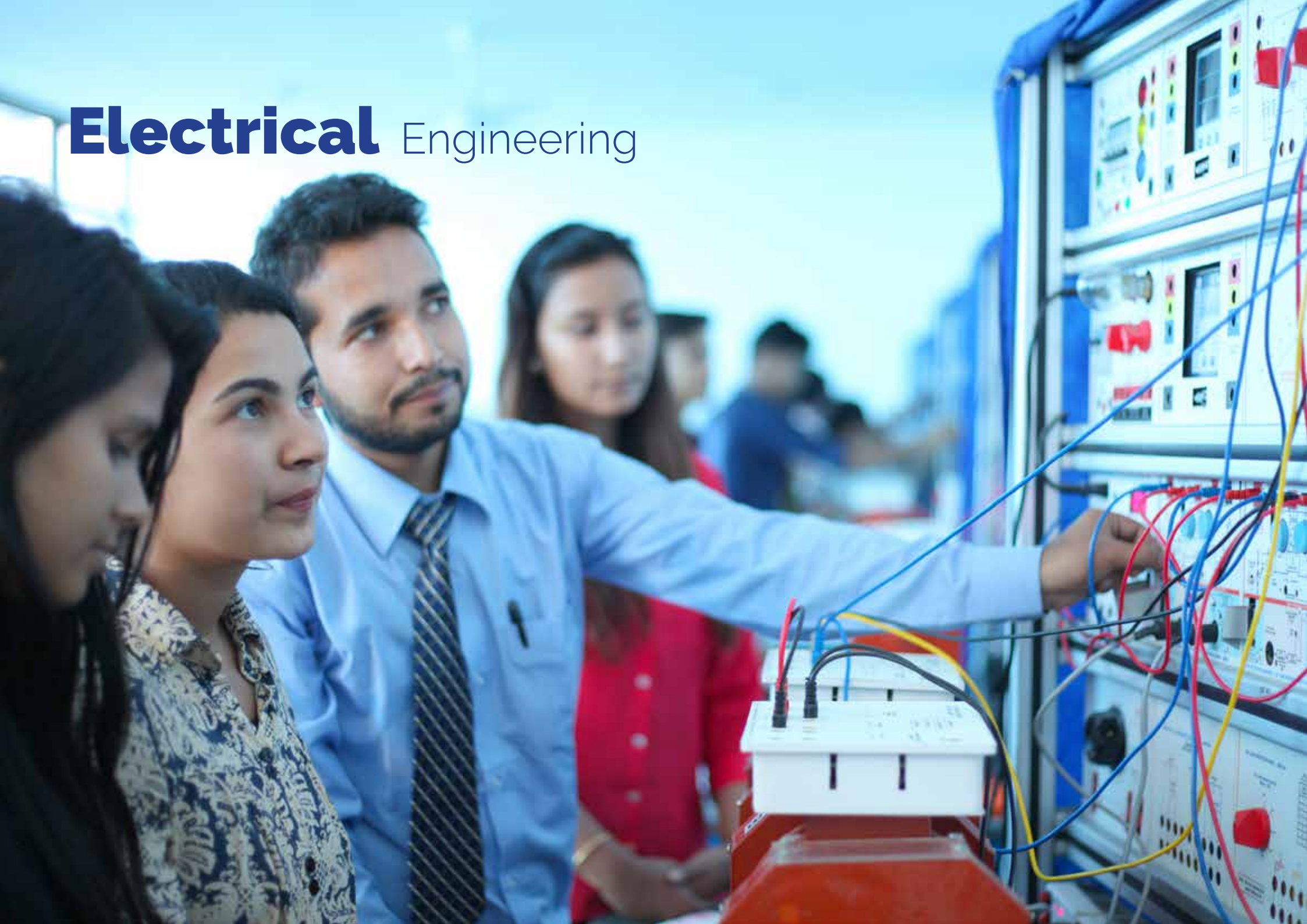


Electrical Engineering



HoD Note

Welcome to the Department of Electrical engineering of NCE our undergraduate program has always been known to be one of the best engineering undergraduate program of the country. We strives to provide our students with appropriate knowledge and practical skills in electrical engineering so that they become well rounded engineering student, who will not only be technically adept but also disciplined and morally up-standing. The four year bachelor in electrical engineering course includes a critical component of industrial attachment, field visit in different semester and project works for the students at the end of their fourth year of study to better prepare them for the industry. All these ensure that our students are most competitive in job market. Furthermore, we also take a good care of our student's extra activity and provide platform to introduce their creativity by involving them in a Robotics Club and Electrical Club under the electrical department. By IOE standards our department is quite large with upgraded laboratory and allows close interaction between highly qualified teaching faculty and students. The department is an active participant in the Institute of Electrical and Electronic Engineering (IEEE) through its academic staff to add the value of international standard and get synchronism with the world. And for all these, we are always here to welcome focused and self-motivated students interested in furthering their understanding and skills in Electrical Engineering to join us and realize their dreams.

Er. Basuki Nath Jha



We strives to provide our students with appropriate knowledge and practical skills in electrical engineering so that they become well rounded engineering student



Electrical Engineering

Electrical engineering is concerned with the basic forms of energy that run our world. Whether it's gas, hydro, turbine, fuel cell, solar, geothermal, or wind energy, electrical engineers deal with distributing these energies from their sources to our homes, factories, offices, hospitals, and schools. You have seen various kinds of electrical devices and systems around you. Do you know how it operates? Electrical engineering deals with design, research, development, planning, manufacturing of various electrical instruments and devices. Electrical engineering also involves the exciting field of electronics and information technology. Do you have a cellular phone or a computer? Wireless communication and the Internet are just a few areas electrical engineering has helped flourish, by developing better phones, more powerful computers, and high-speed modems. As we enter the 21st century, the technology that surrounds us will continue to expand and electrical engineers are leading the way.

Electrical engineering itself is one of the exciting courses of study. We feel proud to involve such course in our program here at NCE. This department is running successfully at NCE since 2066. It has the accumulated experiences and physical resources of more than 5 years now, for providing quality engineering education and performing applied engineering research. It has a strong group of faculties with diverse experiences. It is continu-

ously evolving and continuously seeking its faculty and infrastructure development. It takes the followings as its prime objectives:

- To produce highly qualified, objective, confident, and creative graduates with entrepreneurial attitude, and attain excellence in engineering education and applied research
- To become a center of excellence in electrical & electronics engineering research
- To collaborate with various organizations in making the engineering education more relevant to the domestic context and in obtaining in-country applied research solutions to the domestic technical problems



Why NCE for Electrical Engineering?

Making a difference, career-building and giving back to society, these are some of the ways our graduating seniors describe their electrical engineering experience at NCE. We know that electrical engineers at NCE are, and always will be, at the forefront of technological innovation in any related fields. From designing operating room equipment, to creating faster ways for generating work in the area of power systems, renewable energy and technology NCE is creating various opportunities. Besides, an excellent faculty and staff, the department has well-equipped laboratories to train students in these areas.

If you want to make a difference, if you want to use your creativity to solve the latest challenges confronting mankind, be at the pinnacle of the best thinkers in the nation, and truly change the engineering concept, then your choice is obvious – earn the degree of Electrical Engineer from NCE.

Resources

The department is fully equipped with all the resources and materials it needs to impart quality education. This department has all materials required for proper and regular functioning of the laboratories. Course materials and books relating to subject matters are provided by the library. The department also provides various other resources required for academic enhancements.

Participation

Field visits to power stations, manufacturing, and other industries are conducted by the department as prescribed by IOE curriculum. Students are encouraged to participate in the semester projects and are obligated to report

their work at the end of their project, which enhances presentation skills of student and makes them socially involved in extra-curricular activities. Direct participation in such works help students to develop their self-confidence which is required to compete with other students of similar fields.

Laboratory Works

Basic Electrical Lab
Electric Circuit Lab
Electric Machine Lab
Instrumentation and Control Systems
Switchgear and Protection Lab
Hydropower Lab
Industrial Power Distribution & Illumination Lab
Power Electronics Lab
Utilization of Electrical Energy Lab
Power Plant Equipments Lab

Choose Electrical Engineering if ?

- Machine and control systems excite you
- Power generation, transmission and distribution is an area of your interest
- Power industry, manufacturing industry, renewable energy sector and communication sectors are your career options

After being the part of NCE, I feel secure for my future because it acts as a bridge between me and my career. These days every college is trying to admit themselves to a better for student's career but after being a part of NCE, I felt



NCE actually mean it. While talking about the teachers and infrastructures, with high skilled, friendly, dedicated teachers and full featured infrastructure for engineering students; NCE provides zeal for innovative and creative mind. For a student to achieve his/her goals in life it needs motivation and proper guidelines regarding their aim and that is well provided by NCE.

I must say, joining this college is the best turning point in my life and I am sure I won't regret for it.. "After all college matters for our bright and secured future."

Bishnu Prasad Neupane

072/BEL

When I joined NCE, I wasn't sure of the decision I had made. Today however I am glad that I am part of NCE. NCE has proven to be an ideal platform to pursue my engineering career. The homely environment, dedicated teacher, well equipped laboratory, good administrative facilities should very well assure you that



NCE is one of the best engineering college in Nepal I think +2/Diploma graduated shouldn't miss the chance of being part of NCE.

Madan Neupane

071/BEL

Electrical Engineering Curriculum

1st Semester

- Engineering Mathematics I
- Computer Programming
- Engineering Drawing I
- Engineering Physics
- Applied Mechanics
- Basic Electrical Engineering

2nd Semester

- Engineering Mathematics II
- Engineering Drawing II
- Basic Electronics Engineering
- Engineering Chemistry
- Fundamental of Thermodynamics & Heat Transfer
- Workshop Technology

3rd Semester

- Engineering Mathematics III
- Object Oriented Programming
- Electric Circuit Theory
- Electrical Engineering Material
- Electronics Devices and Circuits
- Digital Logic
- Electromagnetics

4th Semester

- Electrical Machine I
- Numerical Methods
- Applied Mathematics

- Instrumentation I
- Power System Analysis I
- Microprocessor

5th Semester

- Communication English
- Probability and Statistics
- Control System
- Instrumentation II
- Power System Analysis II
- Electrical Machine Design
- Electrical Machine II

6th Semester

- Engineering Economics
- Digital Control System
- Signal Analysis
- Switchgear and Protection
- Industrial Power Distribution and Illumination
- Hydro Power

7th Semester

- Project Engineering
- Organization and Management
- Technology Environment and Society
- Power Electronics
- Utilization of Electrical Energy
- Elective I

- Power Plant Equipment
- Project (Part A)

8th Semester

- Engineering Professional Practice
- High Voltage Engineering
- Power Plant Design
- Transmission and Distribution System Design
- Elective II
- Elective III
- Project (Part B)

Elective Courses

- Reliability Engineering
- Energy Management System
- Rural Electrification
- Micro Hydro Power
- Advance Power System Analysis
- Applied Photovoltaic Engineering
- Bio-Medical Instrumentation
- Wind Energy Conversation System
- Artificial Neural Network

Field Visits

- Electrical Machine Design (3 day)
- Hydropower Engineering (3 day)
- Rural Electrification (1 days)
- Micro Hydro (2 days)