

Curriculum Structure

The BSc. CSIT program will have eight semesters with 126 credit hours. Each semester shall have duration of 6 months. This program comprises of the following courses and credit hours:

Computer science core courses	75	Natural science elective courses	6
Mathematics courses	12	English courses	3
Social science & management courses	6	Computer science elective courses	15
Internship/Project	9	Total Credit hours	126

Course Content

Semester I

Course Code	Course Title
CSC109	Introduction to Information Technology
CSC110	C Programming
CSC111	Digital Logic
MTH112	Mathematics I
PHY113	Physics

Semester II

Course Code	Course Title
CSC160	Discrete Structure
CSC161	Object Oriented Programming
CSC162	Microprocessor
MTH163	Mathematics II
STA164	Statistics I

Semester III

Course Code	Course Title
CSC206	Data Structure and Algorithms
CSC207	Numerical Method
CSC208	Computer Architecture
CSC209	Computer Graphics
STA210	Statistics II

Semester IV

Course Code	Course Title
CSC257	Theory of Computation
CSC258	Computer Networks
CSC259	Operating Systems
CSC260	Database Management System
CSC261	Artificial Intelligence

Semester V

Course Code	Course Title
CSC314	Design and Analysis of Algorithms
CSC315	System Analysis and Design
CSC316	Cryptography
CSC317	Simulation and Modeling
CSC318	Web Technology

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
CSC364	Software Engineering
CSC365	Compiler Design and Construction
CSC366	E-Governance
CSC367	NET Centric Computing
CSC368	Technical Writing

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
CSC409	Advanced Java Programming
CSC410	Data Warehousing and Data Mining
MGT411	Principles of Management
CSC412	Project Work

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
CSC461	Advanced Database
CSC462	Internship

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)

Our Projector based class instruction, small sized Classrooms, and State-of-Art Laboratories; Techno-based Research and high speed free broadband internet has enhanced to grasp deep learning of the technology.

Others Programs

■ BSc CSIT
■ BCA ■ BASW
■ BBM ■ BBS
■ MBS



Kathmandu TU Affiliated
Bernhardt College
 to the stars by hard ways...

Bafal (Ringroad, Kalanki) Kathmandu
 Tel: 01-5237330, 5237361, E-mail: ktmbernhardt@kbc.edu.np
 10+2 Section: Balkhu, Kathmandu (Opposite TU Exams Office)
 Tel: 5187106, 5187107, 5187444
www.kbc.edu.np

BSc. CSIT

Bachelor of Science-Computer Science & Information Technology

TU Affiliated



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Kathmandu BernHardt College

BernHardt is a unique institution designed to disseminate quality education within the quality framework. BernHardt aims to help all students make the most of themselves in terms of academic and social perspective. Many students who have been trained within its walls have been leading their successful lives in different walks of life. BernHardt caters bachelor's level of program on BSc. CSIT With the noble motto of the college 'ad astra per aspera'(L) (to the stars by hard ways), we keep on telling our students: Facing it, always facing it - that's the way to get through. Face it.

BernHardt has embraced dedicated professionals from different walks of life. The college feels pride to have accommodated outstanding personalities in its management body with minimum experiences of not less than a decade in the field of academic institutions with extensive exposure to knowledge and teaching practice- nationally as well as internationally. Determined to play a leading part in the development of modern higher education on science and technology, the members of management board lay particular emphasis on their relationships with public bodies and with other educational institutions.

Vision

The vision of BernHardt is to develop the center of excellence for Technical and Professional education and research at par with national and international standards, advancing the nation's interests to fulfill gaps of skilled professionals as well as to compete successfully in the global arena.

Mission

The mission of BernHardt is to establish it as world class learning centre that equip students with the skills, ability and knowledge to successfully compete in their chosen discipline.



Bachelor of Science-Computer Science and Information Technology (BSc. CSIT)

(TU Affiliated 4-year semester system)

B.Sc. CSIT is a Bachelor of Science in Computer Science and Information Technology. The objective of BSc. CSIT program at BernHardt is to offer intensive courses in the theory, design, programming and application of computers. The graduate from this program will be equipped with necessary knowledge of computer software system and functional knowledge of hardware system. The program equally focuses on service courses to meet the need of high technology applications like-Operating system, Computer networks, Software Engineering, Simulation and Modeling, Database System, Computer Graphics, Artificial Intelligence, Web Technologies.

BernHardt's graduates of BSc. CSIT have a prosperous career opportunity at different sectors as

- Systems Analyst • Software Programmer • IT Officer/Manager • System Administrator
- Database Administrator • Network Administrator and many endless possibilities.....

The Department of Computer Science and Information Technology at BernHardt College has been established as a centre of excellence in Computer Science, through the initiation and support of eminent personalities and intellectuals who have rich, varied and profound expertise in the field of Computer and Information Technology.

It is our aim to develop students with a strong theoretical and experimental foundation, keeping in the view of the vast scope of employment opportunities in the field of Computer Science and IT. The department has a full-time faculty supported by visiting professors and renowned professionals and academicians.

You must appreciate our efforts and join this college with devotion, dedication and determination.

The World of Information Technology-a reality bite!

In the 21st century, computing technology plays an increasingly important role in every aspect of the society. The Computer Science and Information Technology (CSIT) provides students with an understanding of fundamental computer science concepts coupled with applied information technology skills to prepare them for careers in computing technology industries.

The CSIT major offers a unique blend of computer science theory and information technology practice. Students in this program begin their education by taking a set of common core courses to establish a sound foundation of computer science and information technology. The students then build upon this foundation by selecting software engineering, networking and security, database management system as their concentration. Throughout the program, students learn fundamental computing and information technology concepts while applying their knowledge to solve real-world problems. In addition to the computer science skills and abilities, students gain an understanding of the human side of computing, the social, ethical and global issues related to technology and the ability to collaborate and communicate effectively through project-based coursework.

Why Study BSc. CSIT at BernHardt?

BernHardt realizes the importance of IT management study and helps to enforce the strength of this study so as to benefit our young aspirants to become the successful IT managers/programmers in the future. To achieve this noble objective, BSc. CSIT program at BernHardt specially attempts in the following aspects:

- Internships in different IT & IT administrating companies.
- Preferences for Seminars & other IT related project works.
- Frequent Research & Presentations.
- Outstanding faculty with proven experience and professional exposure.
- Fully equipped computer and digital laboratories.
- Frequent assessments and prompt feedback.
- Educational excursions in related places.
- Career counseling for job placement.
- Enhancing learning environment.

Eligibility for Admission

The student who is seeking admission must have

- Successfully completed a twelve-year of schooling in science stream or its equivalent from any University, board or institution recognized by Tribhuvan University securing at least Second Division.
- Successfully passed the Entrance Examination conducted by Institute of Science and Technology, Tribhuvan University (IOST-TU)

