



Inauguration of Chhoekhang by Tsugla Lopen

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Inauguration of College Chhoekhang

From September 9th to 11th, 2024, the college had the honor of hosting Tsugla Lopen His Eminence Karma Rangdrol Rinpoche. The primary purpose of His Eminence's visit was to preside over the sacred Rabney of the college Chhoekhang, which was constructed by renovating the building that previously housed the Department of Mechanical Engineering.

The construction, which began on 3rd October 2023 and completed on 6th February 2024, was made possible through the generous contributions of Nu. 1,512,178.31/- by the college's staff, students, and alumni spanning from the 1980s to recent years. In addition, the

staff and students dedicated their time and effort to the labor involved in creating the sacred space.

The Rabney ceremony took place throughout the day on September 10th. On the morning of September 11th, His Eminence kindly conducted a Chhoed Shayed session for the staff and students, followed by a tour of the college laboratories in the afternoon.

JNEC extends its sincere gratitude to all who rendered their support, time, and resources in making this project a reality.



Honourable Opposition Leader's visit to JNEC

The Honourable Opposition Leader, Lyonpo Pema Chewang, visited JNEC on 25th September, 2024, for a session with students and staff. The session was marked by an engaging exchange of ideas and insights, as His Excellency reflected on his journey and the role of the opposition in Bhutan's political landscape.

He shared his path to becoming the leader of the Bhutan Tendrel Party (BTP) and fondly recalled the hospitality extended to him by JNEC during his tenure as the head of the Eastern COVID19 Task Force.

In his address, he stressed the significant role of the Opposition in Bhutan's Parliament, noting

that its duty is to support government initiatives when they benefit the nation, while also holding the government accountable by opposing policies that may not serve the country's best interests. This was aimed at dispelling any misunderstandings among citizens about their responsibilities.

A key highlight of his speech was on the 5Cs—Certificates, Credentials, Creativity, Communication, and Character – a set of values shared by His Majesty the King during His Majesty's address at Sherubtse College on the occasion of His 42nd Birth Anniversary. He emphasized that while all five qualities are important, Character stands as the most critical element for personal and professional

development.

During the interactive Q&A session, Lyonpo discussed BTP's plans to reform and enhance the national education system. Students also voiced concerns regarding the discontinuation of degree programs in Power and Survey Engineering at JNEC. In response, the Opposition Leader assured the audience that these issues would be raised and addressed in the upcoming sessions of the Parliament.

His Excellency's visit to JNEC provided students and staff with a unique opportunity to gain insights into the workings of the opposition party and the future direction of Bhutan's educational and political landscape.



BIF International Workshop Held at JNEC

JNEC hosted the Bhutan-India Friendship (BIF) International Workshop from 17th to 21st October 2024. The event, organized in collaboration with NIT Silchar, IIT Guwahati, and the College of Science and Technology (CST), was supported by the Indian Embassy in Thimphu. The workshop focused on "Applications of Artificial Intelligence in Renewable Energy, EV Charging, and Grid Modernization infused with Gross National Happiness Values."

The five-day workshop began with a virtual meeting on 17th October, followed by a warm welcome on 18th October with a Khadar ceremony. A total of 134 participants from various institutions attended, including 17 students and 2 professors from NIT Silchar, 20 students and 4 faculty members from CST, 2 faculty members and 7 students from IIT Guwahati, and 61 students and 19 faculty members from JNEC.

The workshop formally commenced with an inaugural address by the President of JNEC on 19th October. The sessions covered topics such



as Distributed Control of AC Microgrids and Power Control of Grid-Integrated Generators. In the afternoon, participants enjoyed a friendly cricket match and a musical night, celebrating the cultures of the two countries.

The next day of the workshop included mindfulness and meditation sessions, followed by technical talks on green energy. The final day

featured a talk on Gross National Happiness, alongside sessions on AI in EV charging and IoT applications. The workshop concluded with a visit to Chökyi Gyatso Buddhist Institute and a closing ceremony presided over by Shri Bupinder Kumar, Consulate General of India. The event fostered cross-border collaboration and shared knowledge on AI, renewable energy, and holistic development.

Training on Machine Fault Diagnostics and Industrial Automation

A three-day training program on “Machine Fault Diagnostics and Industrial Automation” was conducted from 26th to 28th September 2024 in Thimphu. Organized under the CEECoM Project and hosted by JNEC, the event aimed to equip participants with theoretical and practical knowledge in diagnostics, automation, sensors, and signal processing. Participants from Bhutan Power Corporation, Druk Green Power Corporation, and the College of Science and Technology attended, benefiting from lectures

and hands-on sessions led by experts from Aalto University (Finland), Tallinn University of Technology (Estonia), and Kathmandu University (Nepal).

The training commenced with a session on machine fault diagnostics, covering systematic approaches to prevent failures. Participants explored rotor issues, bearing failures, and misalignments through real-world examples. The second day focused on sensors, instrumentation, and signal processing,

including Fourier analysis and Python-based signal interpretation. The final day introduced PLC and SCADA applications for industrial automation.

The CEECoM project, co-funded by the Erasmus+ program, aims to address the shortage of experts in power system diagnostics in Nepal and Bhutan. This initiative is expected to enhance local expertise and reduce dependence on external consultants.



Social Service at Chökyi Gyatso Institute

On 26th August 2024, the scout members and volunteers of JNEC initiated a social service at Chökyi Gyatso Institute (CGI). The event focused on cleaning the institute's campus and enhancing its overall aesthetics. Volunteers worked together to clear debris, clean pathways, and concrete floors, contributing to the beautification of the surroundings. This initiative was aimed to promote environmental

awareness, teamwork, and a sense of community service among the participants. The management of CGI expressed gratitude for the efforts of JNEC scouts and volunteers. Such activities continue to foster a culture of service and responsibility, reinforcing the values of cleanliness and sustainability in the community.



The President Meets Edith Cowan University Dean



The President of JNEC met with Prof. Paulo de Souza, Executive Dean of the School of Engineering at Edith Cowan University, Australia on 28th August 2024.

During the meeting, they explored potential joint projects, strengthening academic and research ties between the institutions. A key outcome was Prof. Paulo's sponsorship for the establishment of a FabLab at JNEC, which is now fully operational on campus. The FabLab is expected to enhance innovation and practical learning for students.

Additionally, Prof. Paulo offered PhD scholarships to former academic staff of JNEC, providing further opportunities for advanced research and development. The collaboration marks a significant step toward strengthening JNEC's academic excellence and global partnerships.

JNEC Hosted International Visiting Academicians

JNEC hosted two visiting academics, Professor Wim Feringa from the University of Twente, Netherlands on 1st September 2024, and Professor Michael Flach from the University of Innsbruck, Austria on 5th October 2024. Prof. Feringa conducted a nine-week course on Cartography for Diploma in Surveying and BE in Surveying & Geoinformatics students while Prof. Flach collaborated with the Department of Civil Engineering and Surveying to develop a Certificate course in Timber Engineering, set to be launched in February 2025.

Their expertise and contributions enriched the academic environment at JNEC, strengthening global collaborations and enhancing curriculum development.



Research Students from Lund University



JNEC welcomed two research students from Lund University, Sweden, for their Master's thesis on Environmental Engineering: Recycling and Reuse of Plastics, under the supervision of Mr. Phurba Tamang, Lecturer in the Department of Civil Engineering and Surveying. The students conducted their research from September 27th to November 20th 2024.

This marked the fourth batch of Master's thesis students hosted by JNEC, bringing the total to six students who have undertaken research under the guidance of JNEC faculty. The collaboration highlights JNEC's commitment to fostering international research and academic exchange.

Competency-Based Training Program for Dzongkhag Technicians

First Batch Training

On 12th November 2024, the Royal Civil Service Commission (RCSC), in collaboration with the Ministry of Infrastructure and Transport (MoIT) and JNEC, launched the Competency-Based Training Program for Dzongkhag Technicians at JNEC. The opening ceremony of the first batch was graced by Dasho Lobzang Dorji, Commissioner of RCSC. The event was also attended by Dasho Dzongda of Samdrup Jongkhar Dzongkhag, the Chief Engineer and the Human Resource Officer from MoIT. Officials from RCSC and JNEC staff were also present.

This initiative aims to align with the vision of building “A High Performing Civil Service for a High-Income GNH Economy” and supports the RCSC’s 13th Five-Year Plan. The training seeks to advance a skilled and adaptable civil service to meet the dynamic infrastructure needs of the country. It was launched as part of a broader transformation initiative in the engineering sector, which has expanded the roles and responsibilities of technicians across all government agencies.

This training covered the following domains:

1. Information Technology (IT),
2. Surveying,
3. Estimation and Costing,
4. AutoCAD, Quality Control and Assurance,
5. e-GP and e-Tools



The first batch was attended by the 20 Technicians from Gasa, Punakha and Wangdue Phodrang Dzongkhags.

Second Batch Training

The opening ceremony for the second batch of the training program was virtually chaired by Dasho Dr. Tshering Cigay Dorji, Commissioner of RCSC, and attended by other officials from RCSC and MoIT. The ceremony was also physically attended by the President, Deans, and resource persons from JNEC.

This training batch brought together 25 participants from four Dzongkhags and Thromdes, including representatives from

Gasa, Punakha, Wangdue Phodrang, Samdrup Jongkhar Dzongkhag, and Samdrup Jongkhar Thromde. The training took place from 16th December 2024 to 10th January 2025.

Continuing the Training Program

The Competency-Based Training Program will continue until all technicians from the 20 Dzongkhags have completed the training. This ongoing initiative will ensure that all technicians across the engineering sector are equipped with the necessary skills and knowledge to meet the growing demands of infrastructure development in respective fields.



CoMSO 2024 at NIT - Silchar India



Jigme Namgyel Engineering College (JNEC) proudly marked a significant milestone as its students showcased their research prowess at the prestigious International Conference on Modelling, Simulation, and Optimisation (CoMSO) 2024, hosted by the National Institute of Technology (NIT), Silchar, India from 16-18th November 2024. The event brought together eminent researchers, academicians, industry professionals, and policymakers to exchange ground breaking ideas and address critical challenges in the domain from over 12 countries.

A remarkable highlight of the event was a distinguished keynote speech by the president of JNEC, Dr. Tshewang Lhendup who was invited to talk on 'Building Energy Simulation: Case Studies in Bhutan'. He added immense value to the conference by emphasizing on innovation and the critical role of research in sustainable development.

The conference saw active participation from five students from JNEC, who presented four research papers, which were financially supported by the college. The paper titled "Optimum PV Design and Reconfiguration

of Rubessa Solar Farm using Comparative Genetic Algorithms - A Solution to PV Systems Operating Under Partial Shading Conditions" by Lhendup Thinley Dorji and Chencho Dorji, students of JNEC, received the Best Paper Award in its technical session. This outstanding accomplishment highlights JNEC's commitment to advancing renewable energy solutions and underscores the students' dedication to impactful research.

The proceedings of the conference are set to be published in Springer's Smart Innovation, Systems, and Technologies (SIST) series, indexed by ISI Proceedings, EI-Compendex, DBLP, SCOPUS, Google Scholar, and SpringerLink. This promises to bring global recognition to the research contributions of JNEC students and faculty.

The successful participation of JNEC at CoMSO 2024 not only reinforces its reputation as a hub of academic excellence but also reflects its steadfast commitment to empowering students to contribute meaningfully to global research and innovation.



JNEC at BUSF 2024: Runner-Up Achievements

The 9th Bhutan University Sports Federation (BUSF) Tournament 2024 was held from 12th to 17th December, 2024 at Samtse College of Education.

This event, aimed at holistic student development, fostering discipline, leadership,

and resilience, while promoting physical and mental well-being, saw fierce competition, and demonstration of remarkable teamwork and perseverance in the participating teams.

JNEC displayed outstanding skill and determination by securing runners-up

positions in archery and football for boys. This achievement highlights JNEC's prowess in sports and unity among players. As the college celebrates this milestone, the teams are encouraged to aim higher and achieve greater success in the future.



JNEC Secures 2nd Position in CTF

Capture the Flag (CTF) competitions are one of the most exciting ways to learn, test, and sharpen cybersecurity skills. Participants work through challenges to uncover hidden “flags” within target environments, making it an exciting and hands-on experience.

The BtCIRT division of the GovTech Agency organized an online CTF challenge from 19th to 20th December, 2024 for students from JNEC, Gyalpozhing College of Information Technology (GCIT), and College of Science and Technology (CST). The event commenced with an expert-led session from BtCIRT, equipping participants with valuable knowledge on cybersecurity tools, techniques, and strategies for tackling CTF challenges.

Out of 23 participating teams, a team from JNEC secured the 2nd position.

Place	Team	Score
1	Bold Believers	335
2	JNEC Visionaries	330
3	Group 3	329
4	Nomad	327
5	Jnec-Flag Hunters	325
6	JNEC AI squad	319
7	Toffs	312
8	Group 5	312
9	Clt+alt+elite	312
10	JNEC Digital disguise	307
11	JNEC Codebreak Clash	299

Visit by Officials from the International Development Centre of Japan

Ms. Veronika Kutics and Mr. Yukitomo Tatsumi from the International Development Centre of Japan visited JNEC along with Mr. J.P. Sharma, a local consultant and JNEC's 1987 Civil Engineering alumnus, on 28th November 2024. They visited to discuss potential collaborations aimed at refining and enhancing the Human Resource Development (HRD) Plan for the sustainable growth of Bhutan's construction workforce.

The team held an in-depth discussion with the college management and the



Department of Civil Engineering and Surveying. Their focus was on the JICA supported project, "Establishment of Human Resource Development System in the Construction Sector," which seeks to create a comprehensive training system for engineers and technicians in Bhutan's construction industry. This initiative is expected to significantly contribute to developing a sustainable and resilient road infrastructure across Bhutan. The meeting was a step forward in strengthening international partnerships for long-term growth in the construction sector.

Samdrup Jongkhar National Council Member visits JNEC

JNEC welcomed Dasho Tshewang Rinchen, the National Council Member of Samdrup Jongkhar on 24th October 2024. Dasho interacted with the faculty and staff in a productive discussion centered on educational initiatives and the potential for collaboration between educational institutions and national

governance.

Dasho also emphasized the importance of strengthening ties between the education sector and government bodies to foster an environment conducive to national development. The discussions covered a range

of topics, including policy support for education and how higher education institutions can contribute to the nation's growth. Faculty and staff also expressed their enthusiasm for future opportunities that could enhance educational programs and create a more cohesive approach to national progress.



Khenpo Jangsem Tashi visits JNEC

Khenpo Jangsem Tashi visited the college on 30th September, 2024 and delivered a talk on pressing contemporary issues from a Buddhist perspective. Khenpo emphasized the need for practical and ethical action in today's world. He took the audience into the philosophical roots of natural disasters, encouraging them to reflect on their relationship with nature and how it influences their environment. In line with Bhutan's vision of Gross National Happiness (GNH), he shared strategies to enhance soil fertility, underscoring the importance of sustainable agricultural practices.

One of the key highlights was his distinction between GNH education and traditional educational methods, which fostered a deeper understanding of happiness and societal well-being. Khenpo advocated for harmony to combat religious extremism and promote inclusivity, urging the audience to adopt an education system rooted in Buddhist wisdom.



DoEE officials visit JNEC

Officials from the Department of Employment and Entrepreneurship (DoEE), Ministry of Industry, Commerce and Employment led by Director General Ms. Kunzang Lhamo visited JNEC on 24th September 2024 to monitor performance of the Incubation Centre at the

college which was established with the funding support from DoEE.

The President of the college presented the status of the Incubation Centre, its performance over the last two years and sustainability plans beyond December 2024. He also thanked DoEE

for generously supporting the Incubation Centre along with training of Incubation Manager. DoEE and JNEC renewed their commitment to work together in promoting entrepreneurship not only among the college students but also among the youths in the nearby community.



Inter-class Fashion Show Competition



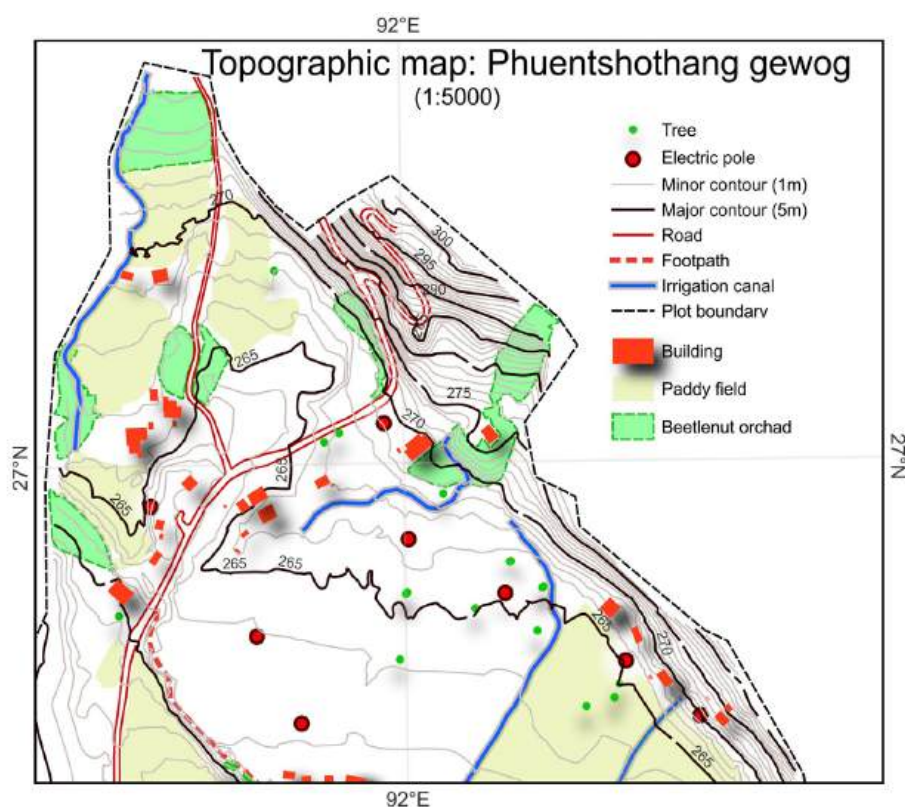
On 26th October 2024, the JNEC Y-PEER Club, in collaboration with the Helping Hand Club, hosted the much-anticipated Inter-class Fashion Show Competition. The event was a stunning showcase of creativity and diversity, with the theme 'World Tour', where each class represented a different country, bringing unique and imaginative fashion ideas to life.

The competition featured a wide array of designs, each inspired by the rich cultures and traditions of various nations with Final Year BE in Power Engineering (BE4PE) emerging as the winner followed by First Year Diploma in Civil Engineering (D1C).

Such competition plays a crucial role in developing creativity, teamwork, and cultural awareness among students. By exploring diverse cultures through fashion, participants gained a deeper understanding of global traditions, promoting inclusivity and appreciation for diversity.



Survey camp at Samdrup Choling



A 35-day survey camp, part of the annual module curriculum for students, took place in Samdrup Choling from 7th December 2024 to 11th January 2025. Seventeen Bachelor of Engineering students in Surveying & Geoinformatics and 26 Diploma students in Surveying participated in the camp, guided by

three staff members from the Department of Civil Engineering and Surveying.

The camp focused on conducting a topographic survey of 160.615 acres, with the data collected to support future planning and development efforts led by the Dzongkhag Administration of Samdrup Jongkhar.

On 19th December 2024, the college President visited the survey camp, encouraging and inspiring the students. His visit highlighted the college's commitment to hands-on learning, underscoring the academic importance of the camp.

Mr. Binay Tamang, the Team Leader, emphasized that the camp serves as an invaluable platform for students to enhance their technical skills while honing their teamwork, critical thinking, and problem-solving capabilities. This yearly programme builds on a legacy of impactful fieldwork, following a similar survey of 371 acres of Samdrup Choling Yenlag Throm conducted by earlier student cohorts during the 2022 field season.



FABLAB NEWS



Jigme Namgyel Engineering College, Royal University of Bhutan established its Digital Fabrication Laboratory (FabLab) in December 2023 with generous support of the School of Engineering, Edith Cowan University, Western Australia. It is envisaged to serve as a hub for creativity, collaboration, and practical skill development for the students, faculty, and the local community.

"To be a dynamic hub for creativity, collaboration, and practical skill development, serving students, faculty, and the local community in realizing innovative ideas and solutions."

Meet the team!



Mrs. Chimi Dem



Mr. Dorji Gyeltshen



Mr. Nyan Moe Paing



Ms. Sun Depa Rai



Mr. Karma Singye



Mr. Sangay Dorji

Products we made!



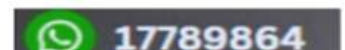
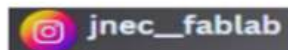
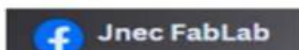
Training we offer!

We offer Introduction to CAD and Digital Fabrication training for 12 weeks, 24 hrs every semester

We have trained around 100 students and 6 faculties of JNEC as of January 2025.

We offered two session on Introduction to Digital Fabrication (FABLAB) to community focusing on the high school students during their summer and winter break and trained around 25 high school students as of January 2025

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