

# FACULTY OF SCIENCE

## DEPARTMENT OF COMPUTER AND INFORMATION SCIENCES

### DIGITAL AND TECHNOLOGY SOLUTIONS

Bachelor of Science with Honours in Digital and Technology Solutions with Specialisation in Business Analysis

Bachelor of Science with Honours in Digital and Technology Solutions with Specialisation in Cyber Security

Bachelor of Science with Honours in Digital and Technology Solutions with Specialisation in IT Consultant

Bachelor of Science with Honours in Digital and Technology Solutions with Specialisation in Software Engineering

Bachelor of Science in Digital and Technology Solutions

Diploma of Higher Education in Digital and Technology Solutions

Certificate of Higher Education in Digital and Technology Solutions

*This programme is a Degree Apprenticeship.*

*These regulations are to be read in conjunction with [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.](#)*

#### Status of the Programmes

1. Admission to the programme shall normally be for applicants who hold appropriate qualifications that would allow entry into the Second Year. Students will be awarded Recognition of Prior Learning equivalent to 120 credits at Level 1.
2. All students are usually admitted in the first instance as potential Honours students.

#### Mode of Study

3. The programmes are available via on campus study (Open Access) or off campus (Distance Learning) on a part-time basis.

#### Curriculum

4. All students shall undertake an approved curriculum as follows:

**First Year** – First year is not taught as part of this programme.

**Second Year** – All students shall undertake modules amounting to 100 credits as follows:

#### Business Analysis and IT Consultant Specialisms

#### Compulsory Modules

| Module Code | Module Title                         | Level | Credits |
|-------------|--------------------------------------|-------|---------|
| CS113       | Information and Data 1               | 1     | 20      |
| CS119       | Problem Solving                      | 1     | 10      |
| CS120       | Introduction to Software Engineering | 1     | 10      |
| CS274       | Work Based Learning 1                | 2     | 10      |
| OB206       | Business and Management Fundamentals | 1     | 20      |

### **Optional Modules**

30 credits chosen from:

|       |                         |   |    |
|-------|-------------------------|---|----|
| CS112 | Programming 1           | 1 | 30 |
| CS121 | Programming with Python | 1 | 30 |

Not all optional modules on this list will be available in each academic year.

### **Cyber Security and Software Engineering Specialisms**

#### **Compulsory Modules**

| Module Code | Module Title                         | Level | Credits |
|-------------|--------------------------------------|-------|---------|
| CS112       | Programming 1                        | 1     | 30      |
| CS113       | Information and Data 1               | 1     | 20      |
| CS119       | Problem Solving                      | 1     | 10      |
| CS120       | Introduction to Software Engineering | 1     | 10      |
| CS274       | Work Based Learning 1                | 2     | 10      |
| OB206       | Business and Management Fundamentals | 1     | 20      |

**Third Year** - All students shall undertake modules amounting to 100 credits as follows:

### **Business Analysis and IT Consultant Specialisms**

#### **Compulsory Modules**

| Module Code | Module Title                                                | Level | Credits |
|-------------|-------------------------------------------------------------|-------|---------|
| CS273       | Introduction to Databases                                   | 2     | 15      |
| CS255       | Professional Issues                                         | 2     | 10      |
| CS276       | Software Engineering Principles for Business                | 2     | 10      |
| CS353       | Fundamentals of Data Analytics                              | 3     | 15      |
| CS362       | Work Based Learning 2                                       | 3     | 10      |
| OB205       | Foundational Principles of Business Analysis and Technology | 2     | 20      |
| OB304       | Managing People for Innovation and Performance              | 3     | 20      |

### **Cyber Security and Software Engineering Specialisms**

**Compulsory Modules**

| Module Code | Module Title                                | Level | Credits |
|-------------|---------------------------------------------|-------|---------|
| CS252       | Software Engineering 2                      | 2     | 20      |
| CS253       | Information and Data 2                      | 2     | 20      |
| CS255       | Professional Issues                         | 2     | 10      |
| CS275       | Programming: Data Structures and Algorithms | 2     | 20      |
| CS362       | Work Based Learning 2                       | 3     | 10      |
| CS363       | Principles of Computer Networks             | 3     | 10      |
| CS364       | Programming Project                         | 3     | 10      |

**Fourth Year** – All students shall undertake modules amounting to 100 credits as follows:

**Business Analysis and IT Consultant Specialisms****Compulsory Modules**

| Module Code | Module Title                       | Level | Credits |
|-------------|------------------------------------|-------|---------|
| CS272       | Introduction to Computer Networks  | 2     | 10      |
| CS365       | Software Engineering Group Project | 3     | 20      |
| CS379       | User Interface Design              | 3     | 20      |
| CS423       | Cyber Security                     | 4     | 10      |
| CS460       | Work Based Learning 3              | 4     | 10      |
| OB310       | Project Management Basics          | 3     | 20      |

**Optional Modules**

Together with 10 credits from the following

| Module Code | Module Title:                            | Level | Credits |
|-------------|------------------------------------------|-------|---------|
| OB403       | Entrepreneurial Mindset in the Workplace | 4     | 10      |
| OB405       | Service Operations and Simulation        | 4     | 10      |

**Cyber Security Specialism****Compulsory Modules**

| <u>Module Code</u> | <u>Module Title</u>             | <u>Level</u> | <u>Credits</u> |
|--------------------|---------------------------------|--------------|----------------|
| CS356              | Group Project                   | 3            | 15             |
| CS368              | Programming: Concurrency        | 3            | 10             |
| CS369              | Advanced Computer Security      | 3            | 15             |
| CS370              | Information Security Management | 3            | 15             |
| CS371              | Security Vulnerability Testing  | 3            | 15             |
| CS454              | Fundamentals of Cyber Security  | 4            | 20             |
| CS460              | Work Based Learning 3           | 4            | 10             |

### **Software Engineering Specialism**

#### **Compulsory Modules**

| <u>Module Code</u> | <u>Module Title</u>    | <u>Level</u> | <u>Credits</u> |
|--------------------|------------------------|--------------|----------------|
| CS351              | Programming 3          | 3            | 15             |
| CS352              | Software Engineering 3 | 3            | 15             |
| CS355              | User-Centred Design    | 3            | 15             |
| CS356              | Group Project          | 3            | 15             |
| CS423              | Cyber Security         | 4            | 10             |
| CS460              | Work Based Learning 3  | 4            | 10             |

#### **Optional Modules**

Together with 20 credits from the following:

| <u>Module Code</u> | <u>Module Title</u>                       | <u>Level</u> | <u>Credits</u> |
|--------------------|-------------------------------------------|--------------|----------------|
| CS451              | Design Patterns and Software Architecture | 4            | 20             |
| CS456              | Cloud Computing                           | 4            | 20             |

### **Fifth Year**

#### **Compulsory Modules**

| <u>Module Code</u> | <u>Module Title</u>  | <u>Level</u> | <u>Credits</u> |
|--------------------|----------------------|--------------|----------------|
| CS4XZ              | End-point Assessment | 4            | 30             |

All students shall undertake one of the modules amounting to 30 credits as follows depending on their specialism:

| Module Code | Module Title                       | Level | Credits |
|-------------|------------------------------------|-------|---------|
| CS4XV       | Business Analyst Synoptic Project  | 4     | 30      |
| CS4XW       | Cyber Security Synoptic Project    | 4     | 30      |
| CS4XX       | IT Consultant Synoptic Project     | 4     | 30      |
| CS4XY       | Software Engineer Synoptic Project | 4     | 30      |

### Progress

5. In order to progress to the third year of the course, a student must have accumulated at least 220 credits from the programme curriculum.
6. In order to progress to the fourth year of the course, a student must have accumulated at least 320 credits from the programme curriculum.
7. In order to progress to the fifth year of the course, a student must have accumulated at least 420 credits from the programme curriculum.

### Final Honours Classification

8. The final Honours classification will normally be based on the first assessed attempt at the level 3 and level 4 compulsory and, where appropriate, specified optional modules.

### Award

9. Notwithstanding the [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#) for the **BSc with Honours in Digital and Technology Solutions with Specialisation** in a given topic a candidate must follow the curriculum for their specialism and have undertaken 30 credits at Level 4 in subjects related to the specialisation-
10. **BSc:** In order to qualify for the award of the degree of **BSc in Digital and Technology Solutions**, the [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#) shall apply.
11. **Diploma of Higher Education:** In order to qualify for the award of a **Diploma of Higher Education in Digital and Technology Solutions**, the [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#) shall apply.
12. **Certificate of Higher Education:** In order to qualify for the award of a **Certificate of Higher Education in Digital and Technology Solutions**, the [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#) shall apply.