

BSc Computer Science and Information Technology BSc CSIT

Tribhuvan University Bachelors

4 years

Bsc Computer Science and Information Technology (Bsc CSIT) of Tribhuvan University is a 4 year program divided into 8 semesters. With a total of 126 credit hour, the course is taught in 60 institutions with an enrollment capacity of 3072 students (Open- 2457 & Samabesi-615).

## Institutions offering BSc CSIT

Currently, 60 institutions offer BSc Computer Science and Information Technology (BSc CSIT) under Tribhuvan University in Nepal with 18 of them offering in Kathmandu district.

### Constituent (Government) Campuses

These TU-run campuses offer the B.Sc. CSIT program:

- Amrit Science Campus (ASCOL) – Kathmandu [studyinfocentre.com+15CSIT GUIDE+15Edusanjal+15](#)
- Patan Multiple Campus – Lalitpur [Wikipedia+11CSIT GUIDE+11NepaliPedia+11](#)
- Bhaktapur Multiple Campus – Bhaktapur [Educate Nepal+4CSIT GUIDE+4NepaliPedia+4](#)
- Prithvi Narayan Campus – Pokhara [NepaliPedia+3CSIT GUIDE+3Reddit+3](#)
- Mahendra Morang Adarsha Multiple Campus – Morang [Educate Nepal+8CSIT GUIDE+8Collegenp+8](#)
- Birendra Multiple Campus – various [CSIT GUIDE+1NepaliPedia+1](#)
- Mahendra Multiple Campus – Nepalgunj (Banke) [Wikipedia+13CSIT GUIDE+13Collegenp+13](#)
- Butwal Multiple Campus – Butwal [tuiost.edu.np+3CSIT GUIDE+3Reddit+3](#)
- Shree Siddhanath Science Campus – Kanchanpur [CSIT GUIDE+3Collegenp+3Wikipedia+3](#)
- Ramsworup Ramsagar Multiple Campus – various [Wikipedia+3CSIT GUIDE+3Wikipedia+3](#)

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## TU-Affiliated Colleges (Private / Community)

Located mainly in Kathmandu Valley and beyond:

1. St. Xavier's College – Maitighar, Kathmandu [studyinfocentre.com+3CSIT](#)  
[GUIDE+3Educate Nepal+3](#)
2. New Summit College – Purano Baneshwor, Kathmandu [Educate Nepal+5CSIT](#)  
[GUIDE+5studyinfocentre.com+5](#)
3. Kathford Int'l College of Engineering & Mgmt – Balkumari, Lalitpur [Reddit+12CSIT](#)  
[GUIDE+12Educate Nepal+12](#)
4. Prime College – Khusibu, Kathmandu [Edusanjal+12CSIT](#) [GUIDE+12Educate Nepal+12](#)
5. Nagarjuna College of IT – Pulchowk, Lalitpur [Educate Nepal+4CSIT](#)  
[GUIDE+4studyinfocentre.com+4](#)
6. St. Lawrence College – Chabahil, Kathmandu [Educate Nepal+3CSIT](#) [GUIDE+3Educate Nepal+3](#)
7. Nepalaya College – Kalanki, Kathmandu [NepaliPedia+3CSIT](#)  
[GUIDE+3studyinfocentre.com+3](#)
8. Orchid International College – Sinamangal/Gaushala, Kathmandu [Wikipedia+5CSIT](#)  
[GUIDE+5studyinfocentre.com+5](#)
9. Madan Bhandari Memorial College – Anamnagar, Kathmandu [Collegenp+5CSIT](#)  
[GUIDE+5studyinfocentre.com+5](#)
10. Vedas College – Jawlakhel, Lalitpur [Educate Nepal+3CSIT](#)  
[GUIDE+3studyinfocentre.com+3](#)
11. Kathmandu Bernhardt College – Bafal, Kathmandu/Biratnagar? [Educate Nepal+3CSIT](#)  
[GUIDE+3studyinfocentre.com+3](#)
12. Academic International College – Gwarko, Lalitpur [Collegenp+2CSIT](#)  
[GUIDE+2studyinfocentre.com+2](#)
13. Asian School of Management & Technology – Samakhushi, Kathmandu [Educate Nepal+2CSIT](#) [GUIDE+2studyinfocentre.com+2](#)
14. Himalaya College of Engineering – Sankhamul, Kathmandu [CSIT](#)  
[GUIDE+1studyinfocentre.com+1](#)

15. Sagarmatha College of Science & Technology – Sanepa, Lalitpur [Educate Nepal+4CSIT](#)  
[GUIDE+4studyinfocentre.com+4](#)
16. College of Applied Business (CAB) – Chabahil, Kathmandu [Collegenp+15CSIT](#)  
[GUIDE+15Educate Nepal+15](#)
17. Ambition College – New Baneshwor, Kathmandu [tuiost.edu.np+5CSIT](#) [GUIDE+5Educate Nepal+5](#)
18. Texas International College – Chabahil, Kathmandu [NepaliPedia+5CSIT](#)  
[GUIDE+5Educate Nepal+5](#)
19. Deerwalk Institute of Technology (DWIT) – Sifal, Kathmandu [tuiost.edu.np+8CSIT](#)  
[GUIDE+8Wikipedia+8](#)
20. Trinity International College – Dillibazar, Kathmandu [Wikipedia+5CSIT](#)  
[GUIDE+5studyinfocentre.com+5](#)
21. Kathmandu College of Technology – Lokanthali, Bhaktapur [NepaliPedia+5CSIT](#)  
[GUIDE+5studyinfocentre.com+5](#)
22. Swastik College – Thimi, Bhaktapur [NepaliPedia+3CSIT](#)  
[GUIDE+3studyinfocentre.com+3](#)
23. Sambridhi College – Lokanthali, Bhaktapur [Educate Nepal+4CSIT](#)  
[GUIDE+4studyinfocentre.com+4](#)
24. Asian College of Higher Studies – Kamaladi/Ekantakuna, Kathmandu [Educate Nepal+4CSIT](#) [GUIDE+4studyinfocentre.com+4](#)
25. National College of Computer Studies (NCSS/NCCS) – Paknajol, Kathmandu [NepaliPedia+4CSIT](#) [GUIDE+4studyinfocentre.com+4](#)

- NIST College, National Infotec College, Niharika College, Birat Multiple College, AIMS College, Godawari College (Itahari), Hetauda City College, Indreni College (Bharatpur), Soch College of IT (Pokhara), Lumbini ICT College (Butwal) and others are available outside the valley [tuiost.edu.np+1NepaliPedia+1](#)
- Additionally, Padma Kanya Multiple Campus (women's college in Kathmandu) is a TU campus offering B.Sc. CSIT [Edusanjal+10Wikipedia+10CSIT](#) [GUIDE+10](#)

Bachelors of Science in Computer Science and Information Technology (BScCSIT) is a four-year course affiliated with Tribhuvan University designed to provide the student with all sorts of knowledge in the field of Information Technology and Computing.

BSc CSIT program involves, in addition to conventional lectures, a great deal of practical and project works. The program develops the underlying principles of both Computer Science and Information Technology and shows how these principles can be applied to real world problems. This program develops the skills that are essential for both computer professionals and IT specialists.

The design and implementation of B.Sc. CSIT course offers new challenges when compared to the traditional computing environment. The recent emergence of global business, new technologies for data processing and data communication / networking environment, equip specialized science graduates to focus on professional careers in Information Technology. The B.Sc. CSIT program provides the students with adequate theoretical and practical knowledge which will enable students to effectively participate in solving the complex problem of the IT industry.

Mission of the B.Sc. CSIT course:

The mission of the B.Sc. CSIT course is to prepare the students to pursue career advancement in the field of information technology. At the completion of this degree, a student will be able to design the real world e-media products or create technical solutions to hardware and software problems, depending on the chosen area of specialization and electives. However, the main aim of the B.Sc. CSIT program can be enlisted as:

- To offer intensive knowledge in the theory, design, programming and application of computers.
- Providing an in-depth understanding of and experience with computer systems.
- Developing creative and analytical skills that provides a basis for technological problem-solving.
- Equipping students with the technical knowledge required for an IT professionals to handle multi-tasking situations and to assess and develop computer based solutions.
- Imparting knowledge of computer and programming logic environment in IT.
- Knowledge of advanced IT applications in different business sectors.
- To equip students with the technical knowledge required for an IT professional to handle multi-tasking and multi programming situations and to assess and develop computer based solutions.
- To provide necessary knowledge in the field of functional knowledge of hardware system and the and necessary knowledge of computer software system.

## Salient Features

- In addition to conventional lectures, a great deal of practical and project works.
- Develops the underlying principles of both Computer Science and Information Technology and shows how these principles can be applied to solve real world problems.
- Builds up the skills that are essential for both computer professionals and researchers including IT managers, Systems Analysts, Network Administrator, Computer Programmers, Database Administrator, Web Developers, etc.
- Semester based program affiliated to Tribhuvan University.

## **Eligibility**

The candidate applying for B.Sc. CSIT program:

1. Should have successfully completed a twelve year of schooling in the science stream or equivalent from any university, board or institution recognized by TU.
2. Should have successfully passed the entrance examination conducted by TU securing at least 35% marks. Compiled with all the application procedures.
3. Should have secured a minimum of second division in their +2 or equivalent OR should have secured at least C in all subjects in Grade 11 and Grade 12 by taking Physics and Mathematics of 100 marks.

OR

Passed A level in Science (have studied Physics and Mathematics of 100 marks) and passed at least in D Grade

OR

Passed 3 Years Diploma in Engineering program from CTEVT taking both Physics and Mathematics.

(Note: Both Biology and Mathematics group of students of +2 level are eligible to apply for the course)

## **Admission Criteria**

A student eligible to study the B.Sc. CSIT course should collect and submit the admission form from any of the B.Sc. CSIT colleges. The admission form generally opens during Shrawan / Bhadra every year.

Entrance Examination:

1. Tribhuvan University, Institute of Science and Technology, Dean office conducts the entrance examination.
2. The Entrance Examination will be of 100 Full Marks including the subjects of Intermediate/10+2 level or equivalent incorporating English, Mathematics, Physics and Chemistry subjects and the pass marks is 35.
3. All the Questions of Entrance Examination will be Objective Type (MCQs).
4. The Examination Time Duration will be of 2 hours.

Admission Guidelines:

1. The Admission Form and Entrance Model Questions can be received from any of the B.Sc. CSIT colleges.
2. Students do not need to fill up the TU Admission Form in more than one college. Form filled from one college will be valid for all colleges/campuses.
3. Students of Grade 12 Supplementary Exam can also fill up the TU Admission Form but such students should present the Academic Transcript of Passing 10+2/Intermediate level before publication of entrance result, otherwise the entrance examination result of such students will not be published.

## Job Prospects

The B.Sc. CSIT graduates have a prosperous career opportunity at different government, non-government, private and public organizations, like software companies, telecommunications, computer networking companies etc. especially as a:

- Software Developer
- Web Developer
- Network Administrator
- Database Administrator
- IT Manager/Officer
- Cryptographer
- Ergonomics Program Designer
- System Analyst
- Project Manager
- Document Specialist
- Information System Auditor
- Artificial Intelligence Specialist
- Technical Writer
- Information System Manager
- Database Operator

## Curricular Structure

The B.Sc. CSIT curriculum is designed by closely following the course practiced in accredited international universities and institutions, subject to the condition that the intake students are mostly from twelve year of schooling in the science stream or equivalent from any university recognized by Tribhuvan University.

In addition to the core computer science course and elective courses, the program offers service course to meet the need of high technology applications. The foundation and allied courses are designed to meet the need of undergraduate academic program requirements, and the service course are designed to meet the need of market demand and fast changing computer technology and application.

Students enrolled in the four year B.Sc. CSIT program are required to take course in design and implementations of computer software systems, information technology and foundation of the theoretical model of computer science and functional background of computer hardware. All students are required to complete 126 credit hours of computer science and allied courses.

B.Sc. CSIT program comprises of the following courses:

Semester I

Course Code	Course Title	Credit Hours	Full Marks
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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
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Total		15	500
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Semester III

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

Course Code	Course Title	Credit Hours	Full Marks
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CSC257	Theory of Computation	3	100
CSC258	Computer Networks	3	100
CSC259	Operating Systems	3	100
CSC260	Database Management System	3	100
CSC261	Artificial Intelligence	3	100
Total		15	500

#### Semester V

Course Code	Course Title	Credit Hours	Full Marks
CSC314	Design and Analysis of Algorithms	3	100
CSC315	System Analysis and Design	3	100
CSC316	Cryptography	3	100
CSC317	Simulation and Modeling	3	100

CSC318	Web Technology	3	100
	Elective I	3	100
Total		18	600

**List of Electives:**

1. Multimedia Computing (CSC319)
2. Wireless Networking (CSC320)
3. Image Processing (CSC321)
4. Knowledge Management (CSC322)
5. Society and Ethics in Information Technology (CSC323)
6. Microprocessor Based Design (CSC324)

Semester VI

Course Code	Course Title	Credit Hours	Full Marks
CSC364	Software Engineering	3	100
CSC365	Compiler 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)