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Her Excellency Lyonpo Yeezang De Thapa, Ministry of Education and Skills Development (MoESD), graced the JNEC Golden Jubilee celebration

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Golden Jubilee Celebration

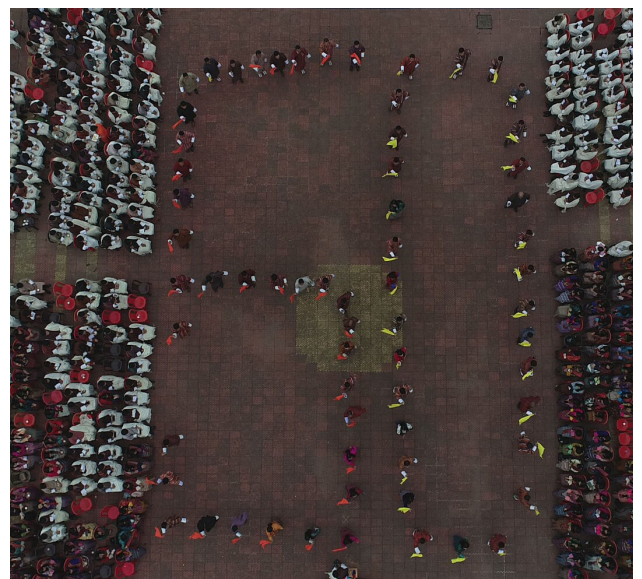
Jigme Namgyel Engineering College (JNEC) celebrated its Golden Jubilee on February 22, 2024, with a grand event graced by Her Excellency the minister for Education and Skills Development, and attended by the representatives of the Indian Ambassador, the Pro Vice Chancellor, distinguished guests, and esteemed alumni. The day commenced with a warm reception for Honorable Sherig Lyonpo at the newly inaugurated Mechanical Building, where various facilities were unveiled. Inspiring speeches from the Pro Vice Chancellor and representatives of the Indian Ambassador's office set a reflective and celebratory tone for the day, further enriched by the guidance of

Sherig Lyonpo.

The celebration featured vibrant cultural performances and engaging activities that fostered a sense of community and camaraderie among attendees. A highlight of the day was the release of a book authored by Mr. Nima Dorji, a proud JNEC alumnus, which showcased the institution's rich legacy of academic excellence and innovation. Mr. Nima Dorji, is an esteemed alumnus who graduated in 1996 with a Diploma in Civil Engineering from the then Royal Bhutan Polytechnic. After 17 years in the School Planning & Building Division under the erstwhile Ministry of Education, Mr. Nima pursued and completed his Bachelor

of Engineering in Civil Engineering in 2016. Since 2018, he has served as the Chief Engineer for Samdrup Jongkhar Thromde. His book, "The Language of Structural Design-I," presents a comprehensive design procedure for frame structure buildings, including chapters on seismic and wind load designs, retaining structures, and solved design examples. The book, comprising thirteen chapters, aims to consolidate critical structural design knowledge into a single resource.

The festivities concluded with Tashi Lebay, leaving everyone with cherished memories and anticipation for the promising years ahead.



Occupational Health and Safety (OHS)

Vajra Builders Pvt. Ltd. organized a comprehensive training session on Occupational Health and Safety (OHS) for the staff of Jigme Namgyel Engineering College (JNEC) at the Vajra Training Centre in Thimphu from June 3-5, 2024. The training was attended by 19 staff members from JNEC and facilitated by experts from the Department of Labour, engineers from Vajra Builders, and JNEC faculty. The training aimed to enhance the participants' knowledge and skills in implementing safety measures in construction and workplace environments.

The training covered a wide range of safety implementation aspects. Key topics included understanding the rules and regulations governing the construction industry, hazard identification and prediction, and risk assessment. Participants also learned about safety protocols for tunnels and underground work, and preparing action checklists for various construction scenarios. A practical demonstration on the use of fire extinguishers provided hands-on experience in emergency response. Additionally, the training included site visits to construction projects managed by Vajra Builders, where participants observed the real-world application of safety measures. The training emphasized the importance of proactive safety planning and the implementation of effective safety protocols to prevent workplace accidents and injuries.

The training not only reinforced the participants' understanding of OHS principles but also equipped them with practical skills to ensure a safer working environment. By bringing together experts from different fields, the training fostered a collaborative approach to safety, highlighting the collective responsibility of all stakeholders in maintaining a safe and healthy workplace.

The training's practical application extends to JNEC's classrooms and workshops, where both students and staff consistently practice the use of occupational health and safety (OHS) gear

during hands-on activities. This ensures that safety protocols are not only theoretical but also integrated into the college's daily operations, fostering a culture of safety among future engineers and professionals. By applying these principles in practical classes, the institution reinforces the importance of OHS in real-world scenarios.

The Office of the Dean of Research and Industrial Linkages (DRIL) and the management of JNEC expressed their gratitude to Vajra Builders and all facilitators for their contributions to the successful completion of the training.



International Exchange Programme Activities at JNEC

With the objective of promoting cross-cultural understanding and enhancing teaching practices at partner universities, Prof. Martin Andersson and Ms. Linnea Ekman from Lund University, Sweden, visited JNEC from April 2 to April 16 as part of an exchange programme funded by the European Union's ICM. Prof. Andersson

provided instruction on the IMRAD method of report writing, global energy system transformation, and research methodology/project design to over 50 Mechanical Engineering students. Concurrently, Ms. Ekman engaged in work shadowing, collaborating with JNEC's administration, HR, student record system, exam cell, external linkages, and

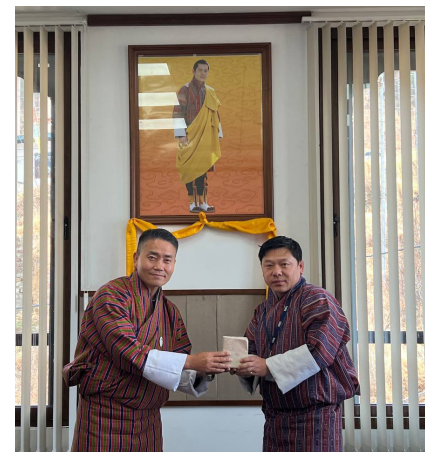
finance staff. This exchange programme served as an invaluable tool for JNEC's staff to broaden their perspectives and refine their skills.

To further enhance academic horizons and enrich student learning experiences, JNEC actively participated in student exchange programmes with European universities. Recently, four students from Lund University were at JNEC to complete their master's theses. Two of these students focused on designing and testing solar dryers, including the nutrient analysis of dried food products, while the other two researched energy-efficient building construction materials in Bhutan. These projects were co-supervised by JNEC faculty. Over the past decade, JNEC sent more than 50 students on exchange programs to universities in Japan, Nepal, and Europe. Additionally, JNEC hosted over 20 students from India and Europe, including six from Lund University through the Linnaeus Palme International Exchange Programme.



Jigme Namgyel Engineering College's MoU Signing with Key Stakeholders

JNEC signed a Memorandum of Understanding (MoU) each with Construction Development Corporation Ltd (CDCL), National Housing Development Corporation Ltd (NHDCL), and Inno Tech, DHI, to foster academic and research cooperation in mutually agreed areas of interest. These MoUs marked a significant milestone in the collaboration between JNEC and these stakeholders. Through these agreements, the parties aimed to leverage their respective strengths and resources for growth and innovation. It also reflected the stakeholders' commitment to facilitating industrial attachments for students, offering guest lectures, conducting joint research in niche areas relevant to all parties, and providing short-term training for their respective staff.



Challenge Assessment Workshop under the CEEECoM Project

A 3-day Challenge Assessment Workshop under the 'Capacity Enhancement in Electrical Equipment Condition Monitoring and Fault Diagnostics (CEEECoM)' project took place from March 27 to March 29, 2024, at City Hotel in Thimphu. Funded by the Erasmus+ Programme of the European Union, the workshop aimed to

address the challenges faced by engineers in condition monitoring, fault diagnostics, and maintenance of heavy electrical equipment in utility companies and industries. The participants included representatives from partner universities: three officials from Aalto University (Finland), five from Tallinn University (Estonia), three from Kathmandu University (Nepal), and two from Tribhuvan University (Nepal). Additionally, engineers from Bhutan Power Corporation (BPC), Druk

Green Power Corporation (DGPC), and the College of Science and Technology (CST) also attended the workshop. The workshop provided a platform for these experts to share knowledge and strategies, enhancing their capacity to manage and maintain electrical equipment effectively.



International Workshop on 21st Century Skills Set for Academic Support Staff

A group of 15 Academic support staff from JNEC participated in a comprehensive 7-day International Workshop on 21st Century Skills from 8th to 14th April, 2024. Hosted collaboratively by the North Eastern Management Association (NEMA) and North Eastern Hill University (NEHU), the workshop took place at NEHU in Shillong. The program was designed to enhance the skills of academic support staff and included a range of sessions aimed at improving various aspects of academic and institutional management.



The morning sessions were rich in content, covering essential topics such as advanced management concepts and control systems, strategies for institutional ranking and accreditation, effective team building and management techniques, leadership skills, and

stress management. Additionally, there were focus on modern online education management systems to help staff adapt to evolving educational technologies.

In the afternoons, participants had the opportunity to observe and learn from NEHU's academic support staff, gaining insights into the management of science and engineering laboratories. This practical exposure was aimed to provide hands-on experience and foster a deeper understanding of laboratory

management practices.

The workshop represented a significant opportunity for professional growth, and JNEC expressed gratitude to NEMA and NEHU for their support in making this event possible. The knowledge and skills gained during this workshop are expected to greatly benefit JNEC's academic support staff and enhance their contributions to college's academic environment.

STEM Education (21st to 22nd March, 2024)

In response to a temporary vacancy in the Physics teaching position at Karmaling Higher Secondary School in Samdrup Jongkhar, Acting Principal Mr. Khem P Thapa devised an innovative plan to maintain student engagement. By reaching out to Jigme Namgyel Engineering College, he sought to incorporate practical physics applications into the curriculum. Dr. Tshewang Lhendup, the President, and the management of JNEC swiftly responded by sending lecturers Mr. Deo Raj Biswa and Ms. Srijana Gajmer from the Department of Electronics and Communication Engineering to the school.

Over the course of 16 hours, the two lecturers conducted a hands-on workshop for 131 students in classes 11 and 12 Science. The workshop included an introduction to theoretical physics concepts followed by practical applications in Internet of Things (IoT), Artificial Intelligence, Microcontroller programming, Automation, and Satellite Communication. Students engaged in various activities such as programming with Arduino and STEMSEL microcontrollers, and worked on IoT projects including home automation, automatic street lighting, burglar alarms, and satellite tracking. They also explored drone flight control and photo acquisition from

Australia, showcasing a range of advanced technologies.

The initiative was met with enthusiasm from both the school administration and students, who expressed eagerness to participate in future projects. Additionally, the Bhutan STEM Society has committed to supporting further knowledge sharing through complimentary workshops and webinars, ensuring continued educational enrichment. This collaborative effort highlights the effective integration of practical skills with academic learning, benefiting students and fostering a greater interest in STEM fields.



Capacity Building Workshop on Business Plan Development & Pitching

JNEC, in collaboration with the World Intellectual Property Organization (WIPO), successfully conducted the 3rd Capacity Building Workshop as part of the Project on Facilitating the Transfer of Appropriate Technology in the Kingdom of Bhutan for Community Development through Universities and Research Institutions. This workshop, resourced by Dr. Tshering Cigay, was specifically designed to equip project members and participants with the skills necessary for the successful development and implementation of the Multipurpose Electric Dryer proposed by JNEC.

began with the first workshop on Intellectual Property (IP) and Patent Information Search Process, held from March 11-12, 2024, in Paro. The second workshop, focusing on Patent Information Search and Technology Landscape Reporting, took place from April 15-16, 2024, in Phuentsholing. The third workshop on Business Plan Development and Pitching was held on May 27, 2024, at the Berti White Bellied Heron Ecologde in Tingtibi, Zhemgang.

The third workshop aimed to provide participants with essential skills in developing and effectively pitching business plans, particularly for technology transfer projects. A total of 18 enthusiastic participants attended this

session, eager to enhance their entrepreneurial capabilities. They engaged in comprehensive sessions on business plan development, financial modeling, and pitching techniques. The workshop emphasized the practical aspects of bringing a technology project to market, with participants actively involved in creating and refining their business plans.

An important highlight of the workshop was the practical application of the learned skills. The prototype of the Multipurpose Electric Dryer will be tested at the Khenrig Namsum Cooperative in Tingtibi. This real-world testing will provide valuable feedback and insights, ensuring the technology is appropriately tailored to meet local needs and conditions. The successful completion of this workshop marks a significant step forward in the project's goal of facilitating community development through the transfer of appropriate technology. JNEC and WIPO are committed to continuing their support for these initiatives, fostering innovation and entrepreneurial growth in Bhutan.



Store & Inventory Management Training for SMCL Staff

Jigme Namgyel Engineering College organized a comprehensive 5-day Store and Inventory Management Training for the staff of State Mining Cooperation Limited (SMCL) from 9th to 13th April, 2024. Funded by SMCL, the training aimed to enhance the participants' skills in crucial areas such as Shift Supplier Management, Inventory

Management, Warehouse Management, and Inventory Technology. The course provided valuable insights to streamline operations, boost efficiency, and reduce losses due to inventory mismanagement. Additionally, it covered transportation modes, documentation, planning, and pricing, along with the concepts of reverse and green logistics, emphasizing

the importance of minimizing environmental impact and ensuring smooth supply chain operations within the mining industry.



High School Students Learn Digital Fabrication Basics at JNEC

JNEC organized a five-day training program on digital fabrication for 15 high school students from 8th to 13th July, 2024. This initiative was aimed to introduce students to the fundamental concepts and practical applications of digital fabrication, which is becoming increasingly crucial in various industries such as manufacturing, architecture, and design. During the training, students were taught to use design programs such as Autodesk Fusion 360 and CorelDraw to create digital models of their designs. They also learned to operate digital

fabrication machines, including 3D printers and laser cutters, enabling them to transform their digital designs into physical objects. Dorji Gyeltshen, the Fab Lab in charge at JNEC, emphasized the importance of providing such basic training to students, particularly those who had never seen 3D printers before, to spark their interest in technical fields and make productive use of their vacation time.

The hands-on training enhanced the students' creativity and problem-solving abilities, allowing them to explore new design concepts and experiment with various materials and techniques. Throughout the program, students created several souvenir products such as key hangers, name tags, and educational kits. Participants expressed that the practical nature of the training made the learning experience memorable and beneficial for their future endeavors. For instance, Yeshi Lhendup Dorji from Garpawoong Middle

Secondary School highlighted the practical training's potential to provide alternative employment opportunities. Tsheten Dorji from Tsenkharla Higher Secondary School and Lhazin Choiney Wangmo from Garpawoong Middle Secondary School noted that the hands-on experience with digital fabrication machines would ease their future ventures into related fields. Tshering Choki Yangzom from Nangkhor Central School also appreciated the future job prospects that the training could unlock. JNEC hopes this program will inspire more students to pursue science streams and plans to organize advanced digital fabrication training for the same group during the winter vacation.



Value Education & Orientation Programme

Jigme Namgyel Engineering College hosted a comprehensive five-day Value Education & Orientation Programme for its first-year students from July 15th to 19th, 2024. This event was aimed to welcome and acclimatize new students to college life, introducing them to the academic, cultural, and social aspects of their educational journey. The programme successfully bridged the gap between high school and college, providing essential knowledge and skills for navigating their new environment. By combining traditional Bhutanese values with modern educational practices, the orientation created a holistic foundation for the students' academic and personal growth. The programme began with a formal gathering and recitation of Tashi Tsekpä, followed by a welcome address from the President of JNEC, who emphasized the importance of integrating into the academic community. Highlights included sessions on Buddhist philosophy and ethics by Dewathang Lam Dechen, the President's talk on

the D raise to 4 principle, a campus tour, and practical demonstrations on Driglam Namzha and traditional etiquette.

The program also addressed contemporary issues and personal development topics. Ms. Tashi Yangchen led a session on cyberbullying and cybercrime, while Mr. Shankar Das Sharma introduced the Entrepreneurship Development Program. The third day featured sessions on mental health and sustainable development, a practical workshop on 'CV and Resume' writing by Mr. Pema Wangchuk, and a substance use and abuse advocacy session by the Royal Bhutan Police. The fourth day focused on

health and wellness, with professionals from Jigme Dorji Wangchuck Military Hospital conducting sessions on non-communicable diseases, sexual and reproductive health, and first aid. The final day covered academic and administrative aspects, including sessions on academic rules, research culture, and the usage of ICT tools. Overall, the orientation provided a comprehensive introduction to college life at JNEC, equipping new students with the knowledge, skills, and awareness necessary for a successful and fulfilling college experience.



A session by Edu Young Happyness Education Consultancy and Placement Firm

Edu Young Happyness Education Consultancy and Placement Firm hosted a series of impactful sessions aimed at bolstering the academic and professional development of our students on 3rd and 4th May, 2024. The first session on May 3rd was dedicated to the theme "Renewable Energy as a Solution for Climate Change," specifically targeting final-year Power and Mechanical Engineering students. This session provided an in-depth look at how renewable energy sources such as solar, wind, and hydro power are crucial in mitigating climate change. It included discussions on technological advancements, successful case studies, and the real-world impact of renewable energy projects.

The following morning, the focus shifted to "Career Options in Bhutan and Abroad - Preparing Yourself as a 21st Century Engineering Graduate." This workshop was designed to help students navigate their career paths by exploring emerging opportunities both locally and internationally. It offered practical advice on building a competitive profile, including skills development and networking strategies, while also addressing current job market trends and global opportunities.



The afternoon of May 4th featured a workshop on "Leadership Development for the Current and Future Student Leaders." This session concentrated on enhancing leadership skills with a particular emphasis on positive body language and decision-making. Through interactive exercises and role-playing activities, students learned techniques for effective communication and decision-making, essential for leading with confidence

and authority.

Overall, the sessions provided valuable insights and practical knowledge, aligning with our goal of equipping students with the skills and awareness needed for their future careers. The focus on renewable energy, career planning, and leadership development underscored the commitment to preparing students for success in a rapidly evolving world.

7 – Days Course on Building Energy Simulation

The seven-day Course on Building Energy Simulation was conducted from 18th to 25th July 2024 in Thimphu as part of the "Strengthening Capacity of Higher Engineering Education for Sustainable Buildings (HEESeB)" project. The course was led by Professor Dr. Wolfgang Streicher and Dr. Martin Hauer from the University of Innsbruck, Austria. A total of 23 participants, including 5 females attended the course, representing various ministries, private construction companies, consultancies, and academic institutions.

The workshop aimed to equip the participants with skills to evaluate and optimize the energy performance of buildings using computer-based analytical processes. These processes involved assessing heating and cooling loads, predicting energy use, and identifying opportunities for energy savings. The licensed software Rhino 8, with Grasshopper plugin, was used for energy simulation throughout the course.



TOT on Basic Computer Training to DCSN students

Department of Information Technology at Jigme Namgyel Engineering College successfully conducted a Training of Trainers (ToT) session for our second-year students pursuing the Diploma in Computer System and Network on July 19, 2024. The session was a resounding success, preparing these dedicated students to take on the role of trainers in the upcoming 2-day Basic Computer Course for first-year students. This training equipped engineering students with essential teaching and leadership skills, enhancing their technical expertise

and fostering a deeper understanding of computer systems and networks. By stepping into the role of trainers, they gained valuable experience in communication and mentoring, which are crucial for their future careers in the rapidly evolving technology sector.



Entrepreneurship and Innovation Centre

The Entrepreneurship and Innovation Centre at Jigme Namgyel Engineering College successfully conducted a series of programs aimed at fostering entrepreneurial skills and inspiring the youth to explore self-employment opportunities. A notable event was the Basic Entrepreneurship Course (BEC), held in February 2024 for NEET youths from the Dewathang community. The week-long program engaged 18 participants, including seven males and eleven females, through sessions on opportunity recognition, business planning, legal considerations, marketing, and financial management. Led by the Business Incubation Manager with support from faculty

members, the course provided a blend of interactive sessions, group activities, and real-world case studies. Participants were equipped with essential entrepreneurial skills and resources, such as training materials, refreshments, and certificates, encouraging them to consider entrepreneurship as a viable career path.

In June 2024, another BEC was organized in Samdrup Jongkhar for 15 participants over ten days, featuring modules on business model generation, design thinking, and business idea pitching. The workshop culminated in a business pitch competition, with SJ Tailoring and Handicraft securing first place. The participants also had the opportunity

to visit local businesses in the Motanga industrial area, gaining practical insights. Additionally, a Startup Bootcamp in May 2024 brought together 32 students across different departments to explore innovation and entrepreneurship basics, including marketing, design thinking, and operations. This bootcamp concluded with a competitive business pitching session judged by external and internal experts, with winning ideas including Prolance by IHTP and Druk E-Service by Group 15k. These programs collectively laid a strong foundation for future entrepreneurial endeavors, aligning with JNEC's mission to promote innovation and regional development.

15th Convocation of the Royal University of Bhutan at Jigme Namgyel Engineering College

The 15th Convocation of the Royal University of Bhutan (RUB) for the graduates of Jigme Namgyel Engineering College for 2019-2023 cohorts was held on 20th May, 2024, coinciding with the 12th day of the Fourth Month of the Wood Male Dragon Year. His Excellency Lyonpo Chandra Bdr Gurung, Minister for Infrastructure and Transport, presided over as the Chief Guest for the auspicious event. A total of 1,452 graduates received their academic

certificates, marking a significant milestone in their academic journey.

For the first time, the convocation ceremony was organized institutionally by JNEC rather than collectively by the RUB for all its constituent colleges. This new approach allowed for a more intimate and focused celebration of the graduates' achievements. The ceremony, held in the new Choekhang, saw

graduates being honored with Trashi Khadhar by their respective Programme Leaders. The event not only recognized the hard work and dedication of the graduates but also provided a platform for reflection and celebration as they transition into the next phase of their lives.

Congratulations to the Class of 2019-2023 on your remarkable accomplishment!



MEMBERS OF PUBLICATION UNIT

Adviser: Mr. Tashi Wangchuk, Dean of Research & Industrial Linkages

Coordinator: Mr. Ngawang Chojay, Research Officer
Mr. Shankar Das Sharma, Inqubation Manager

Editors: Mr. Gangaram Bhattarai, Lecturer, DHM
Mr. Phurba Tamang, Associate Lecturer, DCES
Ms. Tashi Yangchen, Assistant Lecturer, DIT

Designer: Mr. Bhagawath Khatiwara, Asst. ICT Officer, ITSU

Contact:

ngawangchojey.jnec@rub.edu.bt;

(<https://www.jnec.edu.bt>)