26 YEARS OF EXCELLENCE

Engineering the Future

BE

COMPUTER | CIVIL | INFORMATION TECHNOLOGY
SOFTWARE | INFORMATION & COMMUNICATION

B. Arch

NCIT
Nepal College of Information Technology
(Affiliated to Pokhara University)

Vision

To be the leading IT & Engineering College in Nepal that prepares competent & responsible professionals who contribute to shaping a better society

Mission

NCIT seeks to deliver high-quality education by adopting the best teaching-learning practice in IT & Engineering. We endeavour to strengthen our students with necessary knowledge & skills for professional competence.

NCIT aims to promote a culture of innovation & research and a spirit of entrepreneurship in its students. We strive to instill moral values & professional ethics in our students to become good citizens.

Values

NCIT | The Leading IT & Engineering College in Nepal

NCIT, a pioneer private institution providing engineering education in Nepal, is renowned for excellence in teaching & research while maintaining close and mutually beneficial links with various sectors.

Today, NCIT is one of the first choices of students for important reasons you would consider when applying:

2320+ Students (Bachelor's & Master's)	**11** Bachelor's & Master's Programmes	**7850+** Alumni
73+ Districts Represented	**130+** Full-Time / Visiting Faculty	**300+** Full Scholarship Recipients (500+ Partial Scholarship Recipients)
250+ Job Placements Annually	**75+** MOU Institutions	**170+** +2 Colleges Represented
90+ Activities & Seminars Annually	**35+** Innovative Startups Annually	**45+** Research Articles Annually
600+ Annual Intake Capacity at Bachelor's & Master's Level	**7+** International Academic Professional Collaboration	**8** 3 VC Medal Awardees & 5 Chancellor Medal Awardees


A DEEP UNDERSTANDING OF COMPUTER TECHNOLOGY WILL ALWAYS BE ESSENTIAL IN OUR 'WIRED SOCIETY'.

Bachelor of

COMPUTER ENGINEERING

Bachelor of Computer Engineering (BE Computer) provides students with a foundation in the core computer technologies. The programme covers the theoretical and practical aspects of both hardware and software. Professionally, it instills the knowledge of making computing platforms more effective, embedding computing devices in machines & systems, and developing faster, smaller, and more efficient computers. It also deals with further advancements globally in digital technology, computer networking, and computer systems.

Key Learning Outcomes

- Use the techniques, skills, and tools in computer engineering, software & hardware system design, and information technology to work independently
- Design hardware & software systems, components, or processes to meet economic, environmental, or social needs
- Set up and conduct experiments, as well as organize, analyze, and interpret data to help deeper understanding of principles and applications
- Identify, formulate, and solve hardware & software problems to ensure effective practice of computer technologies
- Analyze problems for solutions, formulate & test, and use advanced communications or multi-media equipment, or work in teams for product development

Career Prospects

Computer Engineering is an exciting and growing industry involving the design and development of software like network control systems or operating systems for computer and mobile technology. There are many career opportunities like System Administrators, Network Engineers, OS Developers, and Ethical Hackers.

Computing professionals might find themselves employed in a variety of environments in academia, research, industry, and governmental, private & business organizations.

Careers by Area

Computer Engineering
Computer Engineers, Computer Programmers, or Computer Network Architects in the IT & Computer field

Hardware & Networking
Computer Network Architects, System Engineers, Networking Engineers in IT-based organizations

Artificial Intelligence
Develop computers that simulate human learning and reasoning abilities

Computer Design & Engineering
Design new computer circuits, microchips, and other key electronic components

Software Engineering
Develop methods for the production of software systems on time, within the budget, and without defects

Operating Systems & Networks
Develop basic software for computers or use it for communicating with other computers

Software Applications
Apply computing technology to solve problems outside the everyday computer field, for example, in education or medicine

Information Technology
Develop and manage information systems that support a business or organization

Data Analytics
Data analytics is the collection, transformation, and organization of data in order to draw conclusions, make predictions, and drive informed decision making.

COURSE STRUCTURE

Year I, Semester I

Code	Subject	Credits
ELE 120	Basic Electrical Engineering	3
MTH 110	Calculus I	3
ENG 110	Communication Techniques	2
PHY 110	Applied Physics	3
CMP 122	Computer Workshop	1
CMP 124	Programming in C	3

Year I, Semester II

Code	Subject	Credits
MTH 150	Algebra and Geometry	3
CHM 110	Applied Chemistry	2
MEC 116	Basic Engineering Drawing	1
ELX 120	Electronics Devices and Circuits	3
CMP 160	Data Structures and Algorithms	3
CMP 162	Object Oriented Programming in C++	3

Year II, Semester III

Code	Subject	Credits
MTH 210	Calculus II	3
CMP 234	Computer Graphics	3
ELX 110	Digital Logic	3
CMP 222	Database Management System	3
CMP 228	Advanced Programming with Java	3
CMP 232	Operating Systems	3

Year II, Semester IV

Code	Subject	Credits
MTH 250	Applied Mathematics	3
CMP 224	Microprocessor and ALP	3
ELE 172	Instrumentation	3
CMP 348	Software Engineering	3
CMM 220	Data Communication	3
CMP 264	Theory of Computation	3

Year III, Semester V

Code	Subject	Credits
CMP 346	Artificial Intelligence	3
CMP 344	Computer Networks	3
CMP 262	Computer Architecture	3
MTH 252	Numerical Methods	2
MGT 320	Engineering Management	2
CMP 338	Simulation and Modeling	3
MTH 216	Probability and Statistics	2

Year III, Semester VI

Code	Subject	Credits
CMP 270	Research Fundamentals	2
CMP 360	Compiler Design	2
CMM 344	Digital Signal Analysis and Processing	3
CMP 426	Network and Cyber Security	3
ELX 320	Embedded System	2
CMP 364	Machine Learning	3
	Elective I	3

Year IV , Semester VII

Code	Subject	Credits
CMP 424	Cloud Computing and Virtualization	3
CMP 422	Data Science and Analytics	2
MGT 250	Engineering Economics	3
CMP 362	Image Processing and Pattern Recognition	3
MGT 332	Entrepreneurship and Professional Practice	2
	Elective II	3
PRJ 360	Project I	2

Year IV, Semester VIII

Code	Subject	Credits
INT 492	Internship	3
PRJ 452	Project II	3
	Elective III	3

Electives

AI and Machine Learning

CMP 458	Artificial Neural Network
CMP 488	Fuzzy Logic with Engineering Application
CMP 442	Human Computer Interaction
CMP 459	Natural Language Processing
	Social Network Analysis
	Computational Linguistics

Data Analysis and Computing

CMP 428	Big Data Technologies
CMP 489	Bioinformatics
CMP 427	Cloud Computing
CMP 425	Data Mining
CMP 426	Distributed DBMS
CMP 431	Distributed Operating System
	Infromation Retrival
CMP 491	Oracle
CMP 419	Parallel Computing
CMP 432	Real Time Operating System
	Computational Biology

AN EXCITING YET FLEXIBLE PROFESSION TO ENHANCE THE QUALITY OF LIFE FOR PEOPLE

Bachelor of

CIVIL ENGINEERING

Bachelor of Civil Engineering (BE Civil) focuses on professional engineering that deals with the planning, designing, constructing, and maintaining of the physical infrastructure built in the natural environment. The programme deals with the construction of public works or private projects like all sorts of roads, bridges, tunnels, channels, canals, helipads, airports, dams, buildings, parks, or sports complexes. Civil engineering is all about helping people and shaping the world. Clearly, it will continue to play a key role, particularly in the reconstruction of post-quake Nepal.

Key Learning Outcomes

- Acquire a knowledge of scientific principles & materials in construction engineering and the building sector
- Enable graduates to make objective, technical, and effective decisions in the broad field of Civil Engineering
- Excel in solving problems in teams or independently through skills nurtured by training such as project work or internships
- Engage in lifelong learning & application in areas related to structural, transportational, geo-technical, or environmental engineering, water resources, construction management, disaster risk engineering, and earthquake engineering
- Get the qualifications and confidence to become practising engineers or community leaders in the emerging field of Civil Engineering

Career Prospects

There are many job opportunities in the public sector, with local authorities, in government departments, and environmental organizations for Civil Engineers.

BE Civil Engineering graduates have fine career prospects in infrastructure construction – buildings, transport, hydropower, and irrigation. This includes bridges, roads, tunnels, dams, and canals. They get work of national or local importance in producing, storing, and distributing electricity, gas, and water.

Civil engineers get worthwhile employment with varied contractors and consultancies, and also work for diverse national and multinational organizations.

Careers by Area

Materials Science and Engineering – Quality Controllers in different projects to ensure quality in construction

Earthquake Engineering – Consulting Engineers and Seismic Analysts in construction companies and private or public organizations for public safety

Environmental Engineering – Environmentalists in different INGOs, NGOs, and governmental sectors for monitoring

Geotechnical Engineering – Consulting Engineers and Geotechnical Engineers or Investigators in INGOs, NGOs, and governmental sectors

Water Resource Engineering – Hydrology, Hydropower, or Irrigation Engineers in governmental offices or NGOs or INGOs

Structural Engineering – Structural Designers and Analysts for Structural Modeling

Surveying – Land Surveyors for Revenue or Land Record Departments and Surveyors for planning and designing projects

Transportation Engineering – Consulting or Traffic Engineers and Transportation Planners in road projects, railways, tunneling, and aerodrome construction or maintenance

Municipal or Urban Engineering – Urban Planners for holistic development

Environmental Hydrology and Hydraulic Engineering – Engineers in hydropower or irrigation projects, governmental offices, NGOs, or INGOs

Construction Management – Construction or Project Managers in the governmental or private sector and construction industries

COURSE STRUCTURE

Year I, Semester I

Code	Subject	Credits
CHM 110	Applied Chemistry	2
PHY 110	Applied Physics	3
MTH 110	Calculus I	3
CMP 112	Computer Programming	3
MEC 112	Engineering Drawing	2
MEC 113	Applied Mechanics (Statics)	2

Year II, Semester III

Code	Subject	Credits
ARC 150	Building Technology	2
MTH 210	Calculus II	3
WRE 212	Fluid Mechanics	3
MTH 252	Numerical Methods	2
STR 216	Strength of Materials	3
CVL 216	Surveying I	3

Year III , Semester V

Code	Subject	Credits
WRE 310	Engineering Hydrology	2
CVL 316	Survey Field Project	1
GTE 310	Foundation Engineering	3
STR 314	Structural Analysis II	3
TRP 310	Transportation Engineering I	3
ENV 310	Water Supply Engineering	3
STR 312	Concrete Technology and Masonry Structure	3

Year IV , Semester VII

Code	Subject	Credits
CVL 441	Project II	3
CVL 412	Construction Project Management	3
STR 352	Design of R.C.C. Structures	3
CVL 318	Estimating and Valuation	3
	Elective II	3
WRE 410	Hydropower Engineering	3

Year I, Semester II

Code	Subject	Credits
MTH 150	Algebra and Geometry	3
MEC 151	Applied Mechanics (Dynamics)	2
ELE 112	Basic Electrical and Electronics Engineering	3
CVL 110	Civil Engineering Materials	2
CVL 112	Civil Engineering Workshop	1
GTE 150	Engineering Geology	3
MEC 114	Introduction to Energy Engineering	2

Year II, Semester IV

Code	Subject	Credits
CVL 350	Project I	1
WRE 250	Hydraulics	3
MTH 216	Probability and Statistics	2
ENG 110	Communication Techniques	2
GTE 252	Soil Mechanics	3
STR 252	Structural Analysis I	3
CVL 252	Surveying II	3

Year III, Semester VI

Code	Subject	Credits
MGT 250	Engineering Economics	3
STR 354	Design of Steel and Timber Structure	3
	Elective I	3
WRE 352	Irrigation and Drainage Engineering	3
ENV 352	Sanitary Engineering	3
TRP 352	Transportation Engineering II	3

Year IV, Semester VIII

Code	Subject	Credits
	Elective III	3
CVL 416	Engineering Professional Practice	2
INT 484	Internship	6

Electives

Course Code	*Subject*
CVL 480	Appropriate Technology
ENV 480	Bio-Engineering
ENV 481	Soil Conservation and Watershed Management
ENV 482	Climate Change
ENV 483	Solid Waste Management
ENV 484	Water Quality Management
ENV 485	Environmental Management System
ENV 486	Public Health and Risk Assessment
ENV 487	Environmental Impact Assessment
GTE 480	Geo-hazard
GTE 481	Advanced Geo-technical Engineering
GTE 482	Geotechnical Exploration & Testing
GTE 484	Rock Engineering
GTE 485	Ground Improvement Techniques
MGT 481	Community Development and PRA
MGT 482	Organization & Management
MGT 483	Post-disaster Water and Sanitation Management
MGT 484	Disaster Risk Management
MGT 485	Construction Safety Management
MGT 486	Procurement Management
MGT 487	Operation Research
MTH 480	Finite Element Methods
MTH 481	Statistical Quality Control
STR 480	Earthquake Resistance Design of Structure
STR 481	Design of RCC Bridge
STR 482	Vulnerability Assessment and Retrofitting Techniques
STR 483	Seismic Risk Assessment
STR 484	Structural Reliability
STR 485	Structural Dynamics
STR 486	Seismic Resistant Design of Masonry Structure
TRP 480	Railway Engineering
TRP 481	Ropeway Engineering
TRP 482	Airport Engineering
TRP 483	Transportion Safety
TRP 484	Traffic Engineering & Management
TRP 485	Rural Road Engineering
TRP 486	Transport Planning
TRP 487	Trail Suspension Bridge
WRE 481	Water and Wastewater Quality Analysis
WRE 482	Hill Irrigation Engineering
WRE 483	Groundwater Engineering
WRE 484	Advanced River Hydrology
WRE 485	River Engineering
WRE 486	Domestic Water and Wastewater Engineering & Management
WRE 487	Micro-hydropower System
WRE 488	Hydropower Planning and Development

ADVANCING KNOWLEDGE AND THE FRONTIERS OF TECHNOLOGY TO MEET THE CHANGING NEEDS OF SOCIETY

Bachelor of Engineering in

INFORMATION TECHNOLOGY

Bachelor of Engineering in Information Technology (BE IT) is a unique blend of Information and Communication Technology. It prepares students to function effectively in this dynamic technological era. The programme focuses on applying cutting edge technologies for the socioeconomic development of the nation. It is perfectly designed to meet the needs of an ever-growing Information and Communication Technology industry here or abroad.
The degree produces highly qualified ICT professionals in hardware, software, networking, and communication technology for the digital future.

Key Learning Outcomes

- Analyze, design and develop software or computer systems and design secure networks & monitor them to handle data and information worldwide
- Enable the automation of organizational tasks through computers & telecommunications equipment to improve efficiency
- Gain specialization in the configuration, integration, development, and testing of systems and networks to meet industrial needs
- Resolve system-related issues and troubleshoot communication & networking problems to ensure smooth operation
- Acquire skills and expertise in intelligent information retrieval systems to benefit decision-making bodies in an organization

Career Prospects

Excellent job prospects! More and more jobs are being created in an increasingly IT-driven world. Associated career trends show the fastest growing occupations in Nepal and abroad.

Empowers graduates to handle computer and IT-related tasks independently throughout their careers. They also have tremendous possibilities and opportunities of starting their own ventures.

IT engineers get suitable jobs such as System Analysts, System Designers, Project Managers, Business Analysts, OS Developers, Database Analysts, Information System Experts, Digital Media Specialists, Network Specialists, Software Engineers, or Technical Support Representatives.

Careers by Area

Information Management – IT Managers in government, the private sector, NGOs and INGOs

Telecommunication – Information & Communication Engineers in telecom companies

Software Engineering – Database Administrators, and Software Project Managers in software companies

System Engineering – System Engineers in IT-based organizations

Knowledge Engineering – Information Systems Experts for big data repositories and information systems

Networking – Network Engineers for managing secure networked communication

Artificial Intelligence – Developers of computer-based expert systems that mimic human behaviour, learning, and reasoning abilities

IOT and IT security – IoT Engineers implement robust security measures, such as authentication protocols, encryption techniques, and access controls, to safeguard sensitive data and prevent unauthorized access

COURSE STRUCTURE

Year I, Semester I

Code	Subject	Credits
MTH 110	Calculus I	3
ELX 120	Electronics Device & Circuits	3
CMP 124	Programming in C	3
ELE 120	Basic Electrical Engineering	3
PHY 110	Applied Physics	3
MTH 120	Problem Solving Techniques	3

Year II, Semester III

Code	Subject	Credits
MTH 210	Calculus II	3
CMP 160	Data Structure & Algorithm	3
CMP 230	Software Engineering Fundamentals	3
MTH 216	Probability & Statistics	2
ELE 172	Instrumentation	3
CMP 228	Advanced Programming with Java	3

Year III, Semester V

Code	Subject	Credits
CMP 234	Computer Graphics	3
MTH 242	Numerical Methods	2
CMP 270	Research Fundamentals	2
CMP 328	IT Architecture	3
CMM 333	Multimedia System	2
CMM 320	Signal, System and Prosessing	3
MGT 332	Entrepreneurship and Professional Practice	2

Year IV, Semester VII

Code	Subject	Credits
CMP 432	Intelligent System	3
CMP 428	ICT Project Management	3
	Elective II	3
MGT 250	Engineering Economics	3
CMP 444	Information System	3
CMP 434	IT System Security	3

Year I, Semester II

Code	Subject	Credits
MTH 150	Algebra & Geometry	3
CMP 162	Object Oriented Programming in C++	3
MEC 116	Basic Engineering Drawing	1
CMP 116	Discrete Structure	3
ELX 172	Digital Logic	3
ENG 110	Communication Technique	2
CMP 122	Computer Workshop	1

Year II, Semester IV

Code	Subject	Credits
MTH 250	Applied Mathmatics	3
ELX 176	Microprocessor and Computer Architecture	3
CMP 268	System Administration and IT Infrastructure Services	2
CMP 168	Web Technology	3
CMP 222	Database Management System	3
CMP 266	Applied Operationg System	3

Year III, Semester VI

Code	Subject	Credits
CMP 370	Internet of Things	2
CMP 344	Computer Network	3
CMP 360	Data Science and Analytics	3
CMM 220	Data Communication	3
	Elective	3
MGT 320	Engineering Management	2
PRJ 360	Project I	1

Year IV, Semester VIII

Code	Subject	Credits
	Elective III	3
INT 494	Internship	3
PRJ 452	Project II	3

Electives

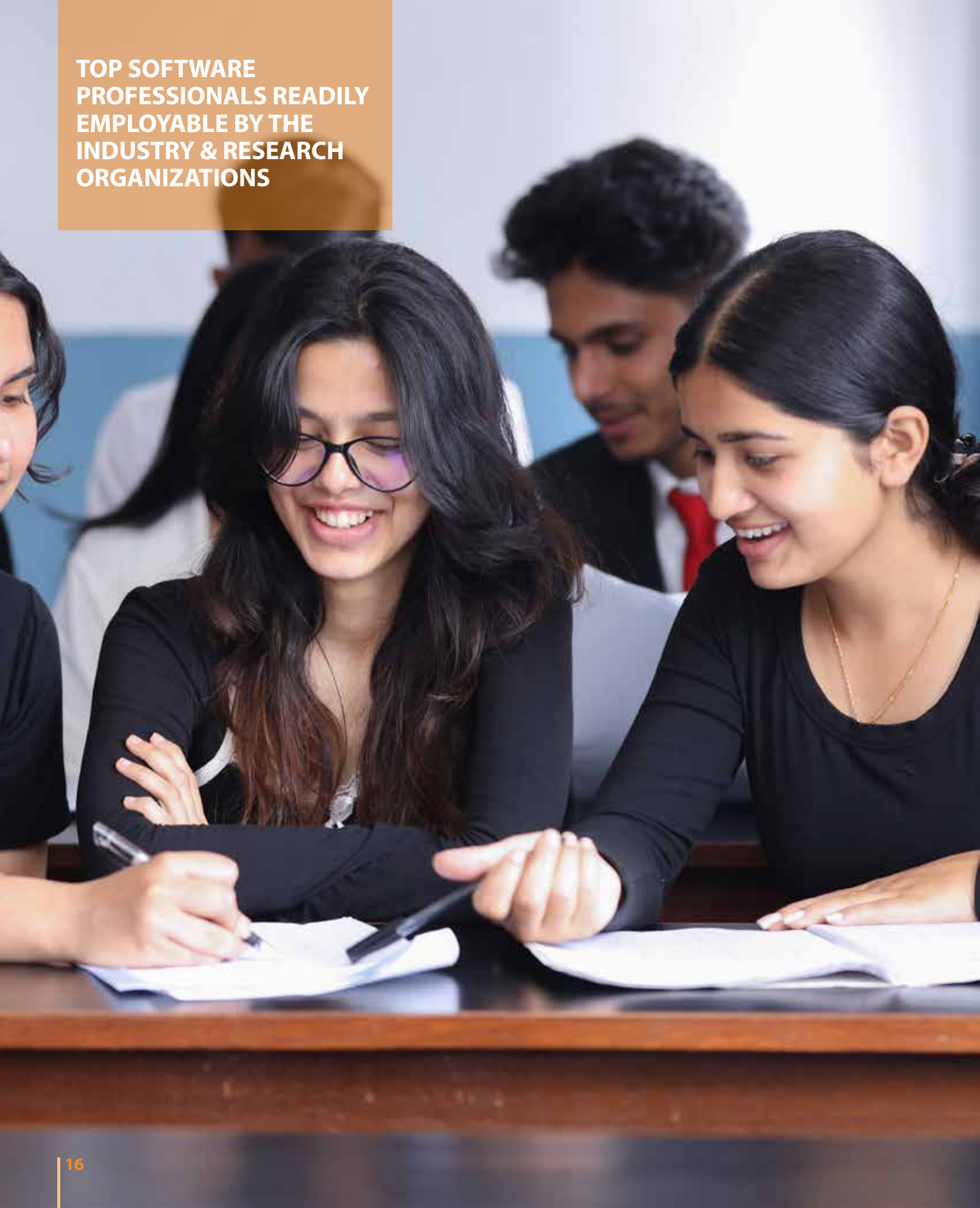
Network & Security

	Advance Networking with IPV6
CMP 440	Computer Network Programming
	Cryptography
CMP 487	Internet Technology
CMP 439	Internet, Intranet & Applications
CMP 437	IP Switching & Routing
CMP 438	Network Security
	Network & System Administration
	Blockchain Technology
	Digital Forensics

Communication

CMM 474	Aeronautical Communication
CMM 472	CDMA Technology
CMM 473	Cellular Mobile Communication
CMM 443	Digital Communication Techniques
CMM 471	GSM Cellular Mobile Communication System
CMM 475	Optical Fiber Communication
CMM 478	Next Generation Wireless Communication
CMM 476	Satellite Communication
CMM 477	Spread Spectrum & CDMA
CMM 422	Wireless communication Technology
	Aeronautical Informatics

TOP SOFTWARE PROFESSIONALS READILY EMPLOYABLE BY THE INDUSTRY & RESEARCH ORGANIZATIONS



Bachelor of

SOFTWARE ENGINEERING

Bachelor of Software Engineering (BE Software) focuses exclusively on the Software Development Process. The programme builds high-level technical skills and professional expertise in students. It provides knowledge of cutting-edge technology and helps them acquire the methods, techniques, and tools of contemporary software engineering to cater fully to the demands of the Software and IT Industry.

Key Learning Outcomes

- Gain specialization in Software Production to analyze, design, program, test, and maintain software systems
- Utilize ultra-modern computer-aided software engineering tools based on an object-oriented software development approach to build robust software
- Get knowledge of recent developments like Big Data Technologies and Cloud Computing to deal with emerging trends in IT
- Develop applications involving multimedia, mobile, network and web-based systems to design effective human-computer interaction
- Acquire skills and expertise in decision support systems to benefit decision-making bodies in an organization

Career Prospects

This has great job prospects! Many jobs get created in an increasingly IT-driven world. Career trends show the fastest growing occupations everywhere.

Empowers graduates to handle software and IT related tasks independently throughout their careers. Further, they have great possibilities of starting their own ventures.

Software Engineers get suitable jobs such as Software & Quality Control Engineers, Development Managers, Applications Programmers, Analysts, Consultants, Software Architects, or Software Innovators.

Careers by Area

Software Development – Software Engineers in software-related companies

Web & Internet Programming – Web Engineers processing interactive web-based applications based on high-end programming technology

Information Management – Information Systems Experts designing and implementing information systems to assist decision-making

Distributed & Cloud Computing – Software Engineers supervising distributed environments and cloud computing

Software Quality Assurance Engineer – A software quality assurance (SQA) engineer is responsible for ensuring that software products are developed and released with the highest level of quality possible

Product Engineering – Product Engineering is the process of innovating, designing, developing, testing and deploying a software product

COURSE STRUCTURE

Year I, Semester I

Code	Subject	Credits
MTH 110	Calculus I	3
MEC 116	Basic Engineering Drawing	1
CMP 116	Discrete Structure	3
ELX 110	Digital Logic	3
CMP 124	Programming in C	3
MTH 120	Problem Solving Techniques	3
CMP 122	Computer Workshop	1

Year I, Semester II

Code	Subject	Credits
MTH 150	Algebra & Geometry	3
ELX 176	Microprocessor & Computer Architecture	3
PHY 110	Applied Physics	3
ENG 110	Communication Technique	2
CMP 162	Object Oriented Programming in C++	3
CMP 168	Web Technology	3

Year II, Semester III

Code	Subject	Credits
MTH 210	Calculus II	3
CMP 222	Database Management System	3
CMP 160	Data Structure & Algorithm	3
MTH 216	Probability & Statistics	2
CMP 228	Advanced Programming with Java	3
CMP 230	Software Engineering Fundamentals	3

Year II, Semester IV

Code	Subject	Credits
CMP 274	Computer Graphics & Multimedia	3
CMP 280	System Programming	3
MTH 252	Numerical Methods	2
CMP 272	Anaylsis & Design of Algorithms	3
CMP 278	Object Oriented Design & Modeling Using UML	3
CMP 270	Research Fundamentals	2

Year III, Semester V

Code	Subject	Credits
CMP 226	Applied Operating System	3
CMP 334	Computer Network	3
CMP 338	Simulation & Modeling	3
CMP 340	Software Design & Architecture	3
CMM 342	Artificial Intilligence & Neural Network	3
CMM 336	Data Science & Machine Learning	3

Year III, Semester VI

Code	Subject	Credits
CMP 376	Agile Software Development	3
MGT 320	Engineering Management	2
CMP 382	Software Dependability	3
	Elective I	3
PRJ 360	Project I	1
CMP 378	Cloud Application Development Foundation	3
CMP 380	Network Programming	3

Year IV, Semester VII

Code	Subject	Credits
	Software Project Management	3
CMP 442	Distributed System & Cloud Computing	3
CMP 440	Software Testing, Verification, Validation & Quality	3
	Elective	3
CMP 438	Entrepreneurship & Professional Practice	2
	Engineering Economics	3

Year IV, Semester VIII

Code	Subject	Credits
	Elective III	3
INT 469	Internship	3
PRJ 452	Project II	3

Electives

Software Development & programming

CMP 416	. NET Technologies
CMP 417	Advance Java
CMP 429	Compiler Design
CMP 422	Formal Methods in Software Engineering
CMP 411	Mobile Apps Development
CMP 485	Web Services & Applications
CMP 418	Advanced Web Technology
MTH 481	Statistical Quality Control

Application

CMP 413	e-Commerce
MGT 421	Engineering Entrepreneurship
ENV 487	Environmental Impact Assessment
CMP 423	ERP
CMP 424	Geographic Information System
CMP 412	Management Information System
CMP 486	Mobile Computing

Bachelor of
ARCHITECTURE

Architecture offers a blend of creative expression and practical application that shapes the built environment of a society. It combines art, engineering, and technology to create aesthetically pleasing and functional spaces. It plays a crucial role in shaping the spaces where people live, work, and interact.

Objectives

- To be able to conceptualize, design, understand, and realize the act of building within a context of the practice of architecture.
- Understanding of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the space.
- Ability to create architectural designs that satisfy both aesthetic and technical requirements.

Scope in Architecture

A varied field where architects can work includes Government, Private, NGO's / INGOs. Architect can enhance their career in Architecture and Planning, Urban Planning, Urban Design and Conservation, Sustainable Architecture, Construction and Project Management, Interior Design, Landscape Architecture, and Product Design.Software Innovators.

COURSE STRUCTURE

Year I, Semester I

Code	Subject	Credits
ASC 101	Mathematics	3
HIS 171	Introduction to Architecture	2
BLT 151	Building Materials	2
PRS 111	Free Hand Sketching	3
PRS 112	Basic Drafting	3
PRS 113	Basic Design	5

Year I, Semester II

Code	Subject	Credits
ASC 102	Communication Techniques	2
ASC 103	Statics and Dynamics	2
VIS 121	Architectural Modeling	2
VIS 122	Architectural Independent Studies	2
PRS 114	Architectural Graphics	3
ADS 131	Design Studio-I	5

Year II, Semester III

Code	Subject	Credits
HIS 272	History of Architecture I (Western & Eastern)	3
AES 241	Building Science I	2
DTT 281	Design Theory I	2
ASC 204	Structure I	2
VIS 223	Structural Forms	2
PRS 215	Computer Aided Design	3
ADS 232	Design Studio II	5

Year II, Semester IV

Code	Subject	Credits
BLT 252	Building Construction I	3
HIS 273	History of Architecture II (Modern)	2
ASC 205	Structure II	2
ASC 206	Surveying	3
PRS 216	Computer Aided 3D Visualizations	2
ADS 233	Design Studio III	5

Year III, Semester V

Code	Subject	Credits
ASC 307	Structure III	3
BLT 353	Building Construction II	3
AES 342	Landscape Architecture	3
HIS 374	History of Architecture III (Nepalese)	3
AEL 391	Elective I	2
ADS 334	Design Studio IV	5

Year III, Semester VI

Code	Subject	Credits
AES 343	Building Science II	2
AES 344	Settlement Planning	3
BMP 361	Working Drawing and Detailing	2
DTT 382	Design Theory II	2
ASC 308	Building Services	3
ADS 335	Design Studio V	5

Year IV, Semester VII

Code	Subject	Credits
BMP 462	Practicum (Practical Office Experience)	15

Year IV, Semester VIII

Code	Subject	Credits
ASC 409	Estimation, Valuation and Specification	2
BLT 454	Building Construction III	3
AEL 492	Elective II	3
VIS 424	Directed Studies and Seminar	2
ADS 436	Design Studio VI	5

Year V, Semester IX

Code	Subject	Credits
AEL 593	Elective III	3
AES 545	Architects & Society	3
ADS 537	Design Studio VII	5
DTT 583	Thesis- Part I	4

Year V, Semester X

Code	Subject	Credits
BMP 563	Professional Practice	2
DTT 584	Thesis: Part II	12

Bachelor of

INFORMATION AND COMMUNICATION ENGINEERING

Bachelor of Information and Communication Engineering (BE IC) is an Engineering program that integrates the principles of communication systems and information technology to design, develop, and manage modern digital communication networks. It encompasses key prominent areas such as signal processing, telecommunications, data communication, and network design that prepare students to address the challenges of today's connected world through holistic learning approach and in depth research to adapt to emerging trends in ICT and communication technologies. Focusing on the implementation aspect of application of mobile communications, the Internet of Things (IoT), cybersecurity, and smart technologies, the program intends to equip its graduates with the technical and analytical skills needed for dynamic careers in telecommunications, IT industries, and research organizations.

Key Learning Outcomes

- Design, analyze, and optimize modern communication and information systems to enhance the reliability and efficiency of communication systems.
- Design and manage network infrastructures for wired, wireless, and mobile communication environments.
- Integrate IoT and smart technologies for automation, connectivity, and intelligent system development.
- Apply cybersecurity measures to protect communication systems and data from threats and vulnerabilities using modern tools and technologies for simulation, testing, and performance analysis of communication networks.
- Demonstrate teamwork, leadership, and ethical responsibility in professional engineering practice.

Careers by Area

- System Analyst
- Web & Mobile App Developer
- Cloud Computing Engineer
- Network Planning & Optimization Engineer
- Wireless Communication Specialist
- IoT (Internet of Things) System Developer
- Embedded Systems Engineer
- Robotics & Automation Engineer
- Control Systems Engineer
- Data Analyst / Data Scientist
- AI / Machine Learning Engineer

COURSE STRUCTURE

Year I, Semester I

Code	Subject	Credits
PHY 110	Applied Physics	3
ELE 130	Basic Electrical Circuits	3
MTH 115	Engineering Mathematics I	3
CMP 112	Computer Programming	3
ELX 110	Digital Logic	3
ELX 111	Electronics Engineering Workshop	1

Year I, Semester II

Code	Subject	Credits
MTH 151	Engineering Mathematics II	3
ELX 152	Electromagnetic Waves and Propagation	3
ELX 120	Electronic Devices and Circuits	3
ENG 110	Communication Techniques	2
CMP 164	Object Oriented Programming with Java	3
MEC 116	Engineering Drawing	1

Year II, Semester III

Code	Subject	Credits
MTH 211	Engineering Mathematics III	3
CMP 160	Data Structure and Algorithms	3
CMP 222	Database Management System	3
ELX 176	Microprocessors and Computer Architecture	3
ELX 211	Instrumentation & Sensor Technology	3

Year II, Semester IV

Code	Subject	Credits
ELX 330	Signals and Systems	3
MTH 216	Probability and Statistics	3
CMP 168	Web Technology	3
MTH 252	Numerical Methods	3
CMP 348	Software Engineering	3
MGT 250	Engineering Economics	2

Year III, Semester V

Code	Subject	Credits
CMP 346	Artificial Intelligence	3
CMM 311	Communication System Engineering	3
CMM 422	Digital Signal Processing	3
ELX 320	Embedded System	3
CMP 331	Mobile Application Development	3
PRJ 341	Mini Project	1

Year III, Semester VI

Code	Subject	Credits
CMM 220	Data Communication	3
CMM 351	Antenna Systems	3
CMP 424	Cloud Computing and Virtualization	2
CMP 370	Internet of Things	3
	Elective I	3
PRJ 351	Minor Project	2

Year IV, Semester VII

Code	Subject	Credits
CMP 336	Data Science and Machine Learning	3
CMM 426	Wireless Communication Technology	3
MGT 332	Entrepreneurship and Professional Practice	2
MGT 320	Engineering Management	2
CMM 424	Telecommunication and Network Security	3
	Elective II	3

Year IV, Semester VIII

Code	Subject	Credits
	Elective III	3
INT 490	Intership	3
PRJ 452	Major Project	3

ELECTIVES

Advance Networking with IPV6
Computer Network Programming
Cryptography
Internet Technology
Internet, Intranet & Applications
IP Switching & Routing
Aeronautical Communication
CDMA Technology
Cellular Mobile Communication
Digital Communication Techniques
GSM Cellular Mobile Communication System
Optical Fiber Communication
Next Generation Wireless Communication
Satellite Communication
Spread Spectrum & CDMA
Wireless communication Technology
Aeronautical Informatics
Artificial Neural Network
Fuzzy Logic with Engineering Application

Human Computer Interaction
Natural Language Processing
Social Network Analysis
Computational Linguistics
Big Data Technologies
Bioinformatics
Cloud Computing
Data Mining
Distributed DBMS
Distributed Operating System
Infromation Retrival
Oracle
Parallel Computing
Real Time Operating System
Computational Biology
Generative AI
Cyber Security
Block Chain Technology
Information System Audit

Get Scholarships

Supporting Your Education

PU Scholarships

The College provides scholarships to deserving students as per PU guidelines. 10% students of the annual intake are provided full scholarships (except the expenses towards surveying and field visits).

NCIT Scholarships

The College provides scholarships based on a student's GPA in +2 / equivalent and the merit list of the NCIT Entrance Test.

Performance based Scholarships

The College awards full Semester Fee waiver to students who achieve SGPA 4 in any Semester.

NCIT also awards class toppers and second toppers.

Admission Process

Shaping Your Future

Eligibility

Applicants need minimum C Grade or 45% marks (for A Levels, minimum D Grade) in Physics, Chemistry and Math. Biology group students (without Mathematics) are also eligible to apply.

Application Form

Forms for admission are available at the NCIT office or online at www.ncit.edu.np.

Entrance Test

NCIT conducts its own Entrance Test which is mandatory for admission and assesses areas in Math, Physics, Chemistry & English.

Results

Results are strictly based on the order of merit and published the same day & made available on the Notice Board and at: www.ncit.edu.np.

Admission Counselling

Applicants who have cleared the Entrance Test are invited for the Admission Counseling.

Offer of Admission & Acceptance

Selected Applicants are handed Offer Letters for admission.

Enrollment

Successful Applicants shall be enrolled as NCIT students on completing this process.

Admission Forms
can also be submitted
ONLINE
at

www.ncit.edu.np

Dean's List Awardees

21st Convocation (February 20, 2026)

Santosh Bhattarai
CGPA 3.94

Ayush Phuyal
CGPA 3.93

Sabhyata Subedi
CGPA 3.92

Shova Kumari Chaudhary
CGPA 3.92

Shankar Jethera
CGPA 3.90

Anjali Paudel
CGPA 3.90

Raaz Gupta
CGPA 3.90

Prakash Poudel
CGPA 3.90

Sanjeev Bhatta
CGPA 3.88

Shyam Khatri Kshetri
CGPA 3.87

Rohan Shrestha
CGPA 3.86

Sarthak Sharma
CGPA 3.85

Ajay Kumar Sah
CGPA 3.84

Kabita Poudel
CGPA 3.83

Sugam Adhikari
CGPA 3.83

Namrata Chaudhary
CGPA 3.82

Manisha Kumari Ray
CGPA 3.81

Pratima Aryal
CGPA 3.81

Manoj Raj Pant
CGPA 3.79

Asim Paudel
CGPA 3.79

Sailendra Kumar Karna
CGPA 3.77

Sameer Bhatt
CGPA 3.76

Sandhya Gotame
CGPA 3.76

Sumit Sah
CGPA 3.75

Neeya Vaidhya
CGPA 3.75

Gaurav Puri
CGPA 3.74

Abinav Shakya
CGPA 3.72

Brihat Thapa
CGPA 3.71

Pankaj Sah
CGPA 3.70

UNIVERSITY TOPPERS
Fall-2025

Aaditya Raj Paudel
SGPA 4.0

Anup Adhikari
SGPA 4.0

Apekshya Awasthi
SGPA 4.0

Gaurav Thapa
SGPA 4.0

Nabin Paudel
SGPA 4.0

Nirbhay Sunuwar
SGPA 4.0

Niroj Danai
SGPA 4.0

Prasiddha Acharya
SGPA 4.0

Rajan Bikram Kshedal
SGPA 4.0

Ram Kumar Isar
SGPA 4.0

Sanjiv Shah
SGPA 4.0

Sarita BK
SGPA 4.0

Sugam Acharya
SGPA 4.0

Suresh Thakur
SGPA 4.0

Suyog Lamsal
SGPA 4.0

Swastika Kumari Sah
SGPA 4.0

CONGRATULATIONS

Mr. PRASIDDHA ACHARYA

BE Software, 2021 Batch

Heartiest congratulations on achieving a
perfect 4.0 GPA in all eight consecutive semesters.
Wishing you continued success in your future academic and professional endeavors.

Programs Offered at NCIT

Bachelor Programs
BE Computer
BE Civil
BE IT
BE Software
BE Information & Communication
B. Arch
BBA
BCA

Master Programs
ME CE
MSc CS
MCSIT

NCIT
Nepal College of Information Technology
(Affiliated to Pokhara University)
Balkumari, Lalitpur, Nepal, Tel: 5186354, 5186358 , Email: info@ncit.edu.np, www.ncit.edu.np

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