Introduction:

The Bachelor of Science in Computer Science and Information Technology (B.Sc.CSIT) curriculum is designed by closely following the courses practiced in accredited international universities, subject to the condition that the intake students are twelve years of schooling in the science stream or equivalent from any university recognized by Tribhuvan University (TU). In addition to the foundation and core Computer Science and Information Technology courses, the program offers several elective courses to fulfill the demand of high technology applications development. The foundation and core courses are designed to meet the undergraduate academic program requirement, and the service courses are designed to meet the need of fast changing computer technology and application. Students enrolled in the four year B.Sc.CSIT program are required to take courses in design and implementation of computer software systems, foundation in the theoretical model of computer science, and a functional background of computer hardware. All undergraduate students are required to complete 126 credit hours of computer science course and allied courses.

Objective:

The main objective of B.Sc.CSIT program is to provide students intensive knowledge and skill on different areas of computer science and information technology including design, theory, programming and application of computer system. It is envisaged that graduate of this program will be equipped with necessary knowledge of computer software and hardware system.

Eligibility Criteria for Admission

A student who seeks admission to B.Sc.CSIT program:

- Should have successfully completed twelve years of schooling in the science stream or equivalent form any university, board or institution.
- Should have secured a minimum of second division.
- Should have successfully passed the entrance examination conducted by Institute of Science and Technology (IOST), TU.
- Complied with all the application procedures.

Course Duration:

The entire course is of eight semesters (four academic years). There is a separate semester examination after the end of each semester.

Hours of Instruction:

a) **1Working days:** 90 days in a semester

b) **Class hours:**

- 3 credit hour courses with theory and lab is equivalent to 3 hours theory and 3 hours lab = 6 working hours per week.
- 3 credit hours theory-only course is equivalent 3 hours theory and 2 hours tutorial = 5 working hours per week.

Evaluation

Theory course should have internal weightage of 20% and external weightage of 80%. For the course having lab work, the internal weightage is 20%, lab work weightage is 20% and external weightage is 60%. A student should secure minimum of 40% in each category to pass a course. The final score in each course will be the sum of overall weightage of in all categories. There will be a separate practical examination for the 20% weightage of lab work conducted by concerned college in the presence of an external examiner.

The project work and internship are evaluated by different evaluators. To pass project work and internship, students should secure at least 40% marks in the evaluation of each evaluator and final score will be the sum of all the evaluations. For the evaluation of final presentation, an external examiner will be assigned from the IOST.

The Grading System

A student having passed his/her 8 semesters (4 years) of study will be graded as follows

- **Distinction:** 80 % and above (8 semester's average)
- **First Division:** 70 % and above (8 semester's average)
- **Second Division:** 55 % and above (8 semester's average)
- **Pass Division:** 40 % and above (8 semester's average)

Attendance Requirement:

Students are required to attend regularly all theory and practical classes and should maintain 80 percent attendance in each course separately.

Final Examination:

Institute of science and technology, Tribhuvan University, will conduct the final examination at the end of each semester. 80% weightage will be given to the final examination for theory course and 60% will be given for the course having both theory and practical.

Course Structure:

Semester I

Course Code	Course Title	Credit Hours	Full Marks
CSC109	Introduction to Information Technology	3	100
CSC110	C Programming	3	100
CSC111	Digital Logic	3	100
MTH112	Mathematics I	3	100
PHY113	Physics	3	100
Total		**15**	**500**

Semester II

Course Code	Course Title	Credit Hours	Full Marks
CSC160	Discrete Structure	3	100
CSC161	Object Oriented Programming	3	100
CSC162	Microprocessor	3	100
MTH163	Mathematics II	3	100
STA164	Statistics I	3	100
Total		**15**	**500**

Semester III

Course Code	Course Title	Credit Hours	Full Marks
CSC206	Data Structure and Algorithms	3	100
CSC207	Numerical Method	3	100
CSC208	Computer Architecture	3	100
CSC209	Computer Graphics	3	100
STA210	Statistics II	3	100
Total		**15**	**500**

Semester VI

Course Code	Course Title	Credit Hours	Full Marks
CSC364	Software Engineering	3	100
CSC365	Complier Design and Construction	3	100
CSC366	E-Governance	3	100
CSC367	NET Centric Computing	3	100
CSC368	Technical Writing	3	100
	Elective II	3	100
Total		**18**	**600**

List of Electives:

1. Applied Logic (CSC369)
2. E-commerce (CSC370)
3. Automation and Robotics (CSC371)
4. Neural Networks (CSC372)
5. Computer Hardware Design (CSC373)
6. Cognitive Science (CSC374)

Semester VII

Course Code	Course Title	Credit Hours	Full Marks
CSC409	Advanced Java Programming	3	100
CSC410	Data Warehousing and Data Mining	3	100
MGT411	Principles of Management	3	100
CSC412	Project Work	3	100
	Elective III	3	100
Total		**15**	**500**

List of Electives:

1. Information Retrieval (CSC413)
2. Database Administration (CSC414)
3. Software Project Management (CSC415)
4. Network Security (CSC416)
5. Digital System Design (CSC417)
6. International Marketing (MGT418)

Semester VIII

Course Code	Course Title	Credit Hours	Full Marks
CSC461	Advanced Database	3	100
CSC462	Internship	6	200
	Elective IV	3	100
	Elective V	3	100
Total		**15**	**500**

List of Electives:

1. Advanced Networking with IPV6 (CSC463)
2. Distributed Networking (CSC464)
3. Game Technology (CSC465)
4. Distributed and Object Oriented Database (CSC466)
5. Introduction to Cloud Computing (CSC467)
6. Geographical Information System (CSC468)
7. Decision Support System and Expert System (CSC469)
8. Mobile Application Development (CSC470)
9. Real Time Systems (CSC471)
10. Network and System Administration (CSC472)
11. Embedded Systems Programming (CSC473)
12. International Business Management (MGT474)