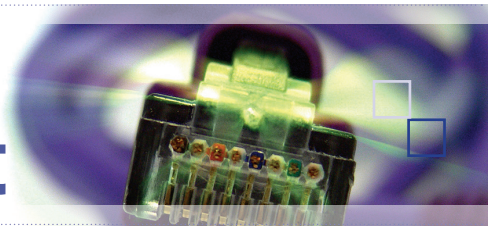
Diploma in Advanced Software Development



Qualification Description

The Diploma in Advanced Software Development is approximately 12 months full-time* or 38 months part-time*. This qualification has been designed to develop skills in IT business systems design and development and will provide you with the most extensive IT knowledge base.

This qualification offers training towards four vendor certifications: SCJP, SCJD, MCTS: Windows Applications and MCTS: Web Applications.

What will I learn?

The skills that you will gain will qualify you for a diverse range of job roles across the IT industry. You will learn all aspects of the IT business system cycle including the analysis, design, development, implementation and evaluation of systems to increase business efficiencies.

In addition, you will learn to design, create, document and implement computer programs in a range of different languages. You can also elect to train in the area of database development.

Should I consider this qualification?

The Diploma in Advanced Software Development is ideal for those who want to enter the IT industry with the broadest career options. This qualification is concerned with the application of technology in today's business environment and the potential that programming possesses. This qualification will give you a solid base on which to start your new career.

What do I need to start?

To gain entry to the qualification, applicants are expected to have successfully achieved:

• A satisfactory result in Computer Power's Aptitude test

• Completed an IT Certificate at NZQA Level 4 or higher (or equivalent)

For International students an additional English language requirement as follows must also be met:

• IELTS 5.5 or equivalent

Major Qualification Goals

Upon completion of this qualification, students will be able to:

- Complete computing tasks and functions in a number of operating system environments
- Code a well structured solution to a problem in a variety of programming languages
- Perform simple accounting functions including using an electronic accounting application
- Analyse client requirements and design, develop, code and evaluate the appropriate business solution
- Demonstrate communication, problem solving, time management, goal setting, planning and customer relation skills

Career Paths

This qualification can complement your existing skills and qualifications or provide further opportunities in your current role. It can also prepare you for a number of career opportunities including:

CAREER ENTRY	FUTURE OPPORTUNITIES
e-Business Developer	e-Commerce Specialist
e-Commerce Developer	Webmaster
Programmer	Analyst Programmer
Web Developer	Systems Analyst
Business System Developer	Database Administrator
Database Developer	Contract Manager
	Database Manager
	IT Manager

**Based on: Full-time study load of 5 shifts per week of approximately 5 hours per shift. Part-time study load of 2 shifts per week of approximately 4 hours per shift. Study schedules can also be tailored to meet your needs.*

Computer Power INSTITUTE®

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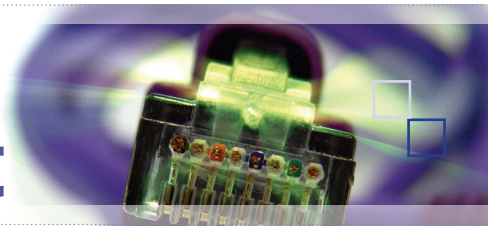

INTRODUCTION
- Introduction to Computer Power

OPERATE A DATABASE
- Creating a database
- Organising a database
- Entering and retrieving data
- Forms, reports and queries

DESIGN AND BUILD A DATABASE
- Database management
- Elements of a database management system
- Database administration, data warehousing

DESIGNING WEB SITES
- Design, link and build Web pages
- Move HTML documents to a Web server
- HTML and Cascading Style Sheets

INTRODUCTION TO LINUX
- use different Linux GUI environments
- use basic terminal commands

PROGRAM DESIGN CONCEPTS
- Principles of programming techniques
- Apply three basic control structures of sequence, selection and repetition in writing an algorithm
- Check algorithms using test data

PROGRAMMING CONCEPTS 1
- Create simple Java programs
- Understand the principles of Object-Oriented programming

PROGRAMMING CONCEPTS 2
- Create Java GUI frames
- Write code to react to events and exceptions
- Understand the MVC pattern

UNIFIED MODELING LANGUAGE
- Understand UML fundamentals
- Create Use Case, Class, Activity and State Machine diagrams

INTRODUCTION TO VISUAL STUDIO
- Create window forms
- Source control
- Object-Oriented programming in VB.NET/C#

STRUCTURED QUERY LANGUAGE
- Understand the fundamentals of the SQL Language
- Construct simple SQL statements

PROGRAMMING CONCEPTS 3
- Create programs that use threads
- Create applets
- Java streams
- JDBC

PROGRAM DESIGN AND MAINTENANCE
- Impact of integration factors on systems design
- Design client interface
- Test, debug and document programming code

JAVA PROGRAMMING (SCJP & SCJD)
- Advanced GUI's
- Networking
- Project analysis, design and implementation

C#/VB.NET PROGRAMMING (MCTS: WEB APPLICATION & MCTS: WINDOWS APPLICATION)
- Application development foundation
- Windows based client development
- Web based client development

SYSTEMS DEVELOPMENT PRACTICES
- Determine client business expectations and manage the scope, cost and quality control
- Develop the detailed technical design blueprint
- Design and manage project life cycle

INFORMATION SYSTEMS ANALYSIS
- Detailed investigation and project analysis
- System design and development
- System life cycle methodologies
- System development tools

ACCOUNTING FUNDAMENTALS
- Introduction to accounting and management accounting
- The balance sheet & profit and loss statement
- Analysis and interpretation of financial statements

ELECTRONIC ACCOUNTING CONCEPTS
- Setting up MYOB-receivables, payables, inventory and sales
- Produce reports to manage a business

PROFESSIONAL DEVELOPMENT PROGRAM
- Goal setting and planning
- Time and personal resource management
- Communication skills, decision making
- Telephone and written communication skills

EMPLOYMENT PREPARATION AND PLANNING
- Surveying the job market
- Matching skills with employer needs
- Interview techniques

GROUP DEVELOPMENT PROJECT
- IT business strategy development
- Project life cycle design
- Manage, guide and apply project integration and quality management techniques

Microsoft IT Academy Program Member