

Prime Minister DASHO TSHERING TOBGAY with Social Impact Award winners– DrukVends from JNEC

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National Startup Weekend team selects 20 ideas from JNEC

On 12th February 2018, the Department of IT & Telecom (DITT), Ministry of Information and Communication in collaboration with Thimphu TechPark, organized a day long Business Idea Pitching event for JNEC. The National Startup Weekend was a vision of the Prime Minister, DASHO TSHERING TOBGAY, who in the business idea pitching event, in College of Science and Technology, saw this as a vital platform for the youth of today and promised a nationwide Startup Weekend to be a culture.

The idea of startup came with aspirations of creating startup culture in the country through promotion of entrepreneurship and innovation among youths. The Startup Weekend aims to provide a platform for youth to explore possible human resources, technologies, finance ideas and familiarize youth with possible areas of business establishment. A total of 77 different business ideas were pitched for one minute each in JNEC, out of which 20 ideas with the highest votes were selected to compete in the National Startup Weekend in the capital. Mr. Sangay Chedup (faculty) secured the highest vote while Ms. Srijana Gajmer (faculty) secured the second highest vote for their excellent ideas in the college. Out of 18 selected students' ideas, the top three ideas were awarded with cash prizes ranging from Nu. 5000-1500.

The team from JNEC was led by Mr. Pema Wangchuk, faculty under the Department of Humanities and Management, to Thimphu on 12th March 2018. Before the kick start of the actual event of 16th March, a short mock pitching session was conducted to acclimatize participants on the event. Mr. Jigme Thinley Namgyal, Director General of DITT and his team presented on the overall views of young entrepreneurship and their innovative business ideas in Bhutan. Enthusiastically, each presenter emphasized on the availability of various engagement programme of youths in the field of modern ICT and Engineering as well as opportunities, scope and significance of entrepreneurship programme in Bhutan and beyond. It was followed by a short presentation by officials of DITT, on upcoming National Startup Weekend which was to be held on 16th-18th March, 2018.

Dr. Tshering Cigay Dorji, the CEO of Thimphu TechPark demonstrated a short mock session on how to pitch business idea within a minute to the audience. In continuation Dr. Chokey Wangmo, an official representative from His Majesty's Secretariat, Thimphu, presented on the need of microfinance and entrepreneurship in Bhutan for generating employment opportunities. After 'One minute pitching', 20 business ideas out of 153 made to the final event of the Startup Weekend.

DrukVends, a sanitary pad vending machine from JNEC, qualified for the finals. After the selection of the teams for the final event, the teams were given a workshop on Design Thinking, Idea Pitching, Financing Ideas and were assigned to mentors who helped in

moulding the ideas professionally. A market feasibility test was conducted by the teams on 15th March, in which all the teams, ventured in to the public space for market study, conducting interviews and collecting requirements of the public.

The main event was graced by Honorable Lyonchhen, dignitaries from ministries, officials from DHI, representatives from financial institutions, entrepreneurs and others. The final Business Ideas were pitched for five minutes, followed by a question answer session with the panel of judges. The business idea from Team JNEC, DrukVends, won the Social Entrepreneurship award and featured in top six teams of the event.

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Workshop on Design Thinking during Start-up Weekend

JNEC Participated in ICDL Digital Challenge -2018

Students in Jigme Namgyel Engineering College participated in ICT competition called 'Digital Challenge-2018' organized by International Computer Driving License

(ICDL), Asia and coordinated by Bhutan Media and Communication Institute, Thimphu as the local partner for ICDL.

A total of 51 students participated in the first round of Digital challenge on 19th April, 2018; out of which 2 students were selected to participate in second round which will be held

in Thimphu. From the second round, the participants can avail the opportunity for IDCL registration and verification which would ensure them with benefits of international certification. After the completion of this round, top two students from tertiary and secondary level of education will be sent

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National Startup Weekend team selects 20 ideas from JNEC

The JNEC team also took home a prize for

securing first position for inter-college dance competition held during the event.

The main event ended on 19th March, 2018 with delightful remarks and note of apprecia-

tion from the Director General, DITT with encouragement to promote entrepreneurship and self-employment.

JNEC to Monitor Air Quality of Dewathang

Jigme Namgyel Engineering College (JNEC) has an Air Quality Monitoring Station to measure the quality of air in the region. The installation of this monitoring system is funded by National Environment Commission (NEC), Thimphu. The instrument to check the air quality is known as Respirable Dust Sampler, which detects Particulate Matter (PM10). PM10 is a mixture of solids and liquid droplets floating in the air. Some particles are released directly from a specific source, while others form in complicated chemical reactions in the atmosphere.

According to the standard given by National Environment Commission, there are three area such as industrial area, mixed area, and sensitive area. JNEC falls under sensitive area and the standard given by NEC states that for 24 hourly average value of PM10 should not be more than $75 \mu\text{g}/\text{m}^3$ and yearly average should not be more than $50 \mu\text{g}/\text{m}^3$.

However the recent reading according the



Air quality monitoring station at JNEC

Respirable Dust Sampler was alarming. The reading showed around 70 to $150 \mu\text{g}/\text{m}^3$. Normally the PM10 values are more during dry season compared to the monsoon. The major factors contributing for high PM10 value could be due to releases from SD Eastern Coal Company and the region being located near Indian border. In addition, the College also has many on-going construction activities which is contributing to air pollution.

The result is alarming but considerable compared to New Delhi, where PM10 value reached up to $400 \mu\text{g}/\text{m}^3$ in the year 2017. Particles in the air comes in a wide range of sizes. Particles less than or equal to 10 micrometers in diameter; which is less than the width of a single human hair, can get into the lungs, potentially causing serious health problems.

People with heart and lung diseases, older

adults and children are most likely to be affected by particle pollution exposure. Even if you are healthy, you may feel temporal symptoms if you are exposed to high levels of particle pollution. Numerous scientific studies connect particle pollution exposure to a variety of health issues, including irritation of the eyes, nose and throat, cough, chest tightness and shortness of breath, reduced lung function, irregular heartbeat, asthma attacks, heart attack, and premature death in people with heart or lung disease.

National Environment Commission has established monitoring stations in the College of Science and Technology, Sherubtse College, Gelephu, Thimphu, and Pasakha to monitor the quality of air. With the advent of such stations, there is a scope for research and monitoring of quality of air for a healthy living collaboratively with NEC.



Respirable Dust Sampler

A Session on Leadership and Communication Skills

The Center for Appropriate Technology (CAT) is a research based center established in Jigme Namgyel Engineering College to provide knowledge and technical support for eco-friendly and culturally appropriate development in the communities of the region. Looking into some of the ways to help the community, the Center in collaboration with Department of Humanities and Management of the College conducted a knowledge and skill oriented session on the introduction to Leadership, Leadership of the Self and Communication Skills for the officials from Dewathang Gewog, Samdrup Jongkhar Thromde,

Samdrup Jongkhar Initiative (SJI), and Choki Gyatsho Institute.

Resourced by the College, a total of nine officials participated in the session. The participants were introduced to the types of leaderships and provided with an avenue for individuals to retrospect on the kind of leaders they are to their respective organization. Further, they were also taken into the journey of Leadership of the Self (LoTS), where individuals got an insight of what a true leader is, and habits they should inculcate in transforming both personal and professional development. Finally, the session concluded with presentation on communication skills, which is seen as the driving force behind success of every leader. The participants were introduced to dynam-

ic roles of communication and methods to communicate effectively while rendering services in their organization as well as in the community.

It was the first ever short term training program conducted by the CAT for the community. The College on behalf of the Center is grateful to SJI for sponsoring refreshments for participants and resource persons. The participants after the event shared that such a programme is a timely guidance to remind them on their purpose of living and transformation to becoming a good human and leader. The Center aspires to continue such efforts and extend support in future for the benefit of communities in the region.

Digital Poster Design Competition

With a vision to have clean toilet in the Community, the JNEC Clean Toilet Initiative organized advocacy programme in creating public awareness on health and sanitation. The club has conducted major activities

such as mass toilet cleaning campaign in hostels, and in collaboration with JNEC Community mappers; funded by Bhutan Center for Media and Democracy and Samdrup Jongkhar Initiative constructed a public toilet for Dudjom Dharma House in Rekhey under Dewathang Gewog.

Similar advocacy programmes will be initiated by the club, thus Digital Poster Design Com-

petition on the theme "Clean Toilet and Good Health: Lets Educate Everyone" was held. The best three posters would be used as an advocacy banner in the schools and nearby community for 'Clean Toilet and Good health'.

The event was declared as an open competition on 21st April, 2018 and exhibited on 16th May, 2018.



Digital Poster Design on the theme : "Clean Toilet and Good Health: Lets Educate Everyone"

Course Testing and Teacher Training Program as part of ELNAB Project

As part of Energy Efficient Lighting Education in Nepal and Bhutan (ELNAB) project, Jigme Namgyel Engineering College (JNEC) in collaboration with the partner universities from Finland, Greece and France conducted 3-day 'Course Testing and Teacher Training Program' from 7th to 9th February, 2018. The College is one of the beneficiary partners of the ongoing ELNAB project sup-

ported by European Union.

The three day training was attended by officials from Department of Renewal Energy, staff and students of the College to provide in-depth understanding of the two newly developed modules on illumination engineering and its important components. In addition, the training also emphasized on the teaching-learning methodology for the modules and usage of lighting design software as well as lighting laboratory equipment. The two new modules on illumination engineering was designed and developed based on the seminar, feedback, recommendation and survey collect-

ed from targeted groups, which include academics, students, graduates and stakeholders.

Through ELNAB project a dedicated lighting laboratory has been developed at JNEC and it can be used for testing of lamps, characteristic studies of lamps, illumination studies including design of the lighting system that address the main objectives of lighting.

Currently, the College is in the process of establishing a research center dedicated for Lighting and Energy Efficiency Studies (LEES) along with lighting laboratory. Such facilities in the campus will enable the College to conduct academic and research activities in the area of lighting and energy efficiency, which has potential to benefit the country in the future. The College has also signed Memorandum of Understanding with the Department of Renewable Energy for collaboration in the field of lighting and energy studies.

Mr. Hemlal Bhattarai, Dean Research and Industrial Linkages and also the Project Manager of ELNAB for JNEC shared that the major activities has been completed and they were left with the final activity on 'Result Dissemination' seminar that is tentatively scheduled in the month of September, 2018 in Bhutan.

The two-year project will be completed in September, 2018. Further, the College has planned advanced project on lighting for sustainable future with its partners.



ELNAB participants with the President and five Professors (Researchers) from Finland, Greece and France

QUOTE

"Science is about knowing; Engineering is about doing"
- Henry Petroski.

International Women's Day Celebration

"The story of women's struggle for equality belongs to no single feminist nor to any one organization but to the collective efforts of all who care about human Rights."- Gloria Steinem.

The celebration International Women's Day dates back to 1909, the day is commemorated to recognize women's achievements and as a resolution to gender parity worldwide. International Women's Day is annually held on 8th of March to mark women's national, social, economic and political achievement throughout the nations and to pay gratitude for

their contributions in the society. The day is also known as the United Nation (UN) Day for Women's Rights and International Peace. The theme for this year is "Press for Progress".

Along with the nations around the globe, Jigme Namgyel Engineering College also joined to cherish the "International Women's Day" on 8th March 2018. The program was coordinated by the Y-Peer Club to mark its significance. The President, Deans, staff, and students came together to mark the event.

The program begun with welcome note from the Club Coordinator, followed by cultural programs. A short film was also screened to the audience with the message, "If you educate a girl you educate the nation." At the closing

of the event, the President, Dr. Andu Dukpa also emphasized on the importance of the day, inspiring and motivating women to move and excel forward in life. Further the President penned his message, stating "Women are at much higher domain in everything they do. Respect Women! Stop discrimination against women and Happy Women's Day!"

International Women's Day is not a country, group or organization specific but the day that belongs to all the groups collectively everywhere. Thus, the day concluded imparting positive message to encourage and to make a difference in the lives of WOMEN for being invaluable part of every community.

Press for Progress!

STAFF UPDATES

NEW APPOINTMENTS

Ms. Kinley Lhaden, Asst. Finance Officer	Ms. Phurpa Dema, Asst. Residence Coordinator
Mr. Phub Tshering, Asst. Residence Coordinator	Mr. Karma Tenzin, Asst. Residence Coordinator
Ms. Pema Choden, Personal Assistant	Mr. Galey Wangchuk, Driver
Mr. Dorji Wangchuk, Security Guard	Mr. Sangay Dorji, Security Guard

RESIGNATION

Ms. Tshering Pelmo, Cleaner

DISTINGUISHE VISITORS

NAME	DATE
Dr. Johannes Binder, Resident Representative, Austrian Coordination Office, Thimphu	2 nd June, 2018
Mr. Fujiwara Hitoshi, Assistant Professor, WASEDA University, Japan	30 th April, 2018
Mr. Tempa Tshering, Offtg. Chief Intellectual Property(IP) Officer, DoIP, MoEA and his team	26 th April, 2018
Mr. Namgay, Chief Research Officer, Department of Prevention and Education, ACC	16 th March, 2018
Mr. Koji Yamada, Chief Representative, JICA and his team	8 th March, 2018
Dr. Pramod Bhusal, Aalto University, Finland	6 th February, 2018
Dr. Fragkiskos Topalis, Professor, National Technical University of Athens, Greece	
Dr. Lambros Duolos, National Technical University of Athens, Greece	
Dr. Laurent Canale, Paul Sabatier University, France	

QUOTE

"Inaction breeds doubt and fear. Action breeds confidence and courage. If you want to conquer fear, do not sit home and think about it. Go out and get busy"
- Dale Carnegie

Celebration of World Intellectual Property Day with Awareness Training & Workshop Program

The Staff and Students along with five officials from the Department of Intellectual Property (DoIP), Ministry of Economic Affairs observed the World Intellectual Property (IP) Day at JNEC on April 26, 2018. On the following day, a daylong awareness program, workshop on economic importance of IP and IP database search training was conducted. The objectives of two-day program on IP was to create general awareness; to provide basic ideas about different IP systems, its economic and academic as well as research benefits and to implement activities based on training attended by Mr. Karma Drukpa, Assist. Professor at Stockholm, Sweden.

The program started with the welcome note from the Officiating President followed by reading out the message from the Director General of World Intellectual Property Organization (WIPO) in Geneva, Switzerland. The main theme of 2018 World IP Day was, "Powering Change: Women in innovation and creativity" and the campaign was intended to celebrate the brilliance, ingenuity, curiosity and courage of the women who are driving change in our world and shaping our common future.

The World IP Day is celebrated annually on April 26 to learn about the role that IP rights (patents, trademarks, industrial designs, copyright) play in encouraging innovation and crea-



Mr. Tempa Tshering, Head of Industrial Property Division presenting during the World Intellectual Property Day.

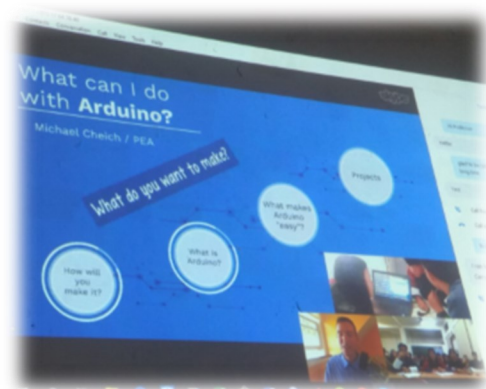
tivity. Events are organized around the world on this day to recognize creativity and contributions made by creators and innovators to the socioeconomic and cultural development of the society, and also to stimulate a culture of respect for the IP rights. On learning the significance of IP rights and knowing that people are either unaware or gives little importance of IP in daily life, this program was conducted to educate staff and students who can be supportive in imparting the message in future.

The celebration was joined by many staff and students who were observed to be embracing the occasion with enthusiasm and joy. The celebration was marked with overview of IP system in Bhutan, video clips on IP practices in Bhutan and distribution of pamphlets. Cultural Club of the College presented lively cultural program to make session cheerful. The two day program funded by the Department of Intellectual Property concluded successfully, educating many staff and students to impact the society in Bhutan.

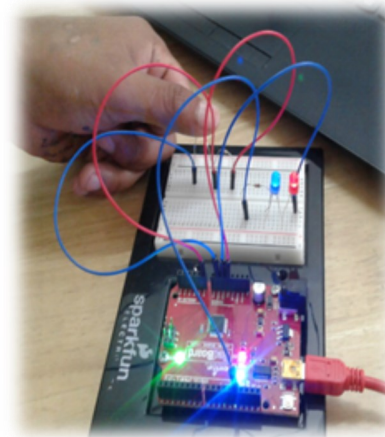
Virtual Class on Arduino and its Application

Students pursuing Diploma in Electronics and Communication Engineering (ECE) in Jigme Namgyel Engineering College attended

a guest lecture on Arduino and its Application. The lecture was delivered through Skype by Mr. Michael James, Instructor at Programming Electronics Academy, USA on 28th May, 2018.



Michael James speaking to students through Skype



Controlling LED light using LDR sensor

This virtual learning is in continuation to the first lecture, Mr. James delivered during the Autumn Semester, 2017 where he introduced the same group of students to Arduino devices. Apart from his lecture, 4 sets of Sparkfun Inventor's Kits and accessories were also donated. Today, students of ECE are introduced to Arduino Programming coordinated by Mr. Sangay Chedup, Lecturer under the Department of Electronics and Communication Engineering.

The guest lecture familiarized students with basic embedded systems controlled by Arduino programming, interfacing the hardware and software skills in the world of electronic applications and automation systems.

The lecture was focused on developing motivation through display and discussion of student projects using Arduino at Programming Electronics Academy and Arduino users globally. More advanced session of such kind is expected from Mr. Michael for in future for educational collaboration.

DID YOU KNOW?

If you were to spell out numbers, you would have to go until 1,000 until you would find the letter A.

JNEC Participated in ICDL Digital Challenge -2018

to Bangkok for the final round. Top students will be awarded with attractive prizes and a week-long student exchange program in either Singapore, India, Taiwan, Thailand or Vietnam. ICDL foundation organized the 'Digital challenge' with an aim to search and recognize the top students with the best digital ICT skills in Asia. The challenge is open to students aged

13-17 from higher secondary schools and 18-25 from tertiary level.

The ICDL is an international organization dedicated to raise digital competence standards in the workforce, education and society. As per the organization's webpage, the certification programmes, delivered through an active network will enable individuals and organizations to assess, build and certify their competence in the use of computers and digital tools. This non-profit social enterprise provides skills and

knowledge required to use digital technology effectively.

Digital skills are now essential, as the world gets dominated with modern technology. As an individual, these skills will not only improve communication but also develop both personal and professional lives. Moreover, for the students, digital skills will enrich their learning and prepare them for future endeavor which is embedded with the sophisticated technology.

2nd Short Film Competition

The Media Club of Jigme Namgyel Engineering College conducted the 2nd Short film competition on 16th May, 2018 with the theme "Acceptance". This is one of the core activities for the club and its main objective is to create a platform for the students to showcase their talents in film making. It is also to engage students in a productive way rather than engaging in nugatory activities.

The event to be held was announced on 21st February, 2018 coinciding with the Birth Anniversary of Fifth Druk Gyalpo Jigme Khesar Namgyel Wangchuck. Six teams registered for the event and prepared for a period of two months. Furthermore, the interested participants were provided with trainings on video editing.

The films screened during the event were *Sorry! My mistake*, *Nyamro Zhoenpi Sung*, *Lab Na Oie*, *Nge Rewa Nge Zewa*, *One and Tendrel*. As usual the awards were decided by judges' score and viewers' votes. The film *Sorry! My mistake* directed by Ngawang Tshedrup was awarded the best film by the judges and the movie *Lab Na Oie* secured the highest vote from the viewers. The films were judged by three JNEC faculty and one official from Samdrup Jongkhar Initiative (SJI), who were appointed with prior information and a set criteria.



Screening of the short films on the theme "Acceptance"

Last year, the theme for the short film competition was "Alcohol drowns Happiness". This year the theme chosen was mainly to let the participants express the importance of it and let the audience realize and get inspired with the good values they receive from the films.

The event was graced by the President of the College, delegates from SJI, staff and the students of JNEC. To make the event cheerful and jovial, the programme included cultural events.

Innovative Engineering Idea Competition

Innovative Engineering Idea Competition was organized by JNEC Clean Toilet Initiative as their planned activity for the club. It was exhibited on 16th May, 2018 along with online article and poster entries of the Open Online Article Competition.



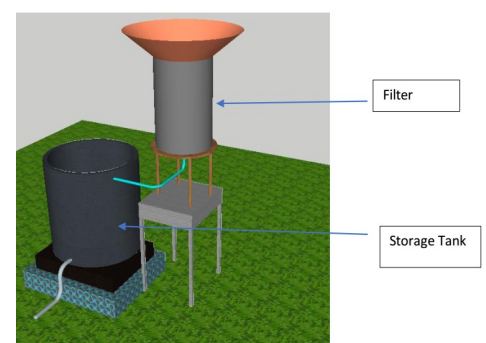
Students exhibiting their innovative models

The club exhibition gave an opportunity for innovative students to exhibit their ideas in making a community a better place to live. Moreover the ideas exhibited during the event were mostly cost-efficient, eco-friendly, and user-friendly.

One of the innovative ideas which caught the attention of the spectators was the *Ashom-Kangtang Filter* (water filter using corn cobs). It is the idea adopted from Lalita Prasida Sripada Srisai, a fourteen year old girl, an award recipient of 'Community Impact Award' at Google science Fair in California in 2015.

In many sources, it is mentioned that 70% of the world is covered with water, out of which 3% is fresh water but 1% of it is drinkable. Thus, it is essential for individuals to adopt ways and means to conserve the water resources and think of innovative ideas to solve water crisis.

Dewathang has an acute shortage of clean drinking water and there is no dearth of rain water since it is located in humid subtropical region. The dominative crop grown in the region is maize. Thus, the idea to synergeize



3D View of Ashom-Kangtang Water Filter

these elements and execute the idea of corn cobs as rain water filter came into being.

Corn cobs act as bio-adsorbent and removes the contaminants from water. In the absence of water treatment plant this idea can cater to needs of safe drinking water. In cases where the problem of water shortage can not be solved, this filter can at least improve the quality of rain water. Therefore with the corn cob, rainwater as well as stream water can be filtered and use it for consumption.



Students collecting garbage from the outskirts of Dewathang town during the Mass Cleaning Campaign conducted by Thakor Nyamsung Tshogpa

Thakor Nyamsung Tshogpa

Thakor Nyamsung Tshogpa was initiated in JNEC with the aim to create awareness about environmental problems, advocate on measures that can be adopted in order to protect and keep the environment clean. The club mainly focuses on promoting greener environment in and around College premises, plant trees and initiate cleanliness activities. The

club comprises of faculty club advisor, club secretary from final year, deputy club secretary from first year and club members.

The club was formally started in the month of April, 2018. The first activity organized by the club was, mass cleaning campaign from Dewathang town till JNEC Campus, covering an area of 400 acres. The event was held on 9th May, 2018 with the theme “Our Place, Our

Planet, Our Responsibility“. A total of 900 participants, comprising of students, staff and faculty took part in the cleaning campaign.

The club not only aims to be a flag bearer in conservation of green resources in the College but also aims to advocate this in the locality.

The Club observed ‘Social Forestry Day’ on 2nd June, 2018 which is also celebrated as the Coronation of His Majesty the Fourth Druk Gyalpo. On this day, around 100 saplings and golden hedges were planted in the college campus. Further, the Club has promised to conserve and maintain the existing saplings planted in previous years.



President planting the first Sapling on Social Forestry Day accompanied by Faculty Club Advisor

Coordination Mechanism of YPEER Network in Bhutan

JNEC Y-Peer attended the meeting on “Coordination Mechanism Meeting on the YPEER Networks” on 5th and 6th May, 2018 at Sherubtse College. The Meeting was coor-

minated by Department of Youth and Sports (DYS), Ministry of Education, chaired by the Director General Goling Tshering.

The main objective of the meeting was to strengthen the YPEER network in the country and to address youth related issues. During the meeting, it was informed that as of today only

two Colleges: Jigme Namgyel Engineering College and Sherubtse College are active in providing awareness education to the youth on Sexual Reproductive Health Rights (SRHR).

During the meeting, JNEC Y-PEER got an opportunity to share on various activities which were conducted in the College. They also shared the challenges they faced. Thus, DYS agreed to support JNEC Y-PEER in sending more members for National Training of Trainers (NTOT) since many members are not trained to facilitate peer to peer education on youth related issues.

The Director General of DYS with other officials visited the College on 10th May and interacted with JNEC Y-PEER members. On his visit, he highlighted on the importance of having Y-PEER network in the College and its benefit in solving the youth issues especially related to sexual reproductive health rights.

The two day meeting was participated by the Heads and representatives from Rangjung Technical Training Institute (TTI) in Trashigang, Chumey TTI in Bumthang, Institute for Zorig Chusum in Trashiyangtse, Jigme Namgyel Engineering College (JNEC), and Sherubtse College. The meeting concluded with endorsement of the way forward activities that individual institutes and colleges will execute.



“Coordination Mechanism Meeting on the YPEER Networks” at Sherubtse College

Guest Lecture on Embedded Systems and IoT

A one day guest lecture on “Introduction to Embedded Systems and IoT using Particle Photon” for Diploma in Electronics and Communication Engineering (ECE) and Computer System and Network (CSN) was held on 18th May, 2018. The lecture was delivered by Mr. James Peyton-Jones, Professor in Electrical and Computer Engineering & Center for



Professor James Peyton-Jones delivering lecture

Nonlinear Dynamics and Control, Villanova University (USA), specialized in control and automation engineering, currently based in Sherubtse College.

The Internet of Things (IoT) is an important technological revolution related to smart cities and smart homes. As smart sensing systems



Professor guiding students to program

becomes reality, different operation areas working today are in automatic mode. Therefore IoT is a network of items including sensors and embedded systems which are connected to the internet and enables physical objects to gather and exchange data. In turn, an embedded system is a system that has embedded software in a computer hardware. The system is dedicated for either an application or a component of a large system. David E. Simon, author of An Embedded Software Primer said, “People use the term embedded systems to mean any computer system hidden in the product”.

During the lecture, students had an opportunity to witness a demonstration of a robot moving and a motor operated by a photon board. The

workshop consisted of some lectures interspersed with hands-on exercises, where participants had to write C programs and flash them to the photon boards using the link to Cloud Services.

Prof. James in his lecture said “Bhutan is one country where the development is in progress, keeping the culture and tradition in mind”. The College being a premier institute of applied engineering, such lectures provide an avenue for the future technical personnel to bring technological evolution with values of Gross National Happiness.

The lecture ended with ample of appreciation for this eye-opening gesture and most importantly, students were inspired to learn.

Seminar on GIS - Application and Possibility

On 8th March 2018, Jigme Namgyel Engineering College (JNEC) participated in collaborative seminar organized by Japan International Cooperation Agency (JICA) and National Land Commission Secretariat (NLCS) on Geographic Information System (GIS) and its Application and Possibility. The seminar was held at College of Science and Technology, Sherubtse College and also in JNEC, mainly to advocate on geospatial information and its technology transfer to the academics and learners who are specializing in the related field of study.

The seminar was led by Chief Representative of JICA, Mr. Koji Yamada with the volunteers from JICA, currently working with Ugyen Wangchuck Institute for Conversation and Environmental Research, world’s largest geospatial group (PASCO), officials from NLCS, Department of Road and Department of Human Settlement.

During the seminar, the participants from JICA and NLCS presented the history of the development of Survey in Bhutan, the current state of the Geospatial infrastructure in Bhutan, components of technology transfer from JICA project and on Continuously Operating Reference Station (CORS) network. The seminar also gave an avenue for academics and learners to explore the innovative practical applications of GIS in Infrastructure Planning, Urban or Regional Planning and Disaster Risk Management.

The faculty and students under the Surveying programme, also presented the Comparative Analysis of Updating Cadastral Map by Application of Field Survey and Remote Sensing Data, Precipitation Induced Flash Flood Modelling using HEC-RAS, and Topographic Mapping of the recent survey camp held at Gaeddu College of Business Studies.

The event was resourceful and important for JNEC, as it has enhanced the knowledge on GIS and its applications in various aspects. Therefore, the seminar has created an avenue

to embark on conducting research using geospatial information and, above all improving the quality of education. In addition the linkages among the participating organizations have strengthened and in near future, the organizations will be sharing their expertise and look into future collaboration for knowledge and skills exchange.



Welcome Address by President of JNEC

Training on Procurement and Contract Management

The training on Procurement and Contract Management was organized by Jigme Namgyel Engineering College (JNEC) from 5th March to 10th March, 2018. The training aimed to provide comprehensive knowledge and skills in the procurement and contract management processes, including the materials

management to enhance the productivity and reduction of cost of products. Ten officials of Phuntsholing Thromde took part in the training.

The five day training covered various concepts of supply chain management, such as procurement management, negotiation skills, inventory management, warehouse management and contract management along with Database Management.

The training was resourced by the faculty from Electrical Engineering, Civil Engineering, Materials and Procurement Management programme and Computer System and Network programme. As a part of the training delivery technique, presentations, discussions, practical exercises, case studies and field visits were used by the resource persons.

Open Volleyball Tournament

On 21st and 22nd of April 2018, the Drop in Centre (DIC) for drugs and alcohol dependence, Samdrup Jongkhar held an open volleyball tournament for women with the aim to enhance women's participation in the sports field and to raise awareness on drugs and alcohol. A total of nine teams participated including girls' team from Jigme Namgyel Engineering College (JNEC). The tournament concluded

in two days and the team, SD United was the winner of the tournament while the team from JNEC made it to the semi-final.

The Samdrup Jongkhar Sports Association (SJSA) also organised a two-day league cum knockout inter-departmental volleyball tournament for men on 28th and 29th of April 2018. The main aim for organizing the tournament was to select the players to participate in the national level tournament besides others. After playing tough and competitive matches, the

Khenrig Shooters and the team JNEC were able to make it to the finals and the team Khenrig Shooters were the winners while the team JNEC lifted the runners-up trophy along with the cash prizes.

Organizing such events always created a platform and an opportunity for every participant to enhance and showcase their sporting skills, allowing the participants to interact with others and also at the same time maintaining a healthy life by playing sports.

Online Article Competition

To advocate on 'Clean Toilet and Healthy Sanitation Habits', the JNEC Clean Toilet Initiative conducted an Open Online Article Competition on 23rd March, 2018. The event had 18 aspiring writers, determined to express on the importance of clean toilet and clean community.

The participants were asked to share their article in social media (Facebook) to widely spread the message on the benefits of clean toilets and healthy sanitation habits. Based on the number of shares obtained and comments received from the readers in social media, the articles were evaluated for 60% and remaining 40% were based on evaluation conducted by selected panel members.

The best three articles selected were: *Mistaken Path* by Karan Gurung, (DCE), *Clean Toilet and Healthy You* by Tshering Choden, (B.E PE) and *Flushed Beauty* by Dorji Selden, (DCE). The winning articles are published below for the pleasure of reading.

Mistaken Path
-Karan Gurung

She found herself walking in an eerie silence of death. Grief stricken faces were floating everywhere. Loud, piercing cries of people mourning could be heard. The commotion created was so overwhelming that she tried blocking it out. She could feel something tug at her coat and a hollow voice called her name, "Tshogyal". At that moment Tshogyal saw a ghostly figure of her mother. Her mother looked frail. Her long ruffled hair clung to her shrunken skull like a blob of fur. Tears started streaming down Tshogyal's cheeks as she stuttered herself in saying, "Ama" and they embraced each other. Her mother suddenly pulled off herself from her and sternly gazed at her eyes. "Tshogyal, I can no more be with you. I am sorry," quivered her mother. Tshogyal's brain juggled inside her skull. She was speechless. She asked what happened Ama? I don't get it." Her mother sadly looked at her and said, "Tshogyal today I am going to tell you something really important. I was a woman who took great pride in what I believed in. I am the reason of my own doom." She took a deep breath. She continued, "I should have listened to my doctor. I should have cleaned my toilet. I should have followed clean toilet sanitation policy." "According to the doctor I got *Shigella flu* which slowly killed me from inside. It is common among those with poor hygiene who do not wash their hands properly after using the toilet," she huffed. "Listen Tshogyal, do not follow the same path as your mother. Always use a toilet. Clean it on a regular basis. Follow healthy sanitation process and live a healthy life." Tshogyal suddenly felt her mother drifting away from her reach. She cried uncontrollably and everything started looking clear. She was at her mother's funeral. Years later Tshogyal became the CEO of Bhutan Clean Toilet. She helped in constructing toilets in rural parts of Bhutan and advocated every individual about healthy sanitation. Tshogyal felt proud of her mother.
Clean toilet and live happy.

"Clean toilet and the healthy you"
-Tshering Choden

Disposal pot of feces or urine	Flushing the undrained down	Ensures one's fitness
Breeding pot of germs or worms	Rubbing the uncleaned boards	Caring of the toilet
Source of malodorous or the foul smell	So are the healthy habits	Assures everyone's healthiness.
Using toilet can be as sacred as	Leading next to godliness.	Following the healthy habits
Lighting an incense stick.	Flushing after use	Keeping the sanitation clean
Keeping toilet clean can be as holy	Washing hand after flushing	So must be prior keen.
As the strong aroma of incense	Closing tap after flushing	Eating clean, makes you fit
Purifying and cleansing every bit	Switching light off before leaving	Breathing clean, makes you calm
Keeping the disease miles away.	So are the rightful steps	Cleaner toilet, clearer heart.
Keeping the surrounding clean	Striving towards greener toilet.	Healthier people, wealthy country.
Sweeping the stacked clutter	Caring of the oneself	Cleanliness is the medicine to all diseases.
Removing the entangled cobwebs		

Flushed beauty
-Dorji Selden

I am beauty in all forms	But do you realize?	I am heaven,
But do you realize?	Crap! It's my fate.	When your stomach is sick.
No one gets my worth,	But do not blow me.	Throw up, I will take it all.
Yet I don't denounce or curse.	I need to be cleansed.	This is what I was meant for.
I have my rhythm in blues.	Instead my importance is flushed.	For I am beauty in all forms.
My name is put down in black and white.	I am displeasing to eye on.	But do you realize?
On the walls, in the papers.	I am cast aside in public,	
Everywhere, it screams my worth,	But don't you hesitate.	



BHUTAN - INDIA

An Enduring Friendship

Nestled in the lap of Himalayas, Bhutan and India have always been two peaceful brothers, fostering respect to each other's sovereignty and culture. Cultural and trade exchanges between Bhutan and India dates back to the times of Zhabdrung Ngawang Namgyel. India has been a strong supporter in growth, development, education and economy of Bhutan. Educators from India, were invited in the early days of the development in the field of education, and they have had great roles in shaping modern education system of Bhutan.

His Majesty the Third Druk Gyalpo (King) Jigme Dorji Wangchuck in his interview to Air India Radio in February 1968 in Delhi, India, said "The friendship between India and Bhutan is solid as a rock and I have no doubt will always remain so. It's not only geographical proximity but mutual love and friendship that has kept us close to each other. Nothing is more valuable than mutual friendship and love."

As country today marks its 50 years of unwavering friendship with India, JNEC would also like to join in this jubilant celebration and promise loyalty in nurturing this friendship through cooperation in educational exchanges.



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