Botswana Open University

DEPARTMENT OF COMPUTING AND INFORMATION SYSTEMS

Programme Regulations 2022

SCHOOL OF SCIENCE AND TECHNOLOGY

BACHELOR OF TECHNOLOGY IN INFORMATION SYSTEMS (B.TECH-IS)

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1. Introduction

1.1 Preface

As a registered student with the Botswana Open University (BOU), you are governed by the current BOU General Academic Regulations. These Programme Regulations are designed and developed by the Department of Computing and Information Systems (CIS) of the School of Science and Technology (SoST) and should be read in conjunction with the General Academic Regulations. Academic staff are also expected to abide by these regulations.

1.2 Overview

The **Bachelor of Technology in Information Systems** (B.Tech - IS) is an applied generic computing degree. The programme, apart from knowledge creation and capacity building aims to improve graduate employability in the Information and Communication Technology (ICT) industry including preparation for graduate school. This degree offers courses in areas of Computer Hardware, Operating Systems, Computer Networks, Security, Database Design and Administration, Web Programming, Visual Programming, Java Programming, Intelligent Systems, Management and Strategic Information Systems, Information Technology (IT) Project Management and Entrepreneurship. The programme is offered in blended mode (i.e. face-to-face and online).

1.3 Purpose

The purpose of the B.Tech-IS is intended to produce graduates who are able to present creative and innovative solutions to technical and business problems using state-of-the-art industrial tools and methodologies. The emphasis is on producing graduates who are hands-on with various competencies across a wide range of ICT areas including Fourth Industrial Revolution (4IR) Skills.

1.4 Target Audience

The target audience for the B.Tech-IS is;

1.4.1 School leavers who are seeking academic qualifications in ICT for employment.

1.4.2 Anyone seeking to upgrade their qualifications in ICT.

1.4.3 Public servants and employees in parastatal organisations who work as ICT technicians or assistants.

1.4.4 Employees from the private sector, and non-governmental organisations in ICT environment.

2. Learning Outcomes

This programme will produce graduates with the following learning outcomes;

1. Use modern software design and development technologies, techniques, and hardware/software resources for IS applications.
2. Communicate effectively, not only within the IT community but also with society at large, and able to work in an international environment.
3. Demonstrate ability to maintain a safe and healthy work environment with a good understanding of professional and ethical responsibilities.
4. Participate in educational activities to expand knowledge of professional practice and enhance own competencies, life-long learning skills and ability to work in a team.
5. Demonstrate social, cultural, and environmental responsibilities of a professional in the IT industry and to apply the principles and technology into practice for sustainable development.
6. Design, implement and evaluate a computer-based system to meet specified design and performance requirements.
7. Apply design and administration principles in the network and security management of an enterprise ICT infrastructure
8. Apply knowledge and problem-solving skills to systematically approach, problem identification, formulation, and implementation of IS solutions in businesses and in research.
9. Apply high level of technical competency and software development knowledge and principles into Information Systems (IS) projects.

3. Duration of Programme

3.1 The programme shall be conducted in semesters.

3.2 There will be two semesters in one academic year.

3.3 The normal duration for the programme is four (4) years

- The minimum duration to complete the programme shall be two and half years (five semesters). This minimum duration is determined by

eligibility and permission of exemption as guided by the BOU Recognition of Prior Learning policy.

- The maximum duration to complete the programme shall be six (6) years (twelve semesters).

4. Entry Requirements

To be admitted to the programme, the candidate must satisfy the minimum conditions for entry outlined below:

4.1 BGCSE/IGCSE or other equivalent secondary school qualification with a minimum grade of 'D' in five subjects. In addition, applicants must have at least a grade "C" in Mathematics and "D" in English.

OR

4.2 Diploma in Computing or equivalent qualification from a recognised institution. Academic transcripts and other relevant documentation will be used to guide the level of exemption.

5. Exemption

For purposes of exemption, provisions of recognition of prior learning will be upheld as follows.

5.1. A student may, in approved cases, be exempted from certain courses provided that the student shall have successfully completed equivalent courses elsewhere, and that the student shall be required to complete, at least, 50% of the programme courses through the University (BOU).

5.2. The course outline of the Institution from which the student completed the course must be equivalent in content to, at least, 80% of the course being applied for exemption.

6. Programme Structure

Graduates of the B.Tech-IS degree programme must complete 480 credits. The course and assessment breakdown of the credits by level are reflected on Table 1.

Notes. F – Fundamental
C – Core
E - Elective

Table 1. Programme Structure

Semester	Code	Title of Course	F/C/E	Credits
	YEAR 1			
1	TCA 711	Communication for Academic Purposes	F	15
	TIC 711	Introduction to Computing	C	15
	TMS 711	Introductory Mathematics	F	20
2	TDM 712	Mathematics for Computing **Note.** *Prerequisite TMS 711*	C	20
	TOS 712	Operating Systems	C	15
	TED 712	Entrepreneurship Development	F	15
Credits				**100**
	YEAR 2			
1	TSD 721	Software Development Models	C	20
	TJV 721	Programming Fundamentals with Java	C	20
	TDB 721	Database Management Systems	C	20
2	TDS 722	Data Structures and Algorithms	C	20
	TVP 722	Visual Programming	C	20
	TDA 722	Database Administration	C	20
Credits				**120**
	YEAR 3			
1	TWD 731	Web Database Application	C	20
	THC 731	Human Computer Interaction	C	20
	TCN 731	Computer Networks	C	20

2	TPM 732	Software Project Management	C	20
	TCO 732	Computer Organization	C	20
	TSS 732	Systems Security	C	20
Credits				**120**
	YEAR 4			
1	TRP 741	Project Part I	C	25
	TIT 741	Industrial Training **Note.** *A learner must have achieved 340 credits of taught courses before starting the Industrial Training.*	C	30
2	TMI 742	Management Information Systems	C	20
	TRP 742	Project Part II **Note.** *Prerequisite TRP 741*	C	25
	TIS 742	Intelligent Systems for Decision support (*Elective*)	E	20
	TSI 742	Strategic Information Systems (*Elective*)	E	20
	TTP 742	Telecommunication Principles (*Elective*)	E	20
Credits **Total Credits**				**140** **480**

7. Progression

7.1 Students shall be allowed to drop and/or add a course within a period of two weeks from commencement of the semester.

7.2 Students should pass at least two courses to progress to the next semester.

7.3 A student shall only be permitted to carry over a maximum of two courses from a preceding level into a subsequent year of study.

7.4 Students shall be allowed to register a maximum number of four courses per semester, and no student will be allowed to register for more modules.

7.5 Students shall not be allowed to register for modules for the subsequent semester or academic year.

8. Assessment

The B.Tech-IS Programme is made up of taught modules, project modules and industrial training module. This section should be read in conjunction with the BOU Student Assessment Handbook. An Outcomes-Based assessment approach is used to assess the exit outcomes for this qualification as follows:

8.1 Taught Modules

Learners will be assessed through two assignments during the Semester and a Final Exam at the end of each semester. Some of these modules have a practical component and will be practically assessed during computer laboratory sessions.

Activities in the study material (study guides) and online participation in forums will be used to stimulate course participation. Assessment will be made from such participation. Table 2. summarizes the assessment for taught modules.

Table 2. Assessment Component Weightings

Assessment Component	**Weighting**
1. Assignment 1	25 %
2. Assignment 2	25 %
3. Course participation (Activities in the study material)	10%
4. Final Exam	40%
TOTAL	**100%**

Assignments and Course Participation constitutes Continuous formative assessment (CA) and constitutes **60 %** weighting. Final Exam (summative) constitute **40 %** of the course mark to give a total of 100%. A learner should obtain a minimum CA of 50 % to be eligible to sit for the Final Examination.

The pass mark for each module is 50% and a learner needs to have achieved a minimum of 50% for the both components (CA and Final Exam) to be get a pass.

During periods where normal assessment, teaching and learning activities cannot go as planned, e.g., during disease outbreaks (like COVID-19) and

in line with the General Academic Regulations, the University may offer you alternative assessments where necessary. This includes conducting timed online assessments in place of venue-based written ones. Previously published materials relating to assessments should therefore be read in conjunction with this statement.

8.2 Project Modules

Learners need to undertake two computing related research projects as part of this qualification (Project I and II). Assessment for these modules will be through oral progress presentations (formative - 40%), demonstration of computing models/prototypes/solutions and project documentation (summative - 60%). Assessment matrix and rubrics will be used to award marks for this.

8.3 Industrial Training

This will be portfolio and performance-based assessed against workplace outcomes. This section should be read in conjunction with the BOU Student Workbased Placement Guidelines. Assessment will be conducted by the workplace supervisor (formative - 40%) and institution (summative - 60%).

9 Admission to Examinations

9.1 Formal examinations will normally be held at the end of each semester.

9.2 To be admitted to the examination the candidate must have:

9.2.1 Satisfactorily attended the approved courses of study, and for this purpose will include submission of assignments, and tests prescribed as compulsory.

9.2.2 Fulfilled all obligations regarding the payment of fees.

9.3 Deferred examinations may be allowed in accordance with Special or Extenuating Circumstance (SorEC) as stipulated in the General Academic Regulations. Students allowed a deferred examination should sit the deferred examination at a time determined by the University.

10. Programme Completion

10.1 Results shall be published and communicated to all the students

10.2 Award of the qualification shall be done at a formal convocation on a date communicated to all successful candidates.

10.3 This programme does not have any exit qualifications like Certificate or Diploma. If you are unable to complete your studies, you will receive a transcript of your accumulated credits.