



**ADVANCED COLLEGE
OF ENGINEERING & MANAGEMENT**
Affiliated to Tribhuvan University



acem where academia collaborates industries



INTRODUCTION

Advanced College of Engineering and Management (acem) located in Kalanki, Kathmandu is one of the oldest and foremost engineering institutions of the country that provides degrees on engineering and computer applications. acem was initially located in Kupondole, Lalitpur. In the course of time, the institution flourished and grew not just in size but also with the enhanced quality.

Established in the year 2000, this top-notch institution has accomplished a rich history of academic excellence and an affluent array of traditions. At present, the requisites of society are changing rapidly due to rapid advancement of science and technology and their applications in daily life. Since the day of inception, acem has been consistently working in fulfilling these changing demands to produce academically qualified and technically sound graduates through quality education.

With a team of highly qualified, experienced and dedicated faculties, acem prioritizes the overall development of the students. They aim to keep themselves updated with the current academic as well as industry developments and make significant contributions to the academia through quality teaching, patent publications, seminars and conferences etc. Moreover, faculty from other renowned institutions are invited to deliver guest lectures to help augment their studies beyond syllabus.



acem teaching methods are designed to ensure technology based learning which is in addition to the designated course design of the chosen engineering branch. Students are provided with hands-on experience through internships in core companies in their chosen branches through Job Mela, an annual job placement fair of acem, experiential learning through industry visits, projects, experts' sessions, workshops, case studies, upscale labs, and also virtual classroom sessions whenever necessary.

With our constant effort, we are convinced that the graduates of acem will be technically sound, confident and also attain leadership skills. acem graduates have an eminent history in achieving excellent results and have progressed to the reputed institutions either for professional career or research study both nationally and internationally.

acem has flourished and grown itself over the years. Overcoming various challenges, acem has ultimately uplifted to emerge as one of the best colleges in the country.



MESSAGE FROM **CHAIRMAN**

Mr. Ramesh Kumar Silwal

It gives me an immense pleasure to welcome you to Advanced College of Engineering and Management (acem), an academic institute devoted to the pragmatic growth of each and every student for a better professional development.

We are delighted to introduce acem in the present recognized form, as a center of excellence in engineering education as well as on providing technical degrees with its core values of self-esteem, harmony, accountability and achievement. The relentless effort and integrated contribution of the college family, students, parents, and all well-wishers have uplifted acem to more advanced levels.

Since the day of establishment, acem has envisioned to educate young minds with best education. Hence, we primarily prioritize teamwork and a high level of responsibility. This visionary culture allows and emphasizes us not only to adopt the present-day challenges but also individual responsibilities to the society and our nation at large.

The relentless effort of the entire acem family is all set to bring out the potential within each student by providing proper guidance and by ensuring learning and understanding to enhance their potentials in order to make them future engineers, prepare them to deal with the real world challenges, and thrive in the global job market after they accomplish their academic training.

You are here to get educated, to develop yourself professionally, and most important of all, to make yourself a better human being. Remember, you are the ambassadors of your home, your family, your college and your country.

So let's embark on the journey together for your better tomorrow.



Mr. Kapil Dev Regmi, Executive Director



Professor Dr. Durga Prasad Sangroula, Principal

MESSAGE FROM **EXECUTIVES**

Here at Advanced College of Engineering and Management (acem), we have one concern only – the process of providing the best possible education with the help and support of an experienced and qualified team. Because we really do put students at the heart of everything we do, you can remain assured that your journey with us will be enlightening, enjoyable and rewarding, and will ultimately prepare you well for your future. We pay an extensive care to our students throughout their time at acem, from the highly competent faculty members to our excellent resources to optimize your employability, and even our substantial and active alumni network.

For more than two decades of its establishment, acem has focused on creating, nurturing, and shaping future engineers, technical professionals and leaders to create an inclusive and sustainable society from a national and international perspective. To achieve this objective, our culture and academic programs aim to nurture the vigorous and promising minds equipped with skills to face the constantly changing social, economic and technical landscape of our nation and beyond.

At acem, we aim to provide advanced undergraduate education alongside the high-tech research opportunities in new frontiers of ‘engineering and technology’ with special focus towards Leadership & Innovation. Students are often provided with dynamic opportunities for interaction with the intellectuals and experts from the industry through guest lectures, industrial visits, internships and projects. To align with the curricula, acem has outstanding faculty, ultra-modern infrastructure and laboratories. Moreover, at acem, a spacious green campus, state-of-the-art library and pleasant ambience ensures a wonderful learning experience.

Your education is invariably the best investment you make along the way.



VISION

To be one of the best technically innovative engineering colleges and prove oneself as a world-class institution in Nepal.

MISSION

Produce professionally competent, technically sound, proactive and ethical leaders who can manage the global workforce having diversified work groups with high adaptations to various cultures.

Establish acem as a world class institution by consistently serving quality education, maintaining professional development of faculty and staff.

Develop long term relations with other national and international educational institutions, corporates, research organizations, government and non-governmental organizations to foster a broad range of self-motivated learning environments.



acem at a glance

| | |
|---------------|-----------------------------|
| Establishment | : 2000 AD (2057 B.S.) |
| Affiliation | : Tribhuvan University |
| Location | : Kalanki, Kathmandu, Nepal |
| Floor Area | : 134000 Sq. ft. |
| Land Area | : 15 Ropanies |

Courses offered & Intake capacity

| Course | Intake Capacity |
|---|-----------------|
| BE Civil | 96 |
| BE Electrical | 48 |
| BE Computer | 96 |
| BE Electronics, Communication and Information | 96 |
| BCA | 35 |

*Enrollment under 10% scholarship as per the rule of Institute of Engineering,
TU has been included in intake capacity.

A blurred background photograph of three students in a classroom. On the left, a young man with dark hair and a mustache is looking down at a book. In the center, a young woman with glasses and a dark hoodie is also looking down at a book. On the right, another young woman with long dark hair is looking down at a book. They are all sitting at a light-colored desk. The background shows a window with a grid pattern.

Academic Programs **OFFERED**



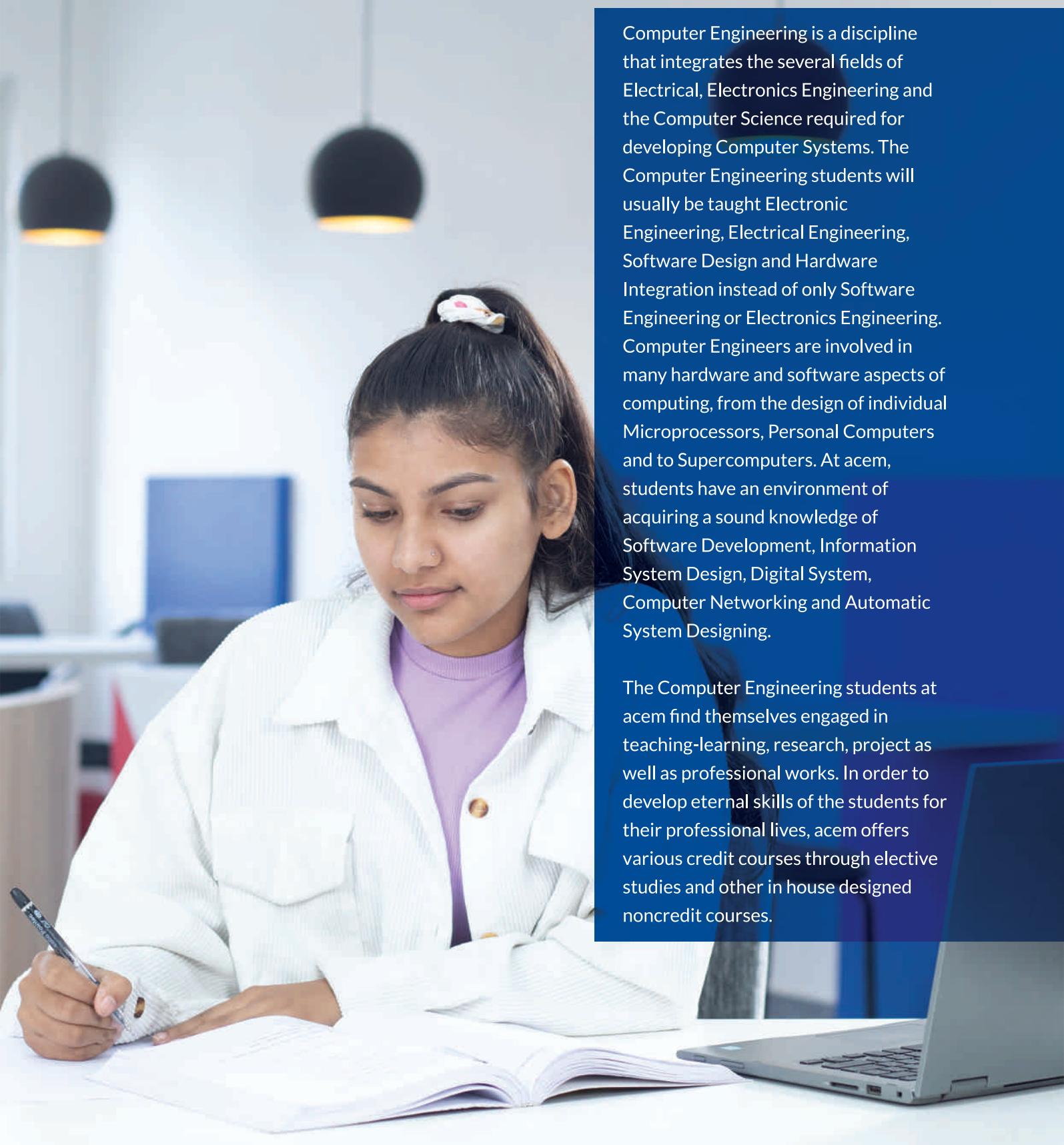
BACHELOR IN CIVIL ENGINEERING (BCE)



Since its year of inception, Advanced College of Engineering and Management (acem) has been providing academic training for the degree of Bachelor of Civil Engineering (BCE). The civil engineering profession deals with a wide variety of engineering tasks including planning, designing, supervision, construction and maintenance of activities of public works like roads, bridges, buildings, water works, sewage systems, tunnels, airports, dams etc. and offers a multitude of challenging career opportunities. The Department of Civil Engineering is the pioneer department of acem. The department plans, arranges, monitors and controls the classes of Bachelor of Civil Engineering except for the first year program.

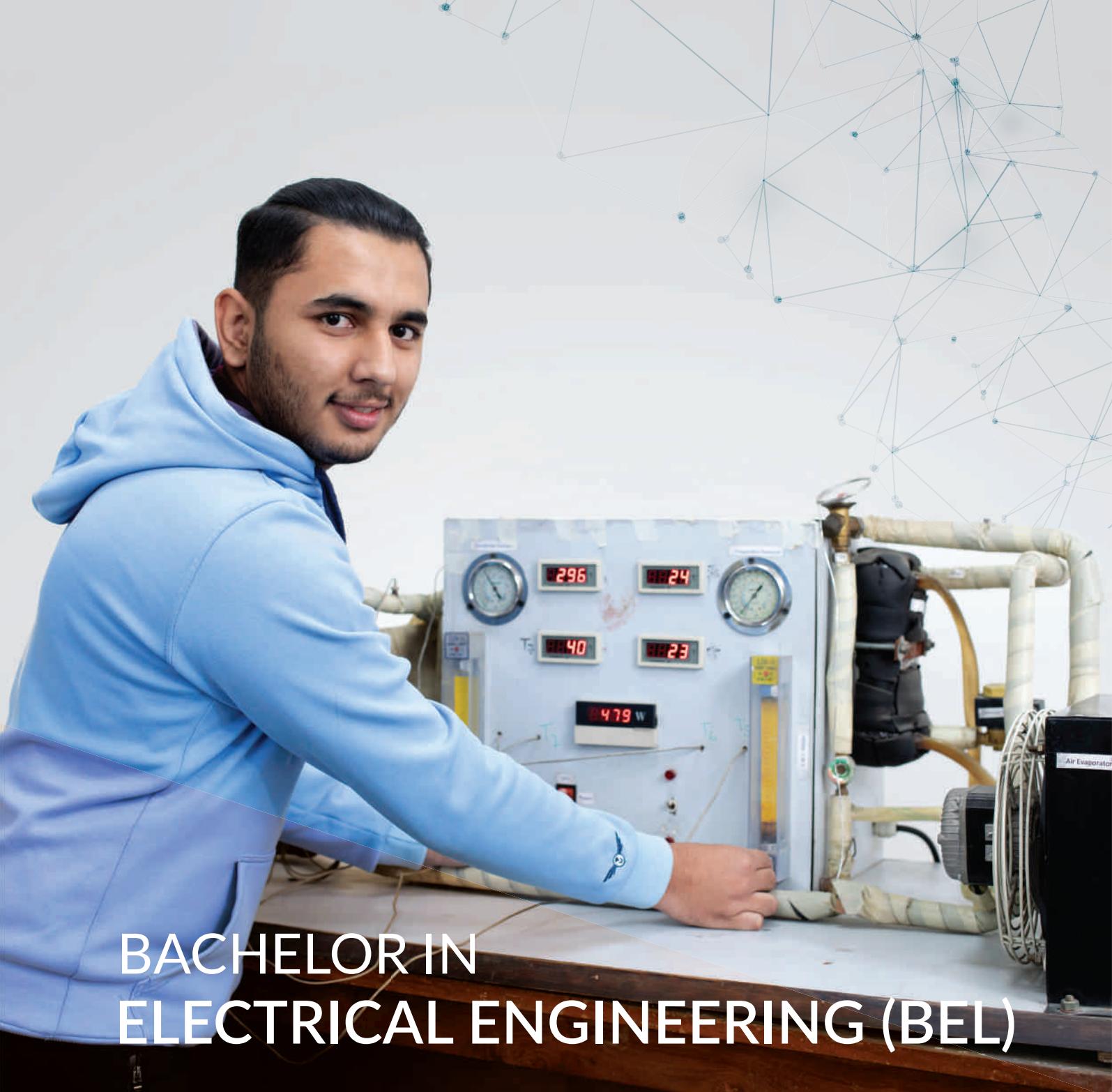
Besides the regular academic courses, students are also trained to use various software related to the civil engineering field. This department also empowers its academics to take part in research activities and technical paper writings. It also recommends students to different educational/professional seminars, exhibitions as the participants of acem. The department strives hard to achieve excellence in teaching, learning and professional development. The department has a vision to develop a center of excellence in the field of Civil Engineering.

BACHELOR IN COMPUTER ENGINEERING (BCT)



Computer Engineering is a discipline that integrates the several fields of Electrical, Electronics Engineering and the Computer Science required for developing Computer Systems. The Computer Engineering students will usually be taught Electronic Engineering, Electrical Engineering, Software Design and Hardware Integration instead of only Software Engineering or Electronics Engineering. Computer Engineers are involved in many hardware and software aspects of computing, from the design of individual Microprocessors, Personal Computers and to Supercomputers. At acem, students have an environment of acquiring a sound knowledge of Software Development, Information System Design, Digital System, Computer Networking and Automatic System Designing.

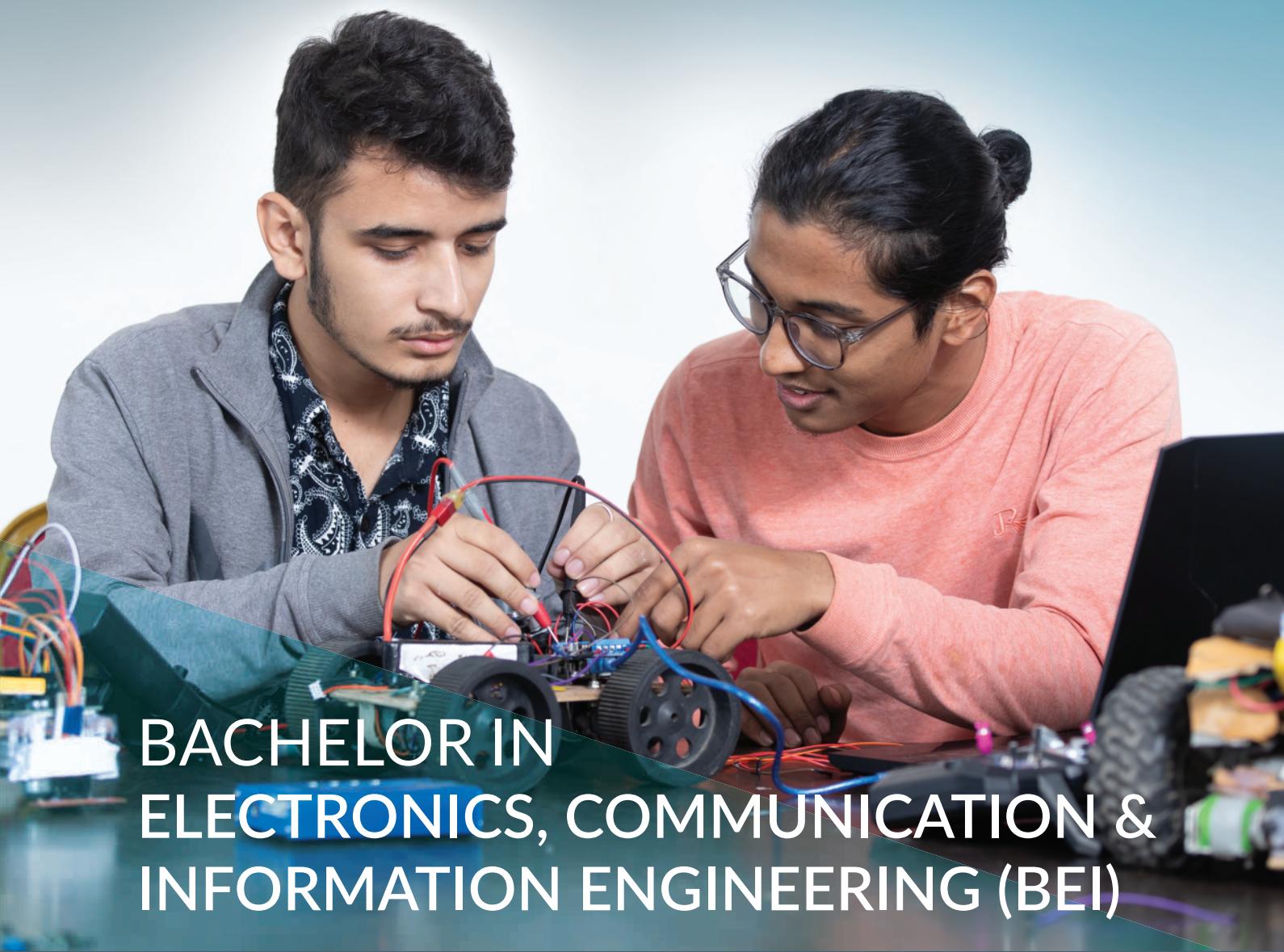
The Computer Engineering students at acem find themselves engaged in teaching-learning, research, project as well as professional works. In order to develop eternal skills of the students for their professional lives, acem offers various credit courses through elective studies and other in house designed noncredit courses.



BACHELOR IN ELECTRICAL ENGINEERING (BEL)

Electrical power and systems are at the heart of modern society and so are electrical engineers. Electrical engineering degrees will equip students with knowledge of how the industry works, as well as giving them the engineering skills and technological knowledge needed to design, assess and improve electrical and electronic systems. Electrical engineers may work on a diverse range of technologies from the design of household appliances, lighting and wiring of buildings, telecommunication systems, electrical power stations and satellite communications.

At bachelor level, an electrical engineering degree will aim to give you grounding in the underlying principles of electronic and electrical engineering, before allowing specialization in an area of interest later on in the course. You will also be involved in projects working within groups. Department of Electrical Engineering at acem is actively engaged in teaching and research on many topics related to engineering challenges.



BACHELOR IN ELECTRONICS, COMMUNICATION & INFORMATION ENGINEERING (BEI)

Electronics Engineering is a discipline that uses the scientific knowledge of behavior and effects of electrons to develop components, devices, systems and equipment to ease life and business. Moreover, this field of engineering covers the area where non-linear and active electrical components such as electrical devices, semiconductor devices; especially transistors, diodes, and integrated circuits are utilized to design electronic circuits, devices and systems.

Combining this engineering with the transmission and reception of electromagnetic signals is the Electronics and Communication Engineering. Recently, IOE has added a new stream 'Information' in this field of engineering and it is now called Electronics, Communication and Information Engineering. Adding 'Information' stream adds knowledge of programming, software, networking and many more.

At acem, students have an environment of acquiring a sound knowledge of Electronic System Design, Digital System Design, Computer Networking and Automatic System Designing, Digital Signal Analysis and Processing and Communication System Design. The present curriculum of Electronics, Communication and Information Engineering of T.U. aims to deal with implementation of applications, principles and algorithms developed within many related fields, for example Wired and Wireless Communication Engineering, Telecommunications, Control System, Signal Processing, Computer System Design, Software Engineering, Network Engineering and Instrumentation Engineering etc.



BACHELOR IN COMPUTER APPLICATION (BCA)

This program aims at imparting knowledge and at creating the environment for implementation of practical aspects where the focus is centered at "learning by doing and observations".

We focus on student centric teaching learning approaches in small group activities and reinforcement with emphasis on practical oriented teaching methods with modern teaching aids. This department is backed by well educated, talented and dedicated computer professionals who are renowned for research outside the country as well. The teaching module comprises lectures, tutorials and practicals.

We have state of the art infrastructure with sophisticated computer labs. The department ensures that the education we provide is reflected not only by being successful in the examinations but also helping students to be successful and competitive in their career and contribute their best to the society.

INDUSTRY PARTNERSHIPS



Advanced College of Engineering and Management, acem, shares strong bonds with numerous industries of Nepal. From manufacturing to service sector mainly focusing on IT, Constructions, Hydropower and Robotics and Automation like ERMC (the biggest consulting group working internationally for World Bank, Asian Development Bank and Nepalese Government Projects), World Link Communications (one of the largest Internet Service Provider of Nepal), e-Sewa (Strongest Digital Payment Service for Nepal), Leapfrog (Software company working for the USA), Stars Scholars' Network (International Academic Network based on USA), Federation of Contractors Association of Nepal (Association of Nepalese Contractors), Solu Hydropower (Biggest Hydropower Company of Nepal in Private Initiative), Kashmir World Foundation (Innovative Technology Solution Provider, USA), SICHER (IT consulting, product engineering, and training services provider, headquartered in Silicon Valley, California, USA), Fuse Machine (AI based IT company focusing Education in USA and Nepal), Goethe Institute, (A German Language Institute, Germany), Sheshkant Foundation (Engineering Work-Center, German and NRN Funded Project), BKOl (A Class Construction Company of Nepal), Hama Group of Industries (Steel Manufacturer), Nepal Bank Limited (Oldest Financial Institution of Nepal), Robotics Association of Nepal (Drone and Robotics based Institution), Merojob.com (HR Company, Nepal), NREN (Nepal Research and Education Network, Nepal) to name a few. We develop networks between the public and private sectors-locally, nationally and internationally, bringing industries to the classroom and taking classes to industries. Furthermore, to secure the placement opportunities of our students, acem organizes Placement Fair via Job Mela that eases students for jobs interviews process and facilitates industries to find energetic freshers. We also provide counseling to students about placement opportunities and maintaining contact with all industrial organizations for further placement purposes.



RESEARCH & INNOVATION UNIT (RIU)



Research and Innovation Unit (RIU) is an in-house research unit of acem. It largely focuses on minimizing the gap between industry and academia. Its way to overcome industry problems is by utilizing acem's faculties, students and global experts.

RIU was established with an objective to provide an open platform for engineering students so that they can leverage their academic skills in order to solve the real challenges of Industry. With this objective in mind we started giving various workshops and training.

In 2022, RIU was registered as Not for Profit Organization and named as NUTAN Research and Innovation Center (NRIC). It has the vision to provide a structured innovation based platform that is majorly focused on minimizing the gap between Industry and academia in Nepal.

RIU has already spent more than 1000 collective hours on various workshops and modules for 400+ students under the "Student Accelerator Program" from School to Industry. At present, it has collaborated with top 4 schools and colleges of Nepal and over 13000+ students are expected to have access to this innovation center. Apart from workshops and training modules, RIU has 3 papers on Publication Reviews and one Start-Up idea about e-scooter on incubation phase.

Earlier, RIU visited Udayapur Cement Industry (UCIL) for the plant assessment of the production performance along with faculty, students and researchers. The team carried out an assessment on Reinforced Suspension Preheater (RSP) to improve the overall thermal efficiency of the plant. The detailed research gave the best suited solution for the cement factory based on the current status of the plant. Along with the technical assessment, the team also proposed an optimum strategy to roll out the plan.

Moreover, some of the major milestones include Students Intensive Involvement in industry Projects, Industry Partnerships, International Universities and National and International students based projects in the pipeline. RIU has so far successfully conducted the workshops like Storytelling with PowerPoint, 3D Printing, Design Thinking Workshop, Coding Code hygiene + Clean Code, Business Model Canvas, Data Driven Decision Making and also Communication skills + Content Writing.



CLUBS VARIATION AT acem

acem club is like a crossroad, a place of intersection for numerous learning environments. The different criss-cross trails are designed to provide opportunities for students to enhance their leadership and interpersonal skills while also upgrading their self-confidence.

At present, the number of functioning clubs to develop the objective of multitasking, staying organized, generating innovative ideas are:

1. Living Lab
2. Reader's Club
3. Entrepreneurship Club
4. Engineers' Without Borders
5. Advanced Robotics Club (ARC)
6. Civil Engineering Students Society (CESS)
7. Advanced Electrical Engineering Society (AEES)
8. Project Association for Computer and Electronics (PACE)

LAB



LIBRARY





OUR ALUMNI

advancing through reconnecting

BADRI PRASAD SHARMA

I always feel proud and lucky to be associated with Advanced College of Engineering and Management (acem). Being a pioneer batch student of acem, I always recall my college as a family. The highly renowned teachers, the welcoming and friendly environment of the classrooms, sound library, and well-equipped laboratory have always been a priority of acem from the beginning of its establishment. The educational and personal guidance, love and support from all the faculty members of acem led us in the frontal arena in this competitive Engineering world, globally.

I am equally grateful to the college for providing me an opportunity to serve as a lecturer, after I completed my Bachelor's Degree in Civil Engineering. It was a great teaching experience and I was overwhelmed with gratitude to be a faculty member of acem.

The teaching and learning experience in acem helped me to succeed in the examination given by the Public Service Commission, Nepal. It is always satisfying to know that the graduates of acem are leading in the front in the government and private organizations nationally and globally. I wish more success of acem in coming days and remain the leading agency in the Engineering Education sector.



Er. Badri Prasad Sharma

Awarded by Civil Service Award 2079 by Government of Nepal

Senior Divisional Engineer/Project Manager Department of Roads

Ministry of Physical Infrastructure and Transport Government of Nepal

Batch: 2000-2004 (First Batch)



NITA KOIRALA

Thank you acem team for letting me put my feelings and experiences in words. It was indeed a wonderful journey of my life being an acem family which I will cherish forever. I had spent my time very well while pursuing my undergraduate degree along with seeking knowledge, doing research and fulfilling my passion. I could not be where I am today without the knowledge and wisdom I got from the acem family.

I would also like to pay my gratitude to acem for giving me an opportunity to work as a teaching faculty as my first job.

Er. Nita Koirala

Senior Section Chief, IT Department

Agricultural Development Bank Limited Nepal

Batch: 2001-2005

BAL KRISHNA NYAUPANE

I am honored to share my experience as an undergraduate student at acem. This four year journey at acem was really motivating, satisfying and inspiring for me.

I would like to thank my teachers for providing all the students with much guidance and support. My current achievement is also because of the endless guidance and support of teachers as well as well-equipped, strong and qualified management team. I feel proud being a part of acem.

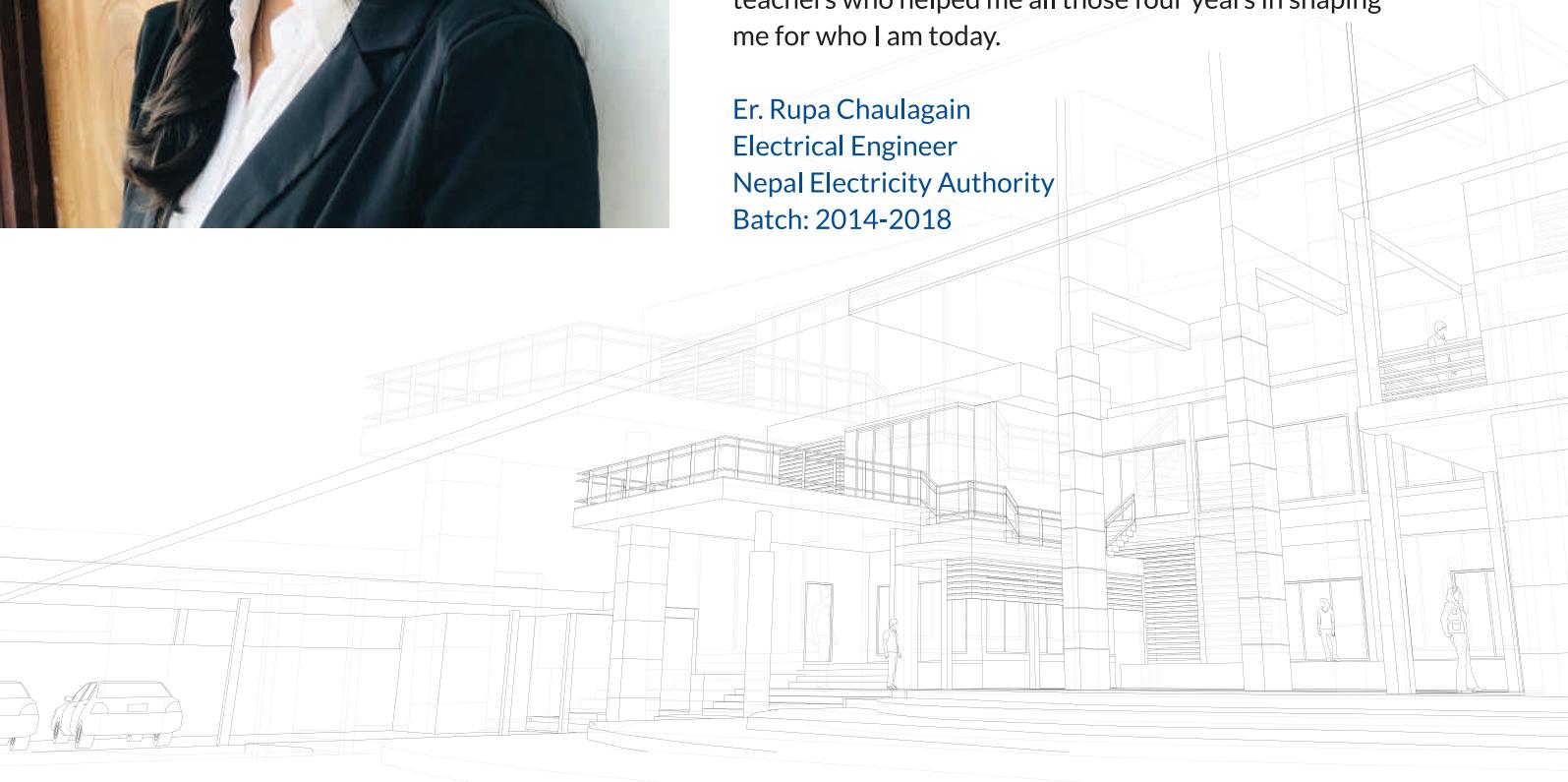
Er. Bal Krishna Nyaupane
Assistant Professor
Department of Electronics and Computer Engineering
Institute of Engineering, Tribhuvan University
Batch: 2003-2007



RUPA CHAULAGAIN

My student days at acem were really fruitful as it genuinely helped me in shaping my career goals. With the starting years to my finals, acem has helped me in every possible way to rebuild my learning of concepts and build my knowledge along with the development of positive demeanor, motivation and confidence in establishing my academic and professional goals. I am indebted towards the dedication of our qualified teachers who helped me all those four years in shaping me for who I am today.

Er. Rupa Chaulagain
Electrical Engineer
Nepal Electricity Authority
Batch: 2014-2018





INTERNATIONAL PARTNERSHIP & EVENTS



Advanced College of Engineering and Management (acem) has been associated with reputed international academic institutions like Azrieli College of Engineering, Kibbutzim College of Education, Technology and the Arts of Israel, Kashmir World Foundation of the United States amid others. In collaboration with such reputed academic institutions and organizations, acem has successfully conducted a few programs as well.

INTERNATIONAL EXCHANGE PROGRAM



ADVANCED COLLEGE
OF ENGINEERING & MANAGEMENT



2022



With the theme of 'students' exchange program' Advanced College of Engineering and Management (acem), Nepal and Kibbutzim College of Education, Technology and the Arts, Israel, in a joint effort organized an 'International Exchange Program' in September 2022. This 2 weeks long program primarily aimed to empower four selected government, semi-government, private and a special (school for differently abled children) schools of Kathmandu, Nepal. Israeli students and students of acem worked together in the premises and vicinity of these schools, building valuable workforce skills to explore the challenges that exist within and around the schools.

BOARD OF



Mr. Ramesh Kumar Silwal, Chairman

As an academician, Mr. Ramesh Kumar Silwal is relentlessly contributing to enhance the higher level of education in Nepal by upgrading the education system. His dedication and efforts are well appreciated in the education system of the country. Mr. Silwal is serving as the President of Higher Institutions and Secondary Schools' Association Nepal (HISSAN) besides his involvement as the President of GoldenGate International College. Formerly, he also served as the Member Secretary of Nepal Sports Council of Nepal. He holds a Master's degree from Tribhuvan University and taught almost three decades in the University.

Mr. Kapil Dev Regmi, Executive Director

Mr. Kapil Dev Regmi has been in the field of education for the last two and half decades. He established Kathmandu Don Bosco School and College along with Kathmandu Pragya Kunja School. He holds an MBA degree from Tribhuvan University and M.Phil in Educational Leadership from Kathmandu University.

Mr. Regmi is also the President of Engineers Without Borders (EWB) Nepal and Vice President of Shalom Club Nepal. Moreover, he is a member of the faculty board of Kathmandu University as well as the advisor of Higher Institutions and Secondary Schools' Association Nepal (HISSAN).



Professor Dr. Durga Prasad Sangroula, Director

Dr. Durga Prasad Sangroula served as Professor for about 32 years at the Institute of Engineering (IOE), Tribhuvan University. He received MSc (with honors) in 1989 with Water Resources Engineering from Leningrad Polytechnic Institute of the former USSR. In 1999, he obtained MSc in Hydropower Development and Management from Norwegian University of Science and Technology (NTNU) and later Dr. Sangroula received his Ph.D. from the NTNU itself. His field of specialization is water resources and sedimentation engineering.

Er. Laxman Pokharel, Director

Er. Laxman Pokharel is the Chairman of Cosmos Engineering College and Himalayan WhiteHouse International College. He is also the CEO of PEA Association which was established in 1994. Formerly, Er. Pokharel served the Association of Engineering College Nepal (AECoN) as the President and Advanced College of Engineering and Management (acem) as the Principal. Furthermore, he has served thousands of entrance aspirants, most of whom have secured admission in the prestigious engineering colleges of Nepal and abroad.



DIRECTORS



Er. Uddab Raj Chaulagain, Director

Er. Uddab Raj Chaulagain is the Managing Director of Environment and Resource Management Consultant which is one of the biggest Engineering firm of Nepal. He is also the Vice President of SCAEF Nepal (Society of Consulting Architecture and Engineering Firms) who has managed and administered many road and irrigation projects funded by The World bank, ADB, DFID and other International Organizations.

Er. Lochan Lal Amatya, Director

Er. Lochan Lal Amatya served in Nepal Telecom for more than 32 years, starting from Computer Engineer to Chief Technical Officer (CTO). He has landed his support to various IT sectors of Nepal including regional ICT projects of UNDP as National project coordinator. He is currently serving as the Chairman of Nepal Research and Educational Network (NREN), President of SECEN, ITPF and Past President of FCAN. Er. Amatya holds Master's degree in ICT from Russia.



Mr. Shinjan Koirala, Director

Mr. Shinjan Koirala has a more than 25 years of experience in managing different organizations and is actively involved in engineering education since the very beginning of privatization of engineering education in the country. He is also the board member of Geotechnical and Associates Pvt. Ltd. (GTAA), a newly established Laboratory in the country to provide quality service in the field of Geotechnical investigation and material testing.



Mr. Dileep Agrawal, Director

Mr. Dileep Agrawal founded and established Nepal's largest Internet service provider (ISP), WorldLink in 1995 while attending Bates College in the US. Over the years, WorldLink has registered tremendous sustained growth and provides services ranging from Internet and data connectivity to cloud computing and managed enterprise services. WorldLink has grown to be not only the largest ISP in Nepal, but one of the largest IT services companies employing over 3,500 people throughout the country. A recognized pioneer in Nepal's IT industry, Mr. Agrawal regularly appears in national and international media. Mr. Agrawal is the invitee to the board.



Assoc. Prof. Laxmi Bhakta Maharjan, Director

Er. Laxmi Bhakta Maharjan has been in the field of education for the last one and half decades. He holds Master's degree in MSc. Water Resources Engineering from Tribhuvan University. He has also been working professionally in the field of civil engineering for the last two decades. He has worked in Advanced College of Engineering and Management as faculty, Deputy Head, Department Head, Chief of Liaison Section. He is also the Editor-in-Chief of journal of Advanced College of Engineering and Management, which is annually published by the college. Er. Maharjan is the invitee to the Board.





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OF ENGINEERING & MANAGEMENT

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📍 Bhuwaneshwori Marg-14,
Kalanki, Kathmandu, Nepal
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