



## Get the fundamentals of programming to build a successful career

Our one-year full-time programme will give you practical skills and hands-on programming experience in various languages. We'll also prepare you to succeed in the external Microsoft examinations.

You'll become confident using Microsoft Visual Studio as this is where you'll do most of your development. Our aim is to make you an effective programmer with problem solving skills and a thorough understanding of the process of development from start to finish. You will write various codes during the course to make up a personal portfolio which showcases your skills.

MTA certification gives you foundational knowledge to advance to Microsoft Certified Solutions Associate (MCSA) or Microsoft Certified Solutions Developer (MCSD) certifications. *MTA certification will jump start your career.*

## Career opportunities

- Software developer • Programmer • Software engineer • Solutions specialist
- Web developer • Web administrator • Database developer • Database analyst
- Web integration specialist

## Programme benefits

- **Practical and hands-on** with lectures conducted in a computer training studio
- UniCollege incorporates **Raspberry Pi training** to create a fun, practical and hands-on experience for students. The Raspberry is similar to a small computer, running its own Linux operating system, which can connect to various electronic components and even control an entire home automation system.
- In addition to an experienced lecturer, UniCollege also makes use of **sophisticated lesson laboratories** to enhance the learning experience
- Our programme is relevant and current to industry needs and objectives
- You will write the internationally recognised Microsoft exams
- **Sufficient tuition and practice time** to ensure you understand and can apply the content in a practical context
- By following the UniCollege study path and **using our unique study tools**, you will gain a solid foundation in programming and top coding skills

## Accreditation

- *Recognised international qualifications from Microsoft.*
- *These qualifications are nationally and internationally recognised by industry.*

## Duration

### Full Time

Our full-time programme runs over one year. You attend classes on weekdays and need to be on campus 4 hours a day. Lectures are 2 hours and then you'll practice what you've learnt using real life tasks to develop your coding and programming skills.

## Admission requirements

- Communication and numeracy skills at NQF level 4/Grade 12 or equivalent
- Basic skills in Windows and Microsoft Office
- Basic knowledge of computers
- Computer Science or Maths will be beneficial

Classes and assessments are conducted in English.

## What you will get

You will write the international external Microsoft examinations after passing a UniCollege internal exam. External exams must be written in the year of enrolment.

Successful students will receive the following certification:

- Microsoft Technology Associate (MTA): Software Development Fundamentals
- MTA: Database Administration Fundamentals
- MTA: HTML5 Application Development Fundamentals
- MTA: Introduction to Programming in Python
- MTA: Introduction to Programming using JavaScript
- MTA: Introduction to Programming using HTML and CSS
- MTA: Introduction to Programming using Java

## Curriculum

More detailed syllabi available on request.

### Programming fundamentals

#### The Basics of Starting Software Development

• Typing • Hour of code • Git/Github • Development platforms (AWS, Azure, Netlify) • Front-end, back-end and full-stack development

#### Basic Raspberry Pi training using Python (including Robotics)

#### asp.net core

A cross-platform, high-performance, open-source framework for building modern, cloud-enabled, internet-connected apps.

#### Introduction to React

A JavaScript library that simplifies development of visual interfaces

#### C# Fundamentals (Console)

• Data types and variables • Logic and conditionals • Methods • Arrays and loops • Classes and objects • Interfaces and inheritance • References

#### Introduction to Databases

• Various types of databases • SQL vs NOSQL • MongoDB / MySQL / SQLite

#### Customer Service and Management

• Critical elements of customer service • Handling customer complaints • The deadly sins of customer service • Types of CRM technology

### Microsoft Technology Associate (MTA) modules

#### Software Development Fundamentals - MTA 98-361

• Core programming • Object-oriented programming • General software development • Web and desktop applications • Databases

#### Database Administration Fundamentals - MTA 98-364

• Core database concepts • Create database objects • Manipulate data • Data storage • Administer a database

#### HTML5 Application Development Fundamentals - MTA 98-375

• Manage the application life cycle • Build the UI using HTML5 • Format the UI using Cascading Style Sheets (CSS) • Code using JavaScript

#### Introduction to Programming in Python - MTA 98-381

• Integrating Raspberry Pi • Data types and operations • Control flow with decisions and loops • Input and output operations • Document and structure code • Operations using modules and tools

#### Introduction to Programming using JavaScript - MTA 98-382

• JavaScript operators, methods and keywords • Variables, data types and functions • Implement and analyse decisions and loops • The Document Object Model • HTML forms

#### Introduction to Programming using HTML and CSS - MTA 98-383

• HTML Fundamentals • CSS Fundamentals • Structure documents using HTML • Present multimedia using HTML • Style web pages using CSS

#### Introduction to Programming using Java – MTA 98-388

• Java fundamentals • Data types, variables and expressions • Implement flow control • Perform object-oriented programming • Compile and debug code

## What's included in your fee

- All your study material
- All your textbooks
- The external examination costs for all 7 of the Microsoft MTA examinations

A rewrite fee is payable if you do not pass the external exams on the first attempt.

## Learning method

Our focus is face-to-face learning in small classes and computer studios where your lecturer knows your name! Our lecturers are industry professionals with practical experience. Classes are supported by:-

- Dedicated programme managers
- Online assessments to prepare you for exams
- A detailed orientation to prepare you for the year ahead
- A workplace readiness workshop
- A minimum of 20 contact hours for each MTA module
- Group development will teach you how to work with others and help each other when faced with a challenge.



## Student portal

Our online student portal, CampusOnline, allows you to manage all your academic admin, access your results, update your details, track your attendance, get in touch with facilitators and other students, access extra study material and attend virtual lectures when necessary. We've got you covered!

## Campus facilities

We are super proud of our clean and well-maintained campus with Covid measures in place. You'll have access to:-

- Free Wi-Fi
- A library with PCs to use, extra resources and printing services
- A cafeteria and outdoor area for chilling during breaks
- Free secure parking
- A safe campus environment with controlled access

