



# JNEC INSIGHTS

Newsletter  
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## Keeping you informed



### Mechanisation of Yarn Processing Tools and Backstrap Loom

On 29<sup>th</sup> September 2025, three student project teams from JNEC, led by the Dean of Research and Industrial Linkages along with faculty members, showcased innovative prototypes at the “Launch of Modern Textile Tools and Digital Design Studio” organised by the Royal Textile Academy (RTA). The event was graced by Her Majesty Gyalum Sangay Choden Wangchuck, along with distinguished dignitaries and government officials.



The JNEC teams presented three key prototypes aimed at modernising traditional textile production while preserving Bhutan’s rich weaving heritage:

- *Semi-mechanised Backstrap Loom, which helps ease the physical strain of the weavers and makes the weaving productive and enjoyable.*
- *Carding machine customised to our local needs, making it more accessible, affordable, and easy to operate.*
- *Spindle machine aimed at producing uniform and consistent yarn quality at a faster rate.*

The prototypes were developed using most of the locally available materials except electronic components, to empower our artisans through innovation to address key challenges in Bhutan’s textile production process, funded by William H. Geiger Family Foundation Inc.



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## JNEC participates in GMC

JNEC was privileged to take part in the 4<sup>th</sup> batch of volunteers at the Gelephu Mindfulness City, which began on 23<sup>rd</sup> December 2025. A total of 248 volunteers from the college comprising 68 staff members and 180 students participated in this national initiative in service to Tsa-Wa-Sum.

The college is particularly grateful for the opportunity to contribute in this meaningful way and is humbled to have sent the highest number of volunteers among the colleges under the Royal University of Bhutan, despite having a relatively smaller staff and student population than several other constituent colleges.

This participation reflects JNEC's shared spirit of service, civic responsibility, and its continued commitment to nurturing a community that values both academic growth and contribution to the nation.



## Workshop on the Use of AI in Teaching and Research



JNEC organised a one-day professional development workshop on 13<sup>th</sup> September 2025, to enhance academics and staff's skills in using AI for teaching and research. The workshop, led by six faculty members trained at the Training of Trainers (ToT) in Paro College of Education from 18<sup>th</sup> to 21<sup>st</sup> August 2025, aimed to empower participants with practical AI tools and techniques for pedagogy and research.

Sessions covered AI fundamentals, hands-on practice with ChatGPT, Gemini, and Napkin AI, and self-assessment activities. Participants also explored research and writing tools like Perplexity, SciSpace, Paperpal, Vany AI, Undermind, ResearchRabbit, Elicit, Notebook LM, and Consensus AI. These tools supported tasks from lesson planning to literature reviews and information synthesis.

The rationale for organising this event stemmed from the increasing integration of AI in academia, necessitating a well-informed faculty to leverage these technologies effectively and ethically.



## Student Leaders Appointment and Annual Performance Agreement (APA)

The Khadar Ceremony and Oath Taking for the newly elected student leaders, councilors and club secretaries for the academic year 2025–2026 was held on 23<sup>rd</sup> July 2025, to formally recognise their appointments.

A key highlight of the event was the signing of the Annual Performance Agreement (APA) between the President and the student leaders, an initiative introduced for the first time at JNEC. The APA was signed to strengthen their commitment to responsible, accountable, and action-oriented leadership.



## Bhutan-India Friendship Association Workshop

The Bhutan India Friendship Association (BIFA) Workshop 2025 on “Empowering Climate Action: AI, IoT, Robotics, and Artistic Fusion for a Sustainable Indo Bhutan Future” took place from 28<sup>th</sup> to 31<sup>st</sup> October 2025 at JNEC.



The five-day event celebrated innovation, friendship, and sustainable tech collaboration by bringing together top minds from:

1. JNEC (Bhutan)
2. Samtse College Of Education(SCE) (Bhutan)
3. Sherubtse College, Royal University of Bhutan
4. College of Science and Technology. - CST (Bhutan)
5. National Institute of Technology Silchar - NIT Silchar (India)
6. NIT Sikkim (India)
7. North-Eastern Hill University - NEHU (India)
8. RoboPixel Guwahati (India)



Participants engaged in a vibrant mix of technical sessions, cultural programmes, and community activities. Hands-on workshops in AI, IoT, Robotics, and Art-Technology Fusion resulted in innovative prototypes such as water monitoring systems and eco-bots for sustainable smart villages.

A field visit to Shimbung in Dewathang enabled real-world testing of the projects, strengthening the link between innovation and community service. The programme concluded with the “Grand Finale of JNEC Got Talent 2025,” featuring lively performances by JNEC students and visiting teams from India.

## Strengthening OHS Foundations at JNEC: A Joint Initiative with JICA Bhutan

The Department of Labour (MoICE), in collaboration with Japan International Cooperation Agency (JICA) Bhutan, successfully concluded a four-day Occupational Health and Safety (OHS) Training for the faculty of JNEC in Samdrup Jongkhar from 9<sup>th</sup> to 12<sup>th</sup> December 2025.

Over the four days, faculty members were equipped with essential competencies covering hazard identification, basic risk assessment techniques, regulatory requirements, safety signages, and hands-on demonstrations on the use of OHS monitoring equipment. Strengthening these core skills is a strategic enabler for embedding a safety-first culture within JNEC’s working environment and for producing engineering graduates who are better prepared to champion safe practices in the workplace.



This foundational training also serves as a critical building block toward JNEC’s long-term aspiration to establish a dedicated centre for OHS that will lead national OHS advancement, facilitate knowledge exchange, drive research, and foster stronger partnerships with national and international OHS institutions.

## Precision Machining Training



The Department of Mechanical Engineering in collaboration with the society for construction equipment (SECONEQ), Japan organised a four day training on Precision Machining from 28<sup>th</sup> to 31<sup>st</sup> December 2025.

The training marked a significant milestone in the professional development efforts and the beginning of international level of practical machining training at JNEC. It was resourced by international level silver medalist, industrial machinist and steadfast and seasoned Japanese supporter for JNEC and Bhutan.

This training programme was supported by SECONEQ, Oval Corporation and RUB. The training program was also recognized by the Japanese Ministry of Foreign Affairs as part of the 40<sup>th</sup> Anniversary Project of Japan–Bhutan Diplomatic Relations.



## Scholarship Signing Ceremony



Professor Yoshitaka Shimada, Vice-Principal of Fukuoka Kokudo Kensetsu Technical College, Japan, visited JNEC and graced a Scholarship Signing Ceremony held on 7<sup>th</sup> November 2025. The ceremony was attended by the President, Dean of Research and Industrial Linkages, and the scholarship recipient.

During the ceremony, the Scholarship Agreement was formally signed, and the student made a Pledge of Commitment, reaffirming his dedication to academic and professional excellence.

The occasion highlighted the strong collaboration between JNEC and Fukuoka Kokudo Kensetsu Technical College in supporting deserving students and advancing academic excellence.

## JNEC Faculty and Students at ABRC 2025

The Australia-Bhutan Research Conference (ABRC) 2025, held from 3<sup>rd</sup> to 5<sup>th</sup> December 2025 at the Office of the Vice Chancellor in Thimphu saw active participation from faculty members and students from JNEC, both as presenters and attendees, reflecting the college's growing engagement in scholarly activities.



During the conference, JNEC representatives presented four research papers and two posters, contributed by four faculty members and four students. A notable highlight was the publication of the research paper titled "Strengthening Digital Defenses: Evaluating the Impact of Cybersecurity Awareness Workshops Among First-Year Engineering Students in Bhutan" in the Special Edition 2025 of the Bhutan Journal of Research and Development (BJRD), marking a significant academic accomplishment for the college.

Adding to JNEC's presence, the college's President participated as a panelist in a fireside chat session, providing insights on research collaboration and academic development. Overall, the college's participation strengthened knowledge exchange and highlighted its commitment to fostering research excellence and innovation.

## JNEC and SCE Strengthen Ties Through Student Leaders' Exchange Tours



JNEC and Samtse College of Education (SCE) strengthened their institutional partnership through reciprocal Student Leaders' Exposure Tours in 2025.

From 23<sup>rd</sup> to 26<sup>th</sup> August 2025, 19 JNEC student leaders, accompanied by faculty coordinators, visited SCE to promote collaboration and share leadership experiences. The programme included interaction sessions, cultural exchanges, campus visits, and a spiritual trip to Milarepa's Lhakhang in Phuentsholing.

In return, a delegation of 13 SCE student leaders visited JNEC from 31<sup>st</sup> October to 3<sup>rd</sup> November 2025. During their stay, they participated in the JNEC Tshechu and the 17<sup>th</sup> Coronation Day celebrations, toured the JNEC Fablab, and visited Chokyi Gyatso Institute and Singye Choeling Lhakhang. The visit concluded with friendly sports activities, fostering camaraderie between the two colleges.

Together, these exchange programmes enhanced leadership learning, encouraged cultural appreciation, and reinforced the strong bond between JNEC and SCE.



## The Launching of Diploma Programme in Mechanical, Electrical and Plumbing (DMEP)



The new Diploma programme in Mechanical, Electrical, and Plumbing (DMEP), offered under the Department of Mechanical Engineering, was officially inaugurated by Dasho Chewang Rinzin, Vice Chancellor of the Royal University of Bhutan on 4<sup>th</sup> August 2025.

During the event, Dasho extended his congratulations to the department, the college, and the inaugural cohort of students, describing the programme as rare, unique, and exciting. In his remarks, he highlighted the significant responsibility carried by the first batch of students and noted that the programme would be relatively demanding, as it integrates three distinct fields of study.

However, he assured the students that, with the right skills and commitment, they will have access to a wide range of job opportunities. He also emphasised that while the college will work hard to implement the programme successfully, the University will fully support it through strong promotion and continued assistance.

## Advancing Sustainable Mobility Through EV Retrofitting at JNEC

To celebrate the 118<sup>th</sup> National Day, a significant milestone was achieved with the successful inauguration of a retrofitted Electric Vehicle (EV), marking a proud moment of innovation, dedication, and teamwork at JNEC. This project focused on the conversion of a conventional fossil-fuel-powered vehicle into a fully battery-operated Electric Vehicle, undertaken purely for educational, learning, and demonstration purposes.



Over a period of nearly one month, an enthusiastic and committed team worked tirelessly, often extending their efforts beyond regular office hours, driven by a shared vision of promoting sustainable and eco-friendly transportation technologies. The project involved an in-depth study and practical application of electric vehicle systems, including the replacement of the internal combustion engine with an electric drivetrain and battery system, and the integration of essential EV subsystems such as the motor controller, battery management system (BMS), DC-DC converter, and electric power steering, ensuring the vehicle remains in good and reliable condition.

The successful completion of this pioneering work was made possible by the dedicated efforts of Mr. Karma Drukpa (Assistant Professor), Mr. Karma Tshechu (Senior Instructor), Mr. Thinley Tobgay (Associate Lecturer), Mr. Tandin Wangdi (Lecturer), and Mr. Sonam Tobay (Technician), whose collaboration, technical expertise, and commitment transformed the vision into reality.

More than just a converted vehicle, this EV stands as a symbol of innovation, skill development, and a forward-looking approach to education, driving not only on roads but also toward a cleaner, greener, and more sustainable future.

## Fostering Global Partnerships: Erasmus Staff Mobility at JNEC



Professor Nicole V Christoff and Ms. Petranka M Velkova from Technical University, Sofia, Bulgaria, was on Erasmus staff exchange mobility from 19<sup>th</sup> August to 31<sup>st</sup> August 2025 at JNEC.

During their stay, they engaged in teaching the basics of telecommunication technology and conducting a Hands-on Workshop on Unity for AR/VR/XR environment, for First and Second Year Diploma in Electronics and Communication Engineering students. They also engaged in a session on writing project proposals and other academic collaborations between two universities.

The programme was not just limited to academic activities but also encompassed cultural exchanges and other institutional visits. They also briefly toured Dewathang, Thimphu, and Paro to study our educational system, culture and tradition, and lifestyle. This visit was expected to further enhance the ties between the two institutions and pave the way for collaboration for future joint projects and exchange programmes.



## JNEC Signs MoU with Ministry of Finance and RCSC on Capacity Development Programme

JNEC signed a Memorandum of Understanding (MoU) with the Ministry of Finance, Royal Government of Bhutan and Royal Civil Service Commission, Royal Government of Bhutan on 31<sup>st</sup> October, 2025 at the college. The MoU aims to strengthen collaboration in capacity development, focusing on enhancing technical, managerial, and leadership skills among faculty, staff, students, and civil servants. The partnership will pave the way for joint training programmes, internships, and professional exchanges, fostering stronger linkages between academia and the public sector.

This partnership marks a significant milestone in JNEC's continuous effort to align technical education and capacity development with Bhutan's national human resources and governance priorities.



## PhD Students from Lund University, Sweden Visits JNEC



JNEC had the privilege of hosting two PhD students from Lund University, Sweden: Mr. Christian Rissler and Mr. Björn Jarfors, from 25<sup>th</sup> October to 7<sup>th</sup> November 2025. Their visit was part of the ongoing academic collaboration between JNEC and Lund University, aimed at fostering knowledge exchange, research cooperation, and international exposure for students and faculty.

During their two-week stay, Mr. Rissler and Mr. Jarfors engaged in a wide range of academic and professional activities on campus. They conducted guest lectures on building energy efficiency, a topic of growing importance in the context of sustainable development and climate-responsive design. Their lectures provided students with global perspectives on energy-efficient building practices, current research trends, and innovative technologies used in the field.

The visit not only enriched the academic environment but also strengthened the existing ties between JNEC and Lund University. JNEC wishes Mr. Rissler and Mr. Jarfors continued success in their doctoral research.

## Referee Training Course

JNEC welcomed the Bhutan Volleyball Federation team to conduct a Referee Training Course from 11<sup>th</sup> to 16<sup>th</sup> September 2025.

The course aimed to enhance the knowledge, confidence, and skills of the Student Affairs Team (SAT) and the College volleyball team in volleyball refereeing.



A total of 33 participants, including 24 students and 9 staff, took part in the training led by distinguished coaches Mr. Tandin Wangchuk (National Referee and Coach) and Mr. Sangay Wangdi (National Referee).

Throughout the six-day programme, participants were introduced to the certification process and official volleyball rules, systematically organised into eight chapters. The sessions combined classroom learning with practical demonstrations, covering key areas such as:

- court setup and team roles
- match structure and ball states
- service, attack, and blocking regulations
- interruptions, substitutions, and libero regulations
- misconduct management and referee coordination
- signals and match protocols
- practical refereeing and mock matches

The training successfully equipped participants with the competence and confidence to officiate volleyball matches professionally and uphold fairness and sportsmanship.

## Inauguration of JNEC-ECU FabLab

Professor Paulo de Souza, Executive Dean of the School of Engineering at Edith Cowan University (ECU), Australia, visited JNEC to strengthen academic collaboration and foster innovation. The highlight of the visit was the inauguration of the JNEC-ECU FabLab on 22<sup>nd</sup> August 2025, a joint initiative aimed at providing students and faculty with advanced facilities to explore design, prototyping, and research in emerging technologies.

The FabLab is envisioned as a hub for creativity, hands-on learning, and entrepreneurship, reflecting the shared commitment of JNEC and ECU to nurture future-ready graduates and contribute to national development.



## Institutional Commitment to Continuing the Sakura Science Programme between JNEC, Sherubtse College and Tokyo University

As part of the Sakura Science Programme 2025, JNEC hosted Professor Hitoshi Fujiwara from Tokyo University, Japan. His visit, organised in collaboration with Sherubtse College, was aimed at fostering academic exchange, cross-cultural learning, and exposure to innovative ideas among students and faculty.

Prof. Fujiwara delivered an intensive session on Sustainable Development Goals (SDGs), innovation practices, and future-oriented approaches such as back-casting and forecasting to a group of selected students. The session also included reflective exercises using the ABCD methodology, and participants actively engaged in team-based activities designed to strengthen problem-solving and collaboration. In addition, Prof. Fujiwara also led discussions on broader societal themes, including play and community building, Digital Bhutan, ICT penetration and gaming culture in Bhutan, enriched with relevant case studies.

It is worth noting that until 2023, the Sakura Science Programme was fully funded. However, in 2024-2025, the collaborating universities were unable to secure funding. Despite this, the programme continued through a mutually agreed cost-sharing arrangement. This demonstrates the strong commitment of all parties involved to sustain the programme and reflects the value they place on continuing the good trends for the benefit of students and institutions alike.



## Digital Literacy and Cybersecurity Training for Army Personnel



The Department of Information Technology at JNEC delivered a five-day Training on Digital Literacy and Cybersecurity Awareness for the Dewathang Wing X Army from 24<sup>th</sup> to 28<sup>th</sup> November 2025. This training was a part of the department's project funded by APNIC Foundation under which the team had also delivered similar training programmes to colleges, schools, teachers, and Gewogs across eastern Bhutan.

The training was aimed at strengthening the participant's digital skills and cybersecurity awareness, ensuring they were equipped to apply essential digital competencies in their professional responsibilities.

The modules included basic computer skills, PowerPoint and graphic design, Excel and data management, Google Workspace, and cybersecurity. All sessions were led by experts and focussed on practical skills, including the use of AI tools.

## JNEC Got Talent 2025 - Season I

The JNEC Got Talent 2025 Season I concluded in grand style on 30<sup>th</sup> October 2025, marking the end of a month-long journey that began on 27<sup>th</sup> September 2025 with the top twenty contestants. The event, designed to nurture creativity and confidence among students, provided a vibrant platform for participants to showcase their diverse talents.

After a competitive round, Trilogy, who impressed the audience with a fusion of traditional and contemporary dance emerged as the Winner, receiving a cash prize of Nu. 20,000. Vegetable Boys, renowned for their humor and theatrical performances were declared First Runner-up, winning Nu. 15,000, while Mr. Neten Phuntsho secured the Second Runner-up (Singing Category) position with Nu. 10,000. Consolation prizes ranging from Nu. 3,000 to Nu. 1,000 were awarded to the remaining top twenty contestants in recognition of their talent and effort.

The event's success was made possible through the generous support of the sponsor, KW International and Institute of Technology and Professional Learnings (ITPL) and the dedication of the organising team.

The JNEC Got Talent 2025 Season I not only uncovered hidden talents but also strengthened the spirit of creativity, unity, and confidence among students. The event has set a new benchmark for cultural excellence and will continue as a proud annual tradition at JNEC.



## Successfully Concluded APPEAR Funded Project - HEESeB

JNEC successfully concluded the APPEAR-funded project “Strengthening Capacity of Higher Engineering Education for Sustainable Buildings (HEESeB)”, marking an important milestone in advancing sustainable construction education in Bhutan. The project closing meeting hosted by JNEC was attended by Wolfgang Streicher and Anton Kraler from University of Innsbruck, Austria.

Launched on 1<sup>st</sup> February 2023, the project was an academic collaboration between JNEC under the Royal University of Bhutan and the University of Innsbruck. The initiative aimed to promote sustainable and resilient buildings in Bhutan through education and research, with a key outcome being the development of a Certificate Programme in Timber Engineering for Energy Efficient Buildings (TEEB). The programme is designed to produce skilled professionals capable of planning, designing, constructing, and maintaining energy-efficient timber structures while integrating modern technologies with traditional Bhutanese building practices.

The project achieved several significant outcomes, including the development and institutional approval of the timber engineering certificate course, establishment of a dedicated Timber Engineering Laboratory, and the creation of new teaching materials and courses on building energy efficiency and simulation. Faculty members and laboratory technicians received specialised training, enabling them to independently deliver courses and operate laboratory equipment.



Higher Engineering Education for Sustainable Buildings



The project also contributed to capacity development, gender-responsive STEM teaching practices, and international knowledge exchange. With the certificate programme now offered on a self-sustaining fee-based model and the laboratory supporting ongoing teaching, research, and professional training, the HEESeB project has strengthened higher engineering education and laid a strong foundation for sustainable building innovation in Bhutan. The initiative was funded by Austrian Partnership Programme in Higher Education and Research for Development (APPEAR), a programme of the Austrian Development Cooperation that supports higher education and research partnerships in priority countries.

## BPC Officials Visits JNEC



JNEC was honored to host a team of officials from Bhutan Power Corporation (BPC), led by Mr. Thinley Gyeltshen, Director of the Distribution Department on 5<sup>th</sup> August 2025. The visit focused on the upcoming project to replace the existing overhead campus distribution network with underground cables. The President, staff, and students of JNEC extend their heartfelt gratitude to BPC for their continued support and collaboration in making JNEC an inspiring campus to live and learn.

## President of JNEC awarded the Friend of Edith Cowan University

The President of JNEC, Dr. Tshewang Lhendup, was honored with the Friend of Edith Cowan University Award.

This recognition celebrates his outstanding contributions in building strong academic partnerships and fostering meaningful collaborations between institutions. This achievement is not only a personal milestone for him but also a proud moment for our entire college community.

We extend our heartfelt congratulations and look forward to many more milestones under his inspiring leadership.



## Technology Challenge: Innovation in Renewable Energy



The Technology Challenge 2025, funded by the ADB e-Asia Fund and organised by JNEC, was held from 3<sup>rd</sup> August to 6<sup>th</sup> September 2025, culminating in the display of final prototypes developed by student innovators. Centered on advancing the efficient use and production of renewable energy, the event provided a platform for several student groups to transform ideas into working models.

The prototypes included:

- Solar-powered induction cooker
- Wearable device harnessing body heat to power lights
- Production of green hydrogen from biogas using steam methane reforming
- Solar roofing with real-time energy data logging
- Energy-efficient solar dryer for cardamom post-harvest processing
- Solar-powered electric fencing for livestock protection in bhutan

The challenge not only demonstrated the creativity of young minds but also reaffirmed the importance of renewable energy innovation in building a sustainable future.

## Vice Chancellor of the Royal University of Bhutan Visits JNEC

JNEC had the honor of hosting Dasho Chewang Rinzin, Vice Chancellor of the Royal University of Bhutan for his third visit this year on 20<sup>th</sup> November 2025. The visit provided an opportunity for Dasho to interact with students and staff and discuss the College’s role in producing skilled and responsible graduates.

During his address to the students, Dasho highlighted the importance of taking pride in studying at an institution with a strong historical background and a legacy of producing competent engineers. He reminded students to stay focused on their goals and to pursue both academic and non-academic learning. Dasho emphasised the need to develop practical skills, soft skills, and personal values such as integrity, self-awareness, and self-respect. He also encouraged students to support each other and foster a collaborative community.

In his address to the staff, Dasho stressed their responsibility to guide students not only academically but also in character development. He highlighted the importance of maintaining high teaching standards and mentoring students effectively.

The visit concluded with a potluck dinner and bonfire with the staff, providing an opportunity for informal interaction and discussion.



## National Conference 2025: Bridging Indigenous Wisdom and Modern Engineering

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NATIONAL CONFERENCE

Bridging Indigenous Wisdom  
and Modern Engineering

Conference Date: 6<sup>th</sup> – 7<sup>th</sup> November 2025  
Organized by Department of Humanities and Management  
Jigme Namgyel Engineering College (JNEC)  
Dewathang, Samdrup Jongkhar

EXPECTED AREAS

- Architecture
- Engineering
- Astrology
- Culture
- Philosophy
- Cosmology
- Geology
- Education

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The Department of Humanities and Management, JNEC convened a significant national conference under the profound theme “Wisdom of Engineering Management: Bridging Indigenous Wisdom and Modern Engineering” (བཟོ་རིག་འཛོམས་སྐོར་ཤེས་བྱ།) on October 31<sup>st</sup> 2025.

The primary objective of the event was to establish a dialogue platform where the technical rigours of modern engineering could intersect with Bhutan’s deep-rooted cultural and philosophical heritage. The forum brought together a diverse group of contributors, including academicians from Sherubtse College, faculty from JNEC, and student researchers, fostering a collaborative environment for interdisciplinary learning.

The conference featured a diverse range of presentations that reflected the integration of culture, philosophy, and engineering. The discourse began with a study on the flourishing of native culture and traditions in Kanglung Geog under Trashigang Dzongkhag, followed by research on enhancing student wellbeing through the “Four Immeasurables,” demonstrating how Buddhist philosophy can be effectively applied to modern educational management. Technical sessions included studies on photovoltaic voltage stress on distribution transformers and the development of a mobile-based flood early warning system to address environmental challenges.

Cultural and humanities research explored Ratna Lingpa’s Bardo Cham at Ugyen Choling Lhakhang in Yongphula, Linguistic repetition in Dzongkha, and the Middle Path approach to societal resilience in Bhutan. The conference concluded with an open discussion that encouraged dialogue among participants highlighting the importance of integrating engineering, management, and cultural values in shaping Bhutan’s future development.

## Strengthening Bhutan's Technical Workforce through Competency-Based Training (CBT)

JNEC has successfully concluded the 7<sup>th</sup> and 8<sup>th</sup> batches of its Competency-Based Training (CBT) for Dzongkhag Technicians, a flagship initiative aimed at enhancing the professional skills of technical personnel across Bhutan. These programmes are conducted in collaboration with the Royal Civil Service Commission (RCSC) and the Ministry of Information Technology (MoIT), reflecting a nationwide commitment to capacity building and quality service delivery.

The 7<sup>th</sup> batch, which concluded on 28<sup>th</sup> August 2025, trained 30 participants from five Dzongkhags (Trongsa, Zhemgang, Samtse, Dagana, and Tsirang). Participants received hands-on training in the following fields:

- Information Technology (IT)
- Surveying
- AutoCAD
- Estimation & Costing
- Quality Control & Assurance
- e-GP/e-Tool systems



Following this, the 8<sup>th</sup> batch, concluded on 23<sup>rd</sup> October 2025, trained 30 technicians from Trongsa, Zhemgang, Samtse, Dagana, Mongar, Tsirang, and Gelephu Thromde. With this completion, the total trained workforce has now reached 201 technicians from 15 Dzongkhags and two Thromdes.

These CBT initiatives not only equip Dzongkhag technicians with essential technical expertise but also reinforce JNEC's commitment to building a skilled, professional, and development-ready technical workforce.

## Capacity Development Programme for Procurement Personnel



The Capacity Development Programme for Procurement Personnel was successfully conducted at JNEC between October and December 2025, marking a significant step toward strengthening public procurement systems in Bhutan.

The 1<sup>st</sup> Cohort started from 27<sup>th</sup> October 2025. The 15-day programme aimed to enhance the knowledge, skills, and professionalism of procurement officials, promoting efficiency, transparency, and accountability in procurement processes. The programme was organized by JNEC in collaboration with the Ministry of Finance, Royal Government of Bhutan, and the Royal Civil Service Commission.



A total of 31 participants from Thimphu, Trongsa, Trashi Yangtse, and Samdrup Jongkhar took part in the first cohort. Throughout the training, participants explored several key areas, including:

- Procurement policies, legal frameworks, standards, and model documents
- Standard Bidding Documents
- Government Inventory Management System
- e-GP Systems
- Inventory and Warehouse Management
- Contract Management and Supplier Relationship Management
- Market Research and Specification Development
- Demand Forecasting and Needs Assessment



Building on its success, the 2<sup>nd</sup> Cohort concluded on 12<sup>th</sup> December 2025, with 30 officials from nine Dzongkhags (Thimphu, Zhemgang, Samtse, Chukha, Paro, Sarpang, Trashigang, Trongsa, and Haa) completing the same 15-day intensive training. The successful completion of two cohorts reflects a strong national commitment to capacity building and professional excellence, contributing to a more transparent and accountable public procurement system in Bhutan.

## JNEC Launches Second Cohort of Certificate in Timber Engineering

JNEC launched the second cohort of the Certificate in Timber Engineering programme on 15<sup>th</sup> September 2025 at the Office of the Vice Chancellor (OVC), Royal University of Bhutan, Thimphu. The launch followed the successful completion of the first cohort and reflected the continued interest in strengthening skills related to timber use in construction.

The new cohort included 15 professionals from different agencies. The programme was designed to help participants build practical skills and a sound understanding of timber construction so that they can apply these skills in their workplaces. During the opening, the Vice Chancellor highlighted the importance of improving national capacity in timber engineering to support the development of safe and sustainable infrastructure.

The program was delivered in partnership with the University of Innsbruck in Austria, Rothoblaas, Forum Holzbau and the APPEAR program under the Austrian Development Cooperation



## JNEC Introduces the AgriDry Multipurpose Electric Dryer to Support Farmers



JNEC developed the JNEC AgriDry, a multipurpose electric dryer designed to help farmers preserve fruits, vegetables, herbs and other produce more efficiently. The development of this dryer reflects the college's ongoing effort to create practical engineering solutions that address challenges faced by rural communities.

The AgriDry was demonstrated during the National Outreach Workshop on Technology Transfer, where it dried vegetables within a single day while maintaining their natural colour and aroma.

This performance showed a clear improvement compared to traditional sun drying, which often takes several days and depends heavily on weather conditions. The dryer is equipped with double shield ceramic fiber insulation to reduce heat loss and uses adjustable temperature controls that range from 30 degrees Celsius to 90 degrees Celsius. It has fifteen drying chambers that can be set to different heating and airflow levels. The machine runs entirely on electricity, is energy efficient and is easier to maintain than imported dryers, making it more suitable for local users.

Farmers in Bhutan lose nearly forty percent of fruits and vegetables after harvest due to spoilage. Traditional drying methods are slow, and imported dryers are costly and difficult to service. The AgriDry offers a cleaner, faster and more affordable option by reducing the drying time from three days to one. Farmers and cooperatives have welcomed this improvement because it helps them preserve more of their produce and reduce losses.

The project was developed in partnership with the World Intellectual Property Organization. The collaboration highlights the importance of protecting ideas and building technical skills within the country. It also reflects the role of engineering in supporting agriculture and improving rural livelihoods.

JNEC plans to begin producing the first ten dryers once funding is secured. The college will then license the technology so that it can be manufactured more widely and made available to farmers across the country.

## Empowering Eastern Bhutan Through Digital Literacy and Cybersecurity Awareness

The Department of Information Technology successfully conducted a comprehensive digital literacy and awareness programme from September to October 2025 under the APNIC Foundation project titled "Enhancing Digital Literacy and Cybersecurity Awareness in Eastern Bhutan."

The initiative reached more than 3,000 Bhutanese citizens, including farmers, youth, elders, high school students, monks, and nuns, both literate and illiterate. The programme was carried out across six eastern dzongkhags: Samdrup Jongkhar, Pemagatshel, Tashigang, Mongar, Lhuentse and Tashiyangtse.

The project focused on developing essential digital literacy skills and strengthening cybersecurity awareness. Participants were trained to recognise phishing attempts, online scams, and unsafe digital practices. The sessions emphasised practical guidance to help citizens navigate the digital world safely and confidently.

The significance of the initiative was widely recognised, and the programme received coverage from the national television channel BBS as well as leading newspapers including Kuensel and Bhutan Today. Through this initiative, the department contributed meaningfully to building a safer and more digitally empowered community in Eastern Bhutan.



## JNEC Collaborates on National Capture the Flag (CTF) Challenge



JNEC, in collaboration with Gyalpozhing College of Information Technology (GCIT) and the Government Technology (GovTech) Agency, successfully organised a two-day Capture the Flag (CTF) challenge from 24<sup>th</sup> to 25<sup>th</sup> October 2025.

The event brought together participants to test their skills in cybersecurity through hands-on problem-solving and real-world challenges. The competition provided an excellent platform for students to apply their knowledge in areas such as ethical hacking, network security, and digital forensics.

Several staff members and final-year students from the Diploma in Computer Systems and Network (DCSN), Department of Information Technology, JNEC actively participated in the challenge with the support of the college. Their involvement not only strengthened their technical competencies but also enhanced collaboration and teamwork skills.

The CTF challenge reflects JNEC's continued commitment to promoting practical learning and strengthening cybersecurity capacity among students.

## CIPS Centre at JNEC: A New Gateway to Global Procurement Careers

The Chartered Institute of Procurement and Supply (CIPS), United Kingdom, the world's leading professional body in procurement and supply chain management, is now available at the CIPS Study and Examination Centre at Jigme Namgyel Engineering College, Royal University of Bhutan.

Student and working professionals in Bhutan can now study for an internationally recognized qualification and sit for CIPS examinations within the country.

If you wish to build a career in procurement, logistics, inventory management, tendering, project purchasing, or government supply management, the CIPS Professional Qualification provides a strong professional foundation and is respected by employers in both public and private sectors.

### BRINGING THE WORLD CLOSER TO BHUTAN

This initiative enables students and working professionals to earn globally recognised procurement and supply chain qualifications right here in Bhutan eliminating the need for costly travel abroad while widening access to international standards.



### INDUSTRY-RELEVANT LEARNING PATHWAYS

The Centre delivers CIPS qualifications from Level 2 to Level 6, equipping learners with hands-on skills in:

- Procurement planning and contract management
- Supplier sourcing and negotiation
- Inventory and logistics operations
- Strategic and ethical procurement

Flexible study options, including distance learning, ensure that even full-time professionals can upgrade their skills with structured academic support and exam readiness.

### EMPOWERING DIVERSE LEARNERS

The Centre serves a broad audience:

- Class XII graduates and university graduates seeking professional qualifications
- Store and procurement personnel aiming to enhance technical expertise
- Engineers, finance, and administrative professionals seeking career diversification
- Public sector officials working to improve procurement practices

### STRENGTHENING BHUTAN'S PROCUREMENT FUTURE

More than just a learning hub, the CIPS Centre at JNEC is a catalyst for national capacity building. By embedding global best practices locally, it supports better governance, improved efficiency, and stronger accountability in procurement systems.



## Digital Transformation at RUB: Launch of the No-Due System



The Department of Information Technology successfully secured funding from the Royal University of Bhutan's Innovation Fund to undertake a project titled "No-Due System". The primary objective of this initiative is to digitalise and streamline the existing clearance process for both staff and students across colleges under the Royal University of Bhutan

Traditionally, the clearance process involved manual paperwork and multiple in-person verifications, which were often time-consuming and inconvenient. The newly developed No-Due System aims to simplify this procedure by providing a centralised digital platform where all necessary clearances can be processed efficiently, transparently, and in a timely manner. By automating the workflow, the system reduces administrative burden, minimizes errors, and improves overall coordination among departments.

The system was successfully implemented across several RUB constituent colleges, including Jigme Namgyel Engineering College, College of Science and Technology, Sherubtse College, Samtse College of Education, Paro College of Education, College of Natural Resources and Gyalpozhing College of Information Technology. The implementation phase was carried out over a six-month period, from July to December 2025, ensuring that the system was properly deployed, tested, and operational in each institution.

This project marks an important step toward enhancing digital governance and service delivery within RUB, contributing to improved efficiency, accountability, and user experience for both employees and students.

## Victory and Unity: A National Day to Remember at the 2025 BUSF Awards

The Bhutan University Sports Federation (BUSF) tournament reached a thrilling crescendo at the College of Natural Resources in Wangdue Phodrang. Set against the auspicious backdrop of our National Day, the event was a powerful display of athletic prowess, campus spirit, and national pride.

The highlight of the day was the highly anticipated Girls' Football Final. After a gruelling and competitive match that kept spectators on the edge of their seats, team JNEC secured a decisive 3-0 victory, against the Samtse College of Education claiming the championship trophy.

The football pitch wasn't the only place where we excelled. Our athletes demonstrated remarkable skill and focus across multiple disciplines, bringing home 1<sup>st</sup> Place honors in Archery as well.

It was truly a day of honor, unity, and victory that will be etched in the history of our college for bringing home the BUSF winning trophies for the first time.



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