



Report on the Training of Trainers Course

As a part of the project Strengthening Capacity of Higher Engineering Education for Sustainable Buildings (HEESeB), three training of trainers (ToT) course was organised from 30th September to 3rd October.

1. Gender Sensitive STEM Teaching

Jigme Namgyel Engineering College recently organized a four-day training program focused on the exploration of Gender Equity and Diversity Sensitive STEM teaching for both high school teachers and college faculty. The event was facilitated by Prof. Suzanne Kalepari from University of Innsbruck, Austria, which is funded by Austrian Partnership in Higher Education for Research and Development (APPEAR) project. This engaging program drew active participation from twelve schools in the region and was further supported by Mr. Sangay Chedup of DRIL and Mr. Deo Raj, a Lecturer from the Department of Electronics and Communication Engineering in facilitating the program.

Day 1: The program commenced with an introduction to the Run Linc STEMSEL E32W controller, highlighting its significance in promoting STEM education within schools. This session was followed by a comprehensive overview of Gender Equity and Diversity Sensitive STEM education. The discussions that ensued were thought-provoking, centering on empowering young girls to pursue careers in STEM and creating a more inclusive future.

Day 2: The focus of this day was on empowering women in STEM fields and strategies to overcome obstacles. Participants actively shared their perspectives using an Inquiry-based learning approach and engaged in discussions. Additionally, group activities addressing societal issues, such as air pollution and health concerns, were organized. During these activities, participants employed creative and innovative approaches such as posters, drama, role plays, and advocacy to address these pressing issues.

Day 3: Participants delved into enhancing their teaching methods and evaluating their own performance. They received guidance on creating gender-sensitive STEM education resources and establishing an inclusive classroom environment. To foster collaboration and

inspire equal participation among their students, the participants were tasked with constructing towers using minimal resources, employing imaginative and interactive approaches.

Day 4: This day revolved around practical implementation and reflection. In the morning session, participants presented their lesson plans, receiving valuable feedback and engaging in discussions aimed at improvement. The afternoon session was dedicated to Arduino microcontrollers and their potential for advancing STEM education in schools and colleges.

The program concluded with participants sharing their insights, expectations, and key takeaways from the training. Many expressed their enthusiasm, describing the course as enriching, informative, and highly relevant. They expressed a desire for similar courses in the future. A total of 39 teachers attended the training out of which 17 were female.



2. Building Energy Efficiency

A 2-day course on Building Energy Efficiency was organized on 30th September and 1st October for 46 staff and students (14 female and 32 male) of Bachelor of Engineering in Mechanical and Power Engineering resourced by Professor Wolfgang Streicher, University of Innsbruck, Austria. Forty six staff and students attended the course, out of which fourteen were female students.

The course began with the arousing question “Why do we need shelter?” With discussion and brain storming, shelter translated to buildings. In two days, interactive discussions revolved around building aspects for improving the efficiency, basics to high end building energy simulation, mainly focusing on Building Physics, HVAC and Simulation. In course of discussion, the Professor emphasis more on the passive design buildings for cost-effectiveness and better sustainable future.



3. Timber Engineering

On September 30th, Dr. Anton Kraler, a distinguished professor from the University of Innsbruck (UBIK) in Austria, delivered a comprehensive one-day guest lecture on timber engineering to final-year civil engineering students and staff. His presentation was both informative and engaging, beginning with an introduction to UBIK in Austria to set the stage

for the learning. One of the key aspects of Dr. Anton's lecture was to provide an overview of timber construction projects in Austria. The lecture focuses on two main topics: building physics in construction and structural timber engineering. These discussions encompassed a range of crucial aspects, notably fire protection, sound insulation, thermal insulation, and moisture protection. In the latter segment of his lecture, Dr. Kraler delved into matters concerning the structural aspect of timber in construction. Overall, Dr. Anton Kraler's lecture provided invaluable insights into the realm of timber engineering, encompassing both theoretical principles and practical applications. His presentation not only showcased Austria's expertise in this field but also opened doors to future opportunities and advancements in the field of timber engineering. A total of 48 staff and students attended the course out of which 14 were female.



The participants were awarded with the certificates by the president. A sample of the certificate is shown in Annexure-1



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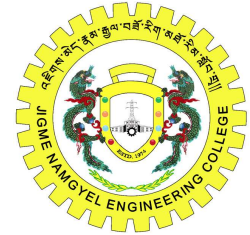
Royal University of Bhutan

Jigme Namgyel Engineering College

Dewathang : Samdrup Jongkhar



Royal University of Bhutan



Certificate of Attendance

Awarded to **Mr Sonam Dukpa** of Garpawong Middle Secondary School, Dewathang for having attended Training of Trainers on **Gender Sensitive STEM Teaching** organised by Jigme Namgyel Engineering College in collaboration with the University of Innsbruck from 30th September to 3rd October 2023 at JNEC, Dewathang.

Prof. Suzanne Kapelari
Facilitator

Dr Tshewang Lhendup
President



Higher Engineering Education for Sustainable Buildings



appear

Austrian Partnership Programme
in Higher Education and Research
for Development

With funding from
= Austrian
Development
Cooperation