# BSc (Hons) Information Systems - IC 311

## 1. CONTEXT AND OBJECTIVES

The field of Information systems (IS) focuses on technology-enabled business development whereby IS professionals require both technical and organisational expertise for systems analysis and design, business process management, systems implementation, and IS project management. Information systems facilitate and influence business operations and innovation, thus contributing to create new business models and services.

The programme of study will impart to prospective students the knowledge and analytical skills to develop and manage business information systems with adequate understanding of the required concepts, technology and the organisational environment. This course integrates business and information, as well as computing technology, to deal with analysis, design, implementation and management of information systems.

The programme is in line with international recommendations of computing curricula for Undergraduate Degree Programmes in Information Systems and has been designed in collaboration with the software industry in Mauritius.

The objectives of the programme are to:
- Provide students with both foundation and practical skills to acquire a deep understanding of the business and professional responsibilities related to the use of information systems in organisations;
- Engage students in different activities which involve problem solving and critical thinking to analyse business problems, propose and implement information system solutions;
- Impart essential technical and soft skills in graduates allowing a smooth transition to the industry;
- Effectively use and administrate Information Systems in different business settings;
- Demonstrate the ability to be a productive team member in a business development environment.

**Competencies and Career Opportunities**

After successful completion of this programme, students should be equipped with the following competencies:
- Analytical, problem solving and programming skills;
- Effective communication skills, adaptability and flexibility;
- Software project management skills;
- Business analytics skills.

Job prospects for graduates exist in the fields of Software Development, Business Analytics, Business Intelligence, Banking and Digital Marketing among others.

The programme consists of three (3) levels.

Level 1 modules cover the fundamental topics of the field. They also impart students with some soft skills such as teamwork and communication skills.

Level 2 modules deal with the technical aspects of Information Systems. The modules have been designed so as to impart students with a wide range of skills as well as the aptitude to deal with an ever-changing field.

Level 3 modules are specialist modules which cater for innovations in the field, more demanding in nature as well as the exploratory aspects of the field. Students also undertake a project which enables them to bring together a large number of concepts from the programme, explore the field on their own and show their overall competencies.

## 2. LEARNING OUTCOMES

At the end of this programme, the student should be able to:
- Analyse business problems and apply information system knowledge to provide effective and efficient solutions;
- Use tools and techniques to model and implement information systems;
- Apply analytical skills for enterprise systems, business intelligence and emerging fields in information systems;
- Demonstrate the ability to work in team projects and use effective communication skills in both verbal and written communication.

## 3. TEACHING AND LEARNING METHODS

The BSc (Hons) Information Systems programme consists of Teaching Contact Hours, Self-Study and Other Learning Activities. Teaching methods may include face to face lectures, online delivery, tutorials or practical sessions.

For each module, 6 LCCS credits contribute to 30 hrs of direct contact, 60 hrs of self-study and 90 hrs of other activities, except for ICDT 1200, ICDT 2200 & ICT 3000Y, for which the details about the total hours in each category will be specified in the module catalogue.

Other Learning Activities may comprise of the following:
- Working on assignments;
- Sitting for Class Tests and preparation time for same;
- Sitting for Examinations and preparation time for same;
- Group work;
- Attending Workshops/Conferences recommended by the Department/Faculty;
- Fieldwork;
- Site Visits/Trips;
- Additional Practicals;
- Presentations among peers;
- Experiential Learning;
- Placements/Internships;
- Guest lectures.

## 4. ENTRY REQUIREMENTS

- **General Requirements**

As per General Entry Requirements for admission to the University for Undergraduate Degrees.

- **Programme Specific Requirements**

At least 2 GCE 'A' level Passes and Credit in Mathematics at SC/'O' level

- **Special cases**

As per university regulations.

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## 5. PROGRAMME DURATION

|  | Normal (Years) | Maximum (Years) |
|---|---|---|
| **Degree:** | 3 | 5 |

## 6. MINIMUM CREDITS REQUIRED (LCCS CREDITS)

### (i) For Degree Award

For the degree award in BSc (Hons) Information Systems, the student must obtain at least 204 LCCS credits including:

| Modules | LCCS Credits |
|---|---|
| Minimum Credits for Core Modules | 168 |
| Minimum Credits for Electives Modules | 12 |
| Final Year Project | 18 |
| Industrial Training | 6 |
| TOTAL | 204 |

### (ii) For Diploma Award

The Diploma is provided as a possible exit point in the programme. To be able to exit with a Diploma in Information Systems, a student must have attained 120 LCCS credits, which satisfy requirements specified by University regulations for Exit Points. A student may also opt to complete a Diploma project, worth 12 LCCS credits, to attain the 120 LCCS credits. The assessment of the Diploma project will be based on project report, presentation and software/system demo. Written requests to exit with Diploma should be made to the Dean of Faculty.

### (iii) For Each Academic Year

Students may register for a maximum of 96 LCCS credits and a minimum of 12 LCCS credits, per year.

## 7. ASSESSMENT AND DEADLINES

The assessment for each module may be based on one or a combination of the following:
- Examination
- Continuous Assessment
- Software Evaluation
- Portfolio Evaluation

Students will be assessed by continuous assessment (CA) and/or formal examination for taught modules.

**7.1 Examinations:**
Examination may carry up 60% of the total marks.

**7.2 Continuous Assessment:**
The weight of the CA will be at least 40%.

**7.3 Submission Deadline for Dissertation/ Research Project:**
The Submission Deadline for Dissertation/ Research Project is going to be as per UoM Regulations.

The specific details and/or formula for the calculation of the final mark are provided in the Module Catalogue for each module.
Information regarding the classification of award and student grading is provided in the university regulations.

## 8. LIST OF MODULES

| Module Code | Module Name | L*/T*/P* (Per Week Per Cohort) | Self-Study Hours/ Week | Other Learning Hours/ Week | LCCS Credits |
|---|---|---|---|---|---|
| **CORE** | | | | | |
| ICDT 1016Y(1) | Communication and Business Skills for IT | 2 + 1 + 0 | 6 | 9 | 12 |
| SIS 1025Y(1) | Foundations of Information Systems | 2 + 0 + 1 | 6 | 9 | 12 |
| SIS 1026Y(1) | Databases and Information Management | 2 + 0 +1 | 6 | 9 | 12 |
| SIS 1027Y(1) | System Analysis and Design | 2 + 1 + 0 | 6 | 9 | 12 |
| SIS 1028Y(1) | Application Development | 2 + 0 + 1 | 6 | 9 | 12 |
| SIS 1037Y(1) | Analytical Techniques for Information Systems | 2 + 1 + 0 | 6 | 9 | 12 |
| SIS 2024Y(3) | Object-Oriented Programming | 2 + 0 + 1 | 6 | 9 | 12 |
| SIS 2025Y(3) | Enterprise Systems | 2 + 0 + 1 | 6 | 9 | 12 |
| SIS 2026Y(3) | Information Systems Innovations and Web Technologies | 2 + 0 + 1 | 6 | 9 | 12 |
| SIS 2027Y(3) | Information Systems Audit and Controls | 2 + 1 + 0 | 6 | 9 | 12 |
| SIS 2043Y(3) | Software Project Management | 2 + 1 + 0 | 6 | 9 | 12 |
| SIS 2047Y(3) | E-business and Digital Marketing | 2 + 0 + 1 | 6 | 9 | 12 |
| ICDT 2200 | Industrial Training (10 weeks) | | | | 6 |
| SIS 3000Y(5) | Final Year Project | | | | 18 |
| SIS 3124Y(5) | Business Intelligence and Big Data Analytics | 2 + 0 + 1 | 6 | 9 | 12 |
| SIS 3145Y(5) | Natural Language Processing And Ontology Engineering | 2 + 0 + 1 | 6 | 9 | 12 |
| **ELECTIVES** | | | | | |
| SIS 3070Y(5) | Enterprise Architecture and Integration | 2 + 0 + 1 | 6 | 9 | 12 |
| SIS 3073Y(5) | Enterprise Application Development | 2 + 0 + 1 | 6 | 9 | 12 |
| SIS 3118Y(5) | Information Systems Security | 2 + 0 + 1 | 6 | 9 | 12 |
| ICT 3126Y(5) | Network Information Systems | 2 + 0 + 1 | 6 | 9 | 12 |

**Note:**
**1. Contact Hours= Lectures, T=Tutorials, P*= Practicals**
**2. Offering of electives would be subject to availability of resources and critical mass. The Department reserves the right to offer additional electives.**

## 9. PROGRAMME PLAN

| Module Code | Module Name | L*/T*/P* (Per Week Per Cohort | LCCS Credits |
|---|---|---|---|
| ICDT 1016Y(1) | Communication and Business Skills for IT | 2 + 1 + 0 | 12 |
| SIS 1025Y(1) | Foundations of Information Systems | 2 + 0 + 1 | 12 |
| SIS 1026Y(1) | Databases and Information Management | 2 + 0 +1 | 12 |
| SIS 1027Y(1) | System Analysis and Design | 2 + 1 + 0 | 12 |
| SIS 1028Y(1) | Application Development | 2 + 0 + 1 | 12 |
| SIS 1037Y(1) | Analytical Techniques for Information Systems | 2 + 1 + 0 | 12 |
| | **Sub Total** | | **72** |
| **Level 2** | | | |
| **Module Code** | **Module Name** | **L*/T*/P* (Per Week Per Cohort** | **LCCS Credits** |
| SIS 2024Y(3) | Object-Oriented Programming | 2 + 0 + 1 | 12 |
| SIS 2025Y(3) | Enterprise Systems | 2 + 0 + 1 | 12 |
| SIS 2026Y(3) | Information Systems Innovations and Web Technologies | 2 + 0 + 1 | 12 |
| SIS 2027Y(3) | Information Systems Audit and Controls | 2 + 1 + 0 | 12 |
| SIS 2043Y(3) | Software Project Management | 2 + 1 + 0 | 12 |
| SIS 2047Y(3) | E-business and Digital Marketing | 2 + 0 + 1 | 12 |
| ICDT 2200 | Industrial Training | | 6 |
| | **Sub Total** | | **78** |
| **Level 3** | | | |
| **Module Code** | **Module Name** | **L*/T*/P* (Per Week Per Cohort** | **LCCS Credits** |
| SIS 3000Y(5) | Final Year Project | | 18 |
| SIS 3124Y(5) | Business Intelligence and Big Data Analytics | 2 + 0 + 1 | 12 |
| SIS 3145Y(5) | Natural Language Processing And Ontology Engineering | 2 + 0 + 1 | 12 |
| **ELECTIVES** | **Choose ONE (1) module from:** | | |
| SIS 3070Y(5) | Enterprise Architecture and Integration | 2 + 0 + 1 | 12 |
| SIS 3073Y(5) | Enterprise Application Development | 2 + 0 + 1 | 12 |
| SIS 3118Y(5) | Information Systems Security | 2 + 0 + 1 | 12 |
| ICT 3126Y(5) | Network Information Systems | 2 + 0 + 1 | 12 |
| | **Sub Total** | | **54** |
| | **Grand Total** | | **204** |

*Note:*

- *The University reserves the right not to offer a given elective module if the critical number of students is not attained and/or for reasons of resource constraints.*

> *This Programme has been amended as follows: 2013, 2017, 2018, 2019, 2020*