Far western University

Faculty of Science and Technology

Bachelor of Information Technology (BIT)

Introduction:

The Bachelor's degree in Information Technology (BIT) curriculum is developed by adhering to the courses offered at recognized national and international universities. The BIT degree is a four year eight semester program that offers fundamental and core Information Technology courses as well as various elective courses to satisfy the requirements of the undergraduate academic program and to address the need for the development and implementation of state of art technologies. The prospective students of BIT are supposed to be completed with twelve years of education in any field or possess an equivalent qualification from an accredited board.

The BIT course offers 122 credit hours of information technology and allied courses. Students enrolled in the four year BIT program are required to take foundation and core courses of Information technology, courses of mathematics, statistics, management, research methodology and technical writing, and communication. The graduates of BIT will be able to pursue careers in software development and design, database administration, network and system administration, cyber security, artificial intelligence, DevOps, and all the sectors with usages of IT.

Objective:

The primary objective of the BIT program is to:

- Equip students with strong practical skills and theoretical foundations in information technology.
- Produce graduates who will be capable of designing, developing, and managing IT systems to meet the needs of industries, academia, and society.
- Focus on fostering innovation and critical thinking to prepare students for professional careers and higher studies in the field of information technology

Eligibility Criteria for Admission:

A student to get admitted in the BIT program should have fulfilled following criteria:

- Should have completed all application procedures.
- Should have successfully completed twelve years of education in any stream.
- Should have secured a minimum of 1.8 CGPA or above (D+ Grade).
- Should have successfully passed the entrance examination conducted by Faculty of Science and Technology (FoST), FWU.

Course Duration:

The entire course is of eight semesters (four academic years).

Evaluation:

All the courses except project work and internship should have internal weightage of 40% and external weightage of 60%. For the course having laboratory work, the breakdown of internal weightage is 20% of practical examination and 20% of internal assessment. A student should have to secure minimum of 40% in each category to pass a course. The final grade and grade point in each course will be the sum of overall weightage of in all categories.

The practical examination for the 20% weightage for the courses containing laboratory work should be conducted in the presence of an external examiner assigned from the university.

The Project work and Internship should be evaluated by external evaluator assigned from the university. The project work and internship should be conducted with presentation and demo session in presence of the supervisor, external, internal examiners.

Course Duration:

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BIT Course Structure

First Semester

Course Code	Course Title	Credit Hours
BIT111	Introduction to Information Technology	3
BIT112	C Programming	3
BIT113	Digital Logic	3
BIT114	Mathematics	3
BIT115	Technology and Society	3
Total		15

Second Semester

Course Code	Course Title	Credit Hours
BIT121	Data Structure and Algorithms	3
BIT122	Object Oriented Programming	3
BIT123	Discrete Structure	3
BIT124	Probability and Statistics	3
BIT125	Technical Writing & Communication Skill	3
Total		15

Third Semester

Course Code	Course Title	Credit Hours
BIT211	Computer Architecture	3
BIT212	Web Technology I	3
BIT213	Database Management System	3
BIT214	Computer Graphics	3
BIT215	Principles of Management	3
Total		15

Fourth Semester

Course Code	Course Title	Credit Hours
BIT221	System Analysis and Design	3
BIT222	Data Communication and Networking	3
BIT223	Operating System	3
BIT224	Web Technology II	3
BIT225	Numerical Methods	3
Total		15

Fifth Semester

Course Code	Course Title	Credit Hours
BIT311	Information Security	3
BIT312	Software Engineering	3
BIT313	Python Programming	3
BIT314	Artificial Intelligence	3
BIT315	Project I	2
Total		14

Sixth Semester

Course Code	Course Title	Credit Hours
BIT321	Cloud Computing	3
BIT322	Cyber Security	3
BIT323	Data Science	3
BIT324	Research Methodology	3
BIT325	.NET Development	3
Total		15

Seventh Semester

Course Code	Course Title	Credit Hours
BIT411	E-commerce & Digital marketing	3
BIT412	Dev Ops	3
BIT413	Database Administration	3
BIT414	Project II	3
BIT415	Elective I	3
Total		15

Eighth Semester

Course Code	Course Title	Credit Hours
BIT421	Data Warehousing and Data Mining	3
BIT422	Mobile App Development	3
BIT423	Elective II	3
BIT424	Internship	6
Total		18

Total Credit Hours: 122

List of Elective Subjects

1. Geographical Information System
2. DSS and Expert System
3. Simulation and Modeling
4. Image processing
5. Network Security
6. Internet of Things
7. Wireless Communication
8. Multimedia System
9. Big Data and Analytics
10. System and Network Administration
11. Health Information System
12. Management Information System
13. Business Intelligence
14. Digital Governance
15. IT Ethics & Policies
16. Blockchain Technology