)

### What is a Software Developer?

Most of our days are spent interacting with technology. In order to power these technologies, we need one critical component – software. Software refers to the programs, instructions and other information that tells a computer what to do and how to do it.

Software developers – sometimes referred to as a software engineer – are the masterminds behind a variety of programs. Software developers design, create, evaluate, modify, maintain and configure software solutions for computer systems to meet user needs and client specifications. They may also oversee the entire software development lifecycle, conduct research, debug code, deploy upgrades and build diagrams and models to communicate end results.



Software development is one of the largest tech occupation categories with an estimated base of 27 million in 2024. And it's no surprise that the need for software developers will continue to grow, with the 10-year projected growth being 180% above the national rate, according to the CompTIA State of the Tech Workforce 2024, U.S. Bureau of Labor Statistics.

### The Software Developer Solution by Quality Council for Trades & Occupations (QCTO)

The QCTO is responsible for overseeing the development, implementation and maintenance of occupational qualifications within the South African National Qualifications Framework (NQF).



As an integral part of South Africa's education and training system, the QCTO is responsible for ensuring that the skills development programmes meet the required standards and are in line with South Africa's economic and social goals. By setting and maintaining high standards, the QCTO contributes to the overall improvement of skill development and workforce quality.

### Is a Software Developer Career for me?

Software Developer Career have the following characteristics; Adaptability, resourcefulness, and the ability to troubleshoot and problem-solve in high-pressure situations. They also have good communication and teamwork skills.

If you are any of these archetypes, you may be well suited to be a Software Developer.

## Occupational Certificate: Software Developer (NQF 5)

### Occupational Certificate: Software Developer at Careers Business Institute

The Occupational Certificate: Software Developer (NQF 5) program delves into core programming languages and paradigms, empowering you to design and implement software solutions. You'll gain proficiency in building dynamic and responsive web applications, utilizing industry-standard technologies. Furthermore, the program emphasizes database management, ensuring you gain expertise in database design, manipulation, and querying for data integrity and efficient storage.



Mobile app development is also covered, equipping you with the skills to design and develop engaging mobile applications for various platforms. You'll also explore software engineering principles, applying object-oriented programming concepts, agile methodologies, and software quality assurance techniques to create maintainable and reliable software.

Careers Business Institute have been producing professional graduates for over 30 years, being Nationally & Internationally accredited has assisted our alumni in finding employment sooner!

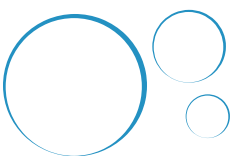
### I'm a Certified Software Developer, What now?

Certified Software Developers have a wide range of Career Opportunities available. We have listed some of the more widely available careers for certified developers;

- Full-Stack Developer
- Web Developer
- Mobile App Developer
- Junior Software Engineer



Students have the option of specialization through Information Technology (IT) programs offered at Careers Business Institute. Are you looking to become a Computer Technician or a Cyber Security Specialist? Join the Occupational Certificate: Artificial Intelligence Software Development (NQF 5) or move onto the Cyber Security Expert (NQF 5) Qualification to have access to higher level IT employment opportunities. Contact a Careers Business Institute Campus to find more about these courses and their requirements!



## Occupational Certificate: Software Developer (NQF 5)

### Course Breakdown: Knowledge Modules

- Computers and Computing Systems
- Desktop and Professional Software to Communicate and Visualize Information
- Automated Web Scraping as a Data Source & Computing Theory
- Logical Thinking and Basic Calculations
- Software Development with HTML5, Opensource Frameworks and Libraries
- UML as Standard Modelling Language for Software and Systems Development
- Obtaining, Querying, Manipulating and Presenting Data with and without MVC
- Software Development Life Cycle, Programming Languages, Algorithms and Security
- Introduction to Governance, Legislation and Ethics
- 4IR, Future Skills & Design Thinking Principles for Innovation
- Business communication and customer services

### Course Breakdown: Practical Modules

- Use Software to Communicate and Visualize Information
- Use and Manage Spreadsheets and Workbooks
- Use Desktop Applications to Analyze, Visualize and Report on Data
- Use a Visual Analytics Platform and Visualization Tools to Analyze, Visualize and report on Data
- Query, Massage Data Apply Logical Thinking and Math

- Apply Code to use a Software Toolkit/Platform in the Field of Study or Employment
- Develop Software using HTML5, Opensource Frameworks and Libraries
- Design and Build Web Applications, Desktop Graphical User Interfaces or Mobile Apps
- Use a Cloud Automation Platform to Create Solutions & Develop Software using Python
- Apply the Development Cycle when Developing Software
- Design Thinking for Innovation Workshop
- Provide support to end Users & Install computer software and hardware

### Course Breakdown: Work Experience Modules

- Technical Requirement Analysis and Refinement
- Modelling Processes & Capstone Project
- Programming for Software Solution Development

### Minimum Requirements & Details

Minimum Requirements: Grade 12 (English) or any NQF 4 Qualification

Full - Time: 2 Years (Part time also available)

SAQA ID: 118707 Credits: 220

Assessment method: External Integrated Summative Assessment (EISA).

**Includes FREE Learning Materials – No hidden costs!**

### Course Fees

Careers Business Institute has developed easy payment options for all courses. Please enquire for a full fee schedule