



AADHARSHILA

The Annual Newsletter of the Department of Civil Engineering
Assam Engineering College

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Principal's Message

It gives me immense pleasure to learn that the Civil Engineering Department, Assam Engineering College is coming up with its ninth edition of the Annual newsletter entitled 'Aadharshila'. I hope it will help in creating a healthy environment for the students. I wish them all the success for future issues to come.

Dr. Atul Bora
Principal
Assam Engineering

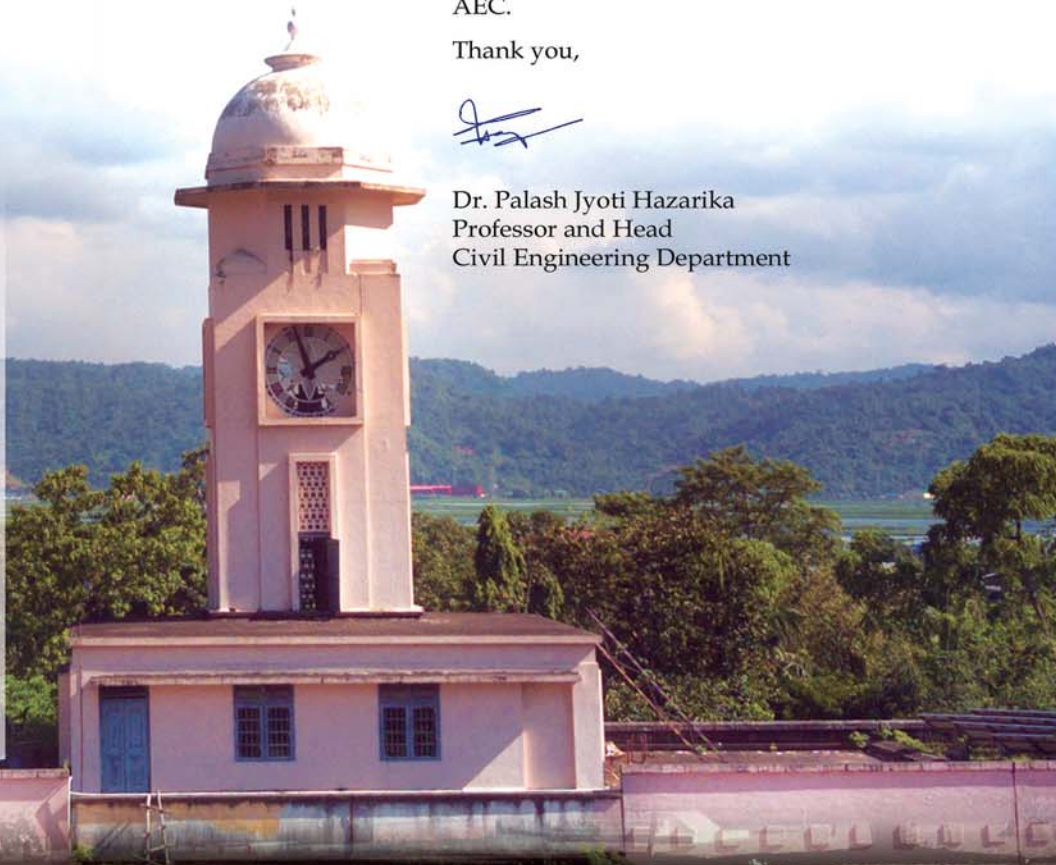
HoD's Message

It gives me immense pleasure and pride to present before you the 9th issue of Aadharshila, the Annual Newsletter of the Department of Civil Engineering College, Assam Engineering College. Aadharshila is conceptualized as a reflection of the activities and achievements of the students and faculty of the Department in the previous academic year. The last year has been a traumatic one for one and all due to the pandemic. In spite of it, we have tried to keep the academic programs running through online classes, for the successful conduct of which I must commend both the faculty as well as the students. Other online academic activities were also conducted to the extent possible. I convey my appreciation to the Aadharshila editorial team for their hard work in bringing out this edition in these trying times and at short notice.

As we slowly move out of the pandemic situation towards a regular classroom teaching environment, I convey my best wishes on the 67th Foundation Day of our glorious institution AEC.

Thank you,

Dr. Palash Jyoti Hazarika
Professor and Head
Civil Engineering Department





EDITORIAL

*"One man's 'magic' is another man's engineering.
'Supernatural' is a null word."*

Robert A. Heinlein

Humans are made up of cells. One cell at a time adds up with another cell creating bonds and thus creating life. Civil engineering is likewise the same. Brick by brick a structure is made and at last a gorgeous structure is brought to life in everyone's eyes. Starting off the ninth edition of AADHARSHILA, the student fraternity, on behalf of the Civil Engineering Department, Assam Engineering College welcomes you aboard on the final structure of the year 2020. The one roof gathering of all the news for the year of 2020 which have been contributed by each and everyone of the Department of Civil Engineering.

In 1955 the first technical college of North-East India was established in Jalukbari which came to be known as ASSAM CIVIL ENGINEERING COLLEGE. Ever since, the department has excelled in the field of academics and research becoming a pioneer in the field of technical education and development. The idea of AADHARSHILA came into existence when the need was felt for documenting the various works, glories, researches and achievements of everyone from the department. The idea sprang into life from 25th January, 2013. Since then it has been catering the need to become a motivation not only for the student fraternity but also for the whole department, providing an insight into the vast ocean of Civil Engineering.

Hereby we would like to express our heartfelt gratitude to the people who played an inevitable role in the journey of this newsletter from our vision to black and white. At the outset, we'd like to express our sincere gratitude and heartiest thanks to Dr. Atul Bora, Principal, Assam Engineering College, and Dr. Palash Jyoti Hazarika, Head of the Department, for allowing us to publish this newsletter. We feel privileged to extend our deep sense of gratitude and appreciation to Dr. Bibhash Sarma, professor-in-charge of AADHARSHILA whose valuable guidance and generous help inspired us in the successful publication of this newsletter. The contributions of our teachers Dr. Binu Sharma, Dr. Jayanta Pathak, Dr. Malaya Chetia, Dr. Abinash Mahanta, Dr. Jayshree Hazarika and Mr. Bibhuti B. Bhardwaj can never be foregone and we are immensely grateful for their timely advice and their perseverance in shaping the newsletter as it is. We would like to thank our respected faculty and also our non-teaching staff of the department whose support and motivation have been relentless.

We hope our efforts have been fruitful in providing a bird's eye view of the department. With a prayer for its success, we would like to present the 9th issue of AADHARSHILA for one and all.

Editors



Aadharshila Committee

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Pro-in-charge	: Dr. Bibhash Sarma
Editors	: Anannya Katak Anusko Awesh Kaushik Medhi
Faculty members	: Dr. Jayanta Pathak Dr. Jayshree Hazarika Mr. Bibhuti B. Bhardwaj
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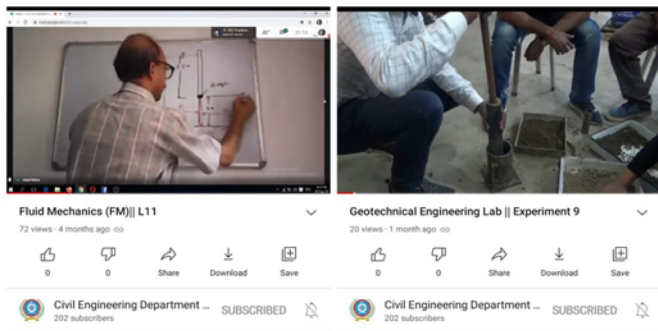
Write to us:

Send us your comment, suggestions and feedback about the newsletter to aadharshila_ced@aec.ac.in

Engaging with students during Covid-19 pandemic

Dr. Palash Jyoti Hazarika, Professor & Head
Dr. Jayanta Pathak, Professor
Mr. Bibhuti B. Bhardwaj, Asst. Professor

The COVID-19 Pandemic and closure of the classroom teaching since March 2020 brought new challenges to the department to sustain the engagement with the students during the lockdown period and to keep the learning environment alive within the virtual environment. Just immediately after the closure of colleges was announced, the department encouraged the teachers to use various available online video platforms to conduct classes from home. Video conferencing platforms like Zoom®, Google-meet®, Gotomeeting®, Jiomeet®, etc. (depending on internet bandwidth availability) were adopted by the faculty members to deliver lectures and content directly to the students joining from their home or their place of living.



The Civil Engineering Department of AEC made all efforts to ensure the same quality of education even through the online mode. The department took a very compassionate view while engaging with the students online by considering their geographic location, their available resources, network connectivity and coverage, and their physical and mental health condition during this lockdown period. The department encouraged the faculty to adopt both active and passive methods of engagement based on the feedback and response collected during the online classes from time to time. The 2016-20 batch appeared in all their final exams including the final semester project viva and the grand viva in online mode. The department with its dedicated and sincere efforts from the teachers made sure that the final year students didn't lose any job opportunity and get their degree on time. With all the uncertainties tackled online, the department was able to tide over the initial pandemic period and the even semester of the year 2020 pretty well.

Since the unlocking of physical classrooms in college was delayed further due to the pandemic and the odd

semester session of 2020 was also declared online by the government, the department took this phase of difficulty as an opportunity to build capacity in the online Learning Management System for future application. The department pioneered the start of scheduled and systematic online classes for the session by strictly following a schedule for the entire semester. The online classes for the session started on 17th August 2020 with an interactive session each with all the three undergraduate semesters. Four classes of 55-minute duration were scheduled every day for every semester with a 30-minute break in between the second and third lecture of the day. The department also decided to record all the lectures taken by the teachers and upload the recordings for ready reference to the students. It helped students who are deprived of good internet connectivity. Similarly, M.Tech 1st semester and B.Tech 1st semester courses were also started in online mode from 3rd November, 2020.

To enhance their understanding, faculty members shared slides and videos during the lectures. These visual elements have significantly improved the learning graph of attentive students. During the online engagements, the faculty members ask questions to students randomly to bring attention to the dormant participants. The assignments have been allotted at the end of the lectures through the Google classroom platform which is also open for any vibrant range of queries. The basic design element of these assignments is the application of the knowledge imparted during the day's lecture.

To ensure the punctual submission by all the students, assignments are tagged with clock timing in Google Classroom®. The Google classrooms®, over the period, evolved as an online library for the students as it is





attributed to the storage of all the lecture notes, related pdfs, and video links.

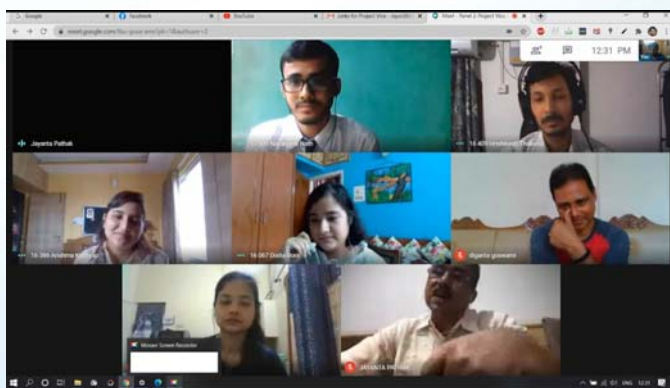
The online class tests were held through the web-based Student Portal with both MCQs and online submission with the time limit. The students need to access their portal account through one device and remain connected by the zoom video call through another device for surveillance and ethical purposes.

The department also took the first step to start the laboratory classes of the 5th semester B.Tech students in staggered phases. In Phase-I, 33 students from Guwahati and nearby areas attended the laboratory classes of Geotechnical, Transportation, and Environmental Engineering in groups of 11 for fifteen days. In phase-II, 44 students attended the same laboratory classes for another fifteen days. The students submitted the necessary declaration forms and undertakings before attending those



classes and maintained social distancing and other government protocols on covid-19 while attending the classes. The department also took a great initiative by recording all the laboratory experiments as well and then sharing the same with the remaining students who were unable to attend the laboratory classes physically.

Apart from the regular classes, the department also organized two faculty development programs, two webinars, and one workshop in online mode during the lockdown period. While the entire nation was under lockdown, the department of civil engineering, Assam Engineering College made a persistent effort to engage with the future engineers and reflected the adaptability of engineering students to changing environment and ability to work together for “sustainability” under the global pandemic situation.



Survey Camp 2020

“Survey Camp” has always been an integral part of the curriculum of undergraduate program in the department till the year 2020. Initially, it used to be hosted outside the



A moment from the survey camp of year 1990

college campus. The students guided by an entourage of professors used to camp in a forested area in close vicinity of Guwahati city. These survey camp used to be a 15-day long fun filled memorable affair for the students. While the boys used to spend their nights in pitched tents, whereas village homestays/nearby guest houses or inspection bungalows were arranged for the girls. These outdoor survey camps saw a metamorphic transition owing to the growing insurgency problem in Northeast-India during the mid 1980s.

Post this turbulent phase, survey camps were hosted within the AEC campus. Also, the duration of the survey camp was reduced from 15 days to 7 days. A few of the pioneering figures of this event are Dr. Manoranjan Kalita (currently Principal of Don Bosco Engineering College), Dr. U.K. Miri, who were no less than a mascot when it came to hosting survey camps. Survey camps

start with rigorous surveying work of a specified area and then translating the work to a beautiful map. It ends with a viva examined by an external followed by the submission of the campus maps. The Civil Engineering Department organises a grand feast on the last day of the survey camp. This fiesta night is one of the most memorable nights in the life of every civil engineering student. The night is packed with a musical euphoria followed by several impromptu performances by the students as well as the consummate professors.

But, with the revised syllabus, survey camp of the year 2020 may become the last of its kind in AEC and the decade long tradition may come to an end. Murchana Choudhury, a B.E. 7th semester student who attended the last survey camp under the Gauhati University syllabus penned down her experiences as followed-

Right after the hefty occasion of Magh Bihu, I along with the rest of my classmates was called by the department for Survey camp 2020. We were divided in groups of five members each and assigned different locations in AEC campus. The camp spanned for 10 days within which we were required to perform different surveying experiments and generate a map of the locality.

I and my team were assigned the area from Hostel-8 playground to AEC gate and I can still remember it to be one of the most hectic days of college life for the 5th semester students. From surveying the roads to the hostel fields and compounds we did all what it took to make our map as exact as possible.

The last day of survey camp was the most exciting one. The evening was momentous with camp fire lit, games being played, songs sung by our faculties and students as we danced our hearts out and enjoyed the scrumptious dinner together



A moment from the survey camp of year 2020

My rendezvous with “Assam Cares”

Ms. Anannya Kataki

B.Tech 5th semester

Life's most persistent and relentless question is, “What are you doing for others?” 2020 crash landed us from the topmost berth of the Ferris wheel. While the privileged section endured the injuries with a few bruises, the others were entangled in a fatal choke. Yes, we were officially living amidst a pandemic! Keeping in mind the rich economic diversity prevailing in our nation, this catastrophe seemed to be the dawn of a forlorn and an impeccably bitter tornado which had just crossed the threshold of our nation. The worst affected were the stranded migrants. With a suspense weighing 100 tonnes more than a Steven Spielberg's movie, everyone frequently kept checking the news updates. This was the time to descend the throne as a covid warrior, help our stranded brothers and sisters, rejuvenate the essence of community service.

Dr. Himanta Biswa Sarma, Minister of Health, Assam, launched one of the most extended and pioneering migrant outreach programs in India- “Assam's Migrant Outreach Program”. The government collaborated with KRAN Consulting, led by Mr Ajith Kumar and developed an application which allowed people stranded in other states to give a missed call on the helpline number. Subsequently they could submit their bank details to avail financial assistance through govt channel. A database was created through the collected information and a cross check was run on the ground level by the DC, wherein several NGOs and volunteers were linked in. The sailor of this ship was Ms Pomi Baruah, Deputy Secretary, Health and Family Welfare, OSD, NHM Assam, who stabilised the ship amidst the turbulent currents. With a construct that “small acts, when multiplied by dozens of people, can transform the world” the government of Assam roped in more than 150 volunteers from Assam Engineering College for the outreach programme. Several professors from our institution extended their helping hand including Dr Sasanka Borah Sir who invigilated the progress of the volunteers from the Civil Department.

Mr. B.K Chakravarthy, IAS became the pole star of the volunteers and illuminated the intentions of this program, igniting a spark within us. For the volunteers' training, the government of Assam leveraged the ECHO India platform with a focus to train the volunteers through several rounds of video conferences through Zoom platform. A script of dialogues were delivered to us which



we sincerely chanted while attending any calls through that app. They say 'Patience is a virtue', we lived this phrase while attending every single call. One of the most perplexing enigma faced by all the volunteers was to decode the words of the migrants while entering their details. The Piramal foundation team supervised the volunteers in the groundwork, including tele-counselling for those experiencing anxiety during lockdown. The Assam Govt extended its heartfelt gratitude towards the volunteers with a remuneration of 1000 rupees and a distinguished certificate.

Remember when the titanic was sinking but the band continued to play? Well every frontline covid warrior forms that band. If they could wear the capes of superheroes, providing telephonic assistance is the least we could contribute. As we continue to further our understanding of the novel coronavirus, its epidemiological characteristics and possible avenues for treatment, lets reside in a cocoon amalgamated with positivity and light!

Why only Nature friendly?

Rubaiyana Taskin

B.Tech 3rd semester

"Pearls don't lie on the seashore, they lie on the deep ocean bed .If you want one, you must dive for it"

The most precious thing that we human beings have been privileged with is nature. The very surroundings that we are gifted with provide us with all the amenities that we require for comfortable living – the clean air we breathe, the crystal-clear water we drink and even the plants that provide us with the very essentials of life.

Memories of us frolicking in the lap of nature vividly exist in our very soul right from our childhood. Each one of us will recall at least one incident such as the feel of the sprinkling of water drops on the face as we looked on with awe at some roaring waterfall.

But recently nature has thrown up perplexing questions that we never anticipated. Alarming consequences of the exploitation of the environment have been raising apprehensions around the globe. Researchers have been trying to seek answers and explanations to the various

calamities of recent times that include global warming, floods, droughts not to mention the current pandemic that seems to have brought the entire world to a dreaded halt.

Do we have answers to Nature's questions that threaten our very existence? Surely we can embark on an endeavor to seek the answers.

With this fast-paced world of emerging superpowers, human beings have manipulated and exploited nature like never before. Gigantic structures infringe on Nature's territory, innumerable contraptions such as a variety of automobiles pollute the environment. However, various inventors and planners have implemented ideas that can appropriately build, manufacture and assemble them in ways that are not detrimental to Mother Nature. Ideas such as Green Buildings have become widespread. Often propositions of ideas that are not destructive to the environment have been put forth. However, their perfect implementation and the number of people actually adopting such methods still remain questionable.

But can we go a step further? Can we come up with ideas and proposals which not only do not affect nature adversely but also aids in restoring the damage that has already been done – For example a Green Car that not just uses biogas as fuel but also purifies the air! Or Can there be a packaging material that is not only biodegradable but also provides manure to the earth when it degrades!

The idea seems to be preposterous in a situation where it is a challenge to even come up with initiatives which are at least nature friendly. Going beyond simply being nature friendly could be a thing of the imagination now, but it is also absolutely true that, "What is now proven was also once in the realm of imagination".

Millions of innovations and inventions take place around the globe every day, going back to where we started from, the world is like the sea with pearls in it, some come out with pearls of knowledge and the rest come out empty handed.

I consider myself extremely fortunate to be studying in an institution where such ideas and thoughts are encouraged, are extensively discussed and are also a part of our classroom courses. If it can ignite a spark of curiosity even in a fraction of us, it can lead to great enterprises.

As a small part of the civil engineering community that is closely associated with building and nurturing the environment, we must put our best effort forward in sustaining, conserving as well as cultivating creative ideas to not just protect nature but to strengthen it. We can only do so by surrendering to the intelligence of nature. For it is rightly said, "If we surrendered to earth's intelligence, we could rise up rooted, like Trees"! - Rainer Maria Rilke.

EVENTS

Two-day National Conference on “Infrastructure Development in North East India: An Engineering Perspective” under TEQIP-III

A two-day national conference on “Infrastructure Development in North East India: An Engineering Perspective” was held on 21st and 22nd of February, 2020, organised by the Civil Engineering Department, Assam Engineering College under TEQIP-III scheme. This conference was organised keeping in mind the huge infrastructure development taking place in the north eastern region and to reduce the gap and transfer the knowledge; thus to bring the awareness amongst the professional engineers. Students from B.E/B.Tech including post graduate students, research scholars and



faculty members of various technical institutions from north eastern region participated in the conference. The total registered participants in the conference stood at 243. The various deliberations in the conference were planned in such a way so as to have a broader perspective on the various aspects of Structural (interlinked with Earthquake Engineering), Geotechnical, Transportation, Water Resources Engineering can be imbibed to the participating students. For this purpose, seven eminent academicians and experts were invited to deliver keynote speeches in the conference. The conference spanned over two days with four number of sessions on each day.

The conference started with the inaugural function where the welcome address was given by the coordinators of the conference- Dr. Binu Sharma and Dr. Jayanta Pathak followed by a speech by Dr. Atul Bora, Principal of Assam Engineering College and director of Technical Education, Assam. The first keynote lecture was delivered

by Dr. Atul Bora himself on “Infrastructure Development in North-East India a Sustainability Perspective”. He discussed various initiatives taken by the government for infrastructure development such as Smart City projects, Solar Cities, Make in India, Skill India, Digital India, Startup India etc. The second keynote lecture was delivered by Dr. Arindam Dey, Associate Professor, department of civil engineering, IIT Guwahati on the Role of Geotechnical Engineering in Infrastructure Development in North-East India. He discussed various infrastructure and specifically infrastructure development in north-east India. Dr. Hemant B. Kaushik, Professor, department of civil engineering, IIT Guwahati spoke on Reinventing the Wheel: Assam-type Housing in the third session, where he discussed Assam type houses and their uniqueness. Mr. Moneswar Kalita, Executive Engineer, North Eastern Council delivered the last lecture of the day on Infrastructure Development in the north eastern-region where he discussed the road infrastructure in North-East region as per Ministry of Statistics and Programme Implementation, Road Statistics Year Book-2018.

Second day of the conference started with the lecture of Dr. D. Neelima Satyam, Associate Professor and Head, department of civil engineering, IIT Indore, where she



discussed Landslide Forecasting, Hazards and monitoring of the Chibo Pashyar in Kalimpong, Darjeeling in the Himalayas. The second session was delivered by Dr. Satyam only on Geospatial Numerical Modelling of Debris Disaster. The seventh keynote speech of the conference was on “GRNN based estimation of regional groundwater fluctuation using GRACE data” and was delivered by Dr. Rajib Kumar Bhattacharjya, Professor, department of civil engineering, IIT Guwahati. The last talk of the conference was on “Innovative Technologies and Sustainable Pavement Materials for Infrastructure Development in North East India: OGFC and Bio-Asphalt Binders” by Dr.





Rajan Choudhary, Professor, department of civil engineering, IIT Guwahati. He discussed Open graded friction courses (OGFC) which are a type of asphalt wearing course that mainly contain uniformly graded coarse aggregates with a small portion of fine aggregate, to allow quick drainage of surface water through itself.

The conference ended with an open discussion followed by the vote of thanks by Dr. Jayanta Pathak. This conference provided an excellent platform for our academicians, engineers and the students to get acquainted with the modern and efficient sustainable infrastructure developments and all the registered participants benefited from the deliberations by the diverse invited experts.



3rd International Conference on Smart Villages and Rural Development (COSVARD 2020)

*Dr. Hemanta Doloi (Chair of COSVARD 2020)
Associate Professor
The University of Melbourne, Victoria, Australia*

Having had success in the first two COSVARD conferences under relatively normal environments, the COSVARD 2020 was required to be held in a year like no other. Ravaged by the global pandemic and at the time of not only global but national borders restrictions across many countries, hosting an international conference was not an easy task. Yet, 21st Century's technology coupled with competence and enthusiasm of the participants from across the globe made it all possible.

COSVARD 2020 Webinar provided a global platform for researchers, policy makers and industry professionals to share relevant knowledge and examples from practice associated with new forms of rural development. With over 40% of the world's nearly 8 billion population still living in rural and ever-increasing discrepancies between urban and rural, the role of COSVARD for building necessary capacities and mobilising required effort for reducing the gap of urban-rural divide is pivotal. With three consecutive years of COSVARD, a solid roadmap has been laid for building the much needed capacity underpinned by relevant knowledge and theories in a new form of rural development widely known as "Smart Villages". Figure 1 shows the banner of COSVARD 2020 representing the key themes of rural housing, rural infrastructure, the rural economy, sustainability and governance.



Snapshot of the banner of COSVARD 2020

Smart Villages is a relatively new concept where multiple interrelated dimensions are integrated for developing rural communities with a bottom up approach. In smart village creation, data-driven and context specific solutions are at the center of intervention planning and management. Traditional top-down approaches where decisions on interventions are based on the grand national and state level public schemes, proven to be ineffective in terms of delivering direct benefits to the community targeting their needs and requirements at the grass-roots levels.

Through the COSVARD conference, numerous new ideas are being shared and debated among the academia, practitioners and public officials across a range of different issues associated with the community development. In COSVARD 2020, there were a total of 16 research papers and three design posters presented across two full days. In addition, there were six keynote speeches and one special lecture by some of the distinguished professionals across large areas of expertise. Figure 2 shows the inaugural program of COSVARD 2020.

Among the 16 research papers, five papers were selected across four best paper prizes. The best papers are:

1st Prize

Velyne Katharpi and Hemanta Doloi, "Multiculturalism and Socio-Cultural Integration in the Bottom-Up Approach to Rural Housing: A Multi-Case Study in Assam, India", The University of Melbourne, Victoria, Australia

2nd Prize

Sai Vighnesh Eddula, Naga Siva Pavani Peraka and Krishna Prapoorna Biligiri, "A Smart Bi-Parametric Approach for Homogenous Delineation of Rural Roads", IIT Tirupati, India.

Agenda for Opening Ceremony and Inauguration Day 1 - Monday 07 th December 2020 2:30pm (AEDT) – 4:00pm (AEDT) 9:00am (SST) – 10:30am (SST)	
Australian Eastern Daylight Time	Indian Standard Time
2:30pm (AEDT)	Welcome and Introduction [A/Prof Hemanta Doley, Chair] Director, Smart Villages Lab, The University of Melbourne
3:00pm (AEDT)	One minute prayer showing respect for the departed soul of the Ex-CEM of Assam Faran Bagrai who patronised the Smart Villages vision and provided unconditional support in our mission
3:15pm (AEDT)	Welcome Speech [Prof Anil Bera, Co-Chair] (Principal, Assam Engineering College)
3:30pm (AEDT)	Inaugural Address, COSVARD 2020 [Prof Dhring Bora] Vice-Chancellor, Assam Science and Technology University, Assam, India
3:50 pm (AEDT)	International Perspective [Prof Mark Barry, AO] Swinburne University of Technology, Victoria, Australia
4:10 pm (AEDT)	National Perspective, COSVARD 2020 [Dr Samir Barua] Top Ex-Banker, Mentor & Advisor, Lighthub Shant, NH
4:30 pm (AEDT)	National Perspective, COSVARD 2020 [Dr. Minnal Talukder] Journalist, Film Maker, Author and Social Worker
4:50 pm (AEDT)	International Perspective [Assoc. Prof Robert Crawford] The University of Melbourne
5:10pm (AEDT)	Assam Perspective [Dr Anind Phukan] Past Rotary District Governor, P.D. 311.C., P.E., D.S. (Inventor), President/Founder, Core Professional Group for the Brahmaputra (CPBG), Former Professor of Civil Engineering, University of Alaska, Anchorage, USA, CEO/Founder, Phukan Inc., Consulting Engineering Company, Anchorage, Alaska (USA)
5:30 pm (AEDT)	International Perspective [Dr Hamzah Subhan] The University of Melbourne
5:55 pm (AEDT)	Vote of Thanks [A/Prof Hemanta Doley]
10:30am (SST)	Technical Session starts at 4:00pm (AEDT) 10:45am (SST)

Excerpt of the COSVARD 2020 Inaugural Program

3rd Prize

Medalson Ronghang, Partha Jyoti Sarma, Mun Mun Basumatary, Subham Shekhar Roy and Gitanjali Wary, “Bank filtration as water source: A case study of Phuentsholing, Bhutan”, Bineswar Brahma Engineering College, Kokrajhar, Assam, India.

4th Prize - 1

Simita Roy¹, Shuvra Das² and Anirudva Bhowmik¹, “Sustainable Livelihood Approach to Remodel Munda Homestead: Case Study of Shaymnagar, Satkhira”, 1Bangladesh University of Engineering and Technology (BUET) and 2Chittagong University of Engineering and Technology (CUET), Bangladesh.

4th Prize - 2

Nabeela Nushaira Rahman¹, Md. Obidul Haque² and Md. Mainul Hassan², “Smart Rural Hub: A Resilience Approach in Bangladeshi ‘Char’ Communities”, 1BRAC University and 2Premier University Chittagong, Bangladesh.

In the three design posters competition, the recipients of the prizes are:

1st Prize

Nazish Abid¹, Ressa Ansari², and Ginelle Lopes¹, “The revival of the tribal community by concept of S.M.A.R.T Village: A case of Sabar Tribe of Jharkhand, India” 1School of Architecture REVA, University Bengaluru and 2XXI Architecture, Pune, India.

2nd Prize

Harshal Kate¹, and Garima Jain², “Deconstructing PMAY-G: ICT 4 Nation Building”, 1Department of Management Studies, IIT Delhi and 2World Resources Institute (WRI) India.

3rd Prize

Dhiman Jyoti Thakuria and Dhiman Kaskyap “Flood resistant housing in Assam” Assam Engineering College, Assam, India.

Poster Presentation Competition for B.E. 7th semester students under TEQIP-III

Being a notable engineering college of national importance, it is very important for the departments of Assam Engineering College to ensure that their students get acquainted with as many technical skills as possible. Presently, students are being taught about report writing and other soft skills within the four boundaries of the classroom. However, poster presentation is still not encompassed in their coursework. The department of civil engineering, Assam Engineering College organised a poster presentation competition for the final year



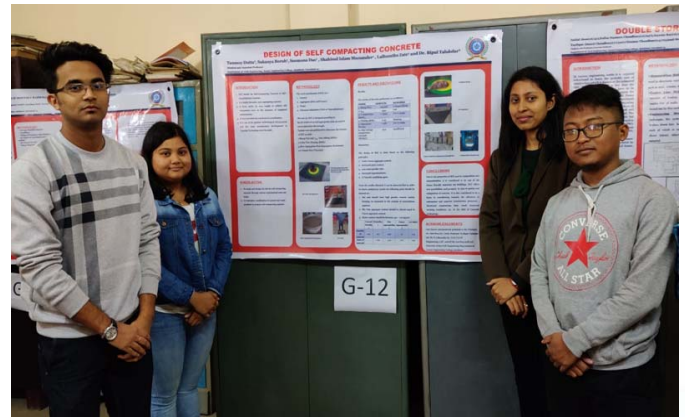
students of the department. Dr. Binu Sharma, Professor of the department coordinated the event with assistance from Dr. Jayshree Hazarika, Assistant Professor. The topic of the poster presentation was decided as the projects carried out by the students during their 7th semester course work. It was organised by procrastinating that poster making will help in developing their presentation skills and encourage team work, which will eventually improve their employability after graduation. It also gave an exposure to the upcoming batches to different emerging areas of civil engineering and encouraged them to work in their niche of interest. The poster presentation was held





on 25th January, 2020 in the departmental library of civil engineering department where 14 groups actively participated in the event with their posters. All the faculty members of the Civil Engineering Department were present in the event. Students from the junior batches also came to witness the event. The students got a chance to interact with a number of notable alumni and external persons through this event, which motivated and encouraged both the participants as well the students. The competition was judged by two senior faculty members of the department- Dr. Jayanta Pathak, Professor and Dr. Palash Jyoti Hazarika, Professor and Head. The teams were judged on the basis of their presentation skills, content and quality of the work done. Award certificates, along with prize money were distributed to the winner and the first runner up at the end of the event while certificates of participation were being given to all the participants after the event.

Rs. 1000/- was awarded to the winner group of Kaustav Kangkan Mahanta, Bhargav Raj Kashyap, Arishma Kashyap, Bhagyendra Deka and Samar Krishna Deka for their work on "Methodology of prioritization of secondary



road sections for maintenance works" under the guidance of Mr. Bibhuti B. Bhardwaj. Rs. 500/- was awarded to the first runner up group of Nayanjyoti Nath, Jerifa Zaman, Smita Dey and Begom Sabjuna Ferdousi Barbhuiya for their work on "Determination of liquefaction potential of Guwahati city" under the guidance of Dr. Binu Sharma.

One-day workshop on "Fire & Safety in Civil Engineering" under TEQIP III

The Department of Civil Engineering, Assam Engineering College had organised a one-day workshop on "Fire & Safety in Civil Engineering" on 18th February, 2020. The lectures of the workshop were primarily for the



final year students of Civil Engineering Department. Mr. Akhil Kumar Das was invited for the lecture as an external resource person. Mr. Das holds a B.Tech degree from IIT Delhi and an MS degree from Worcester Polytechnic Institute, USA and has over 45 years of experience in industry, consulting, teaching and training. The event was coordinated by Dr. Jayanta Pathak with assistance from Dr. Jayshree Hazarika and Mr. Bibhuti B. Bhardwaj. A total of 77 students participated in the workshop. It started with the registration process at 8:30 am and then the introductory session started at 9 am followed by a brief overview of the day long lecture series by the resource

person. The scheduled lecture kick started from 9 am with a quick round of quiz to induce curiosity and interest among the students. Three lectures were delivered before lunch and the remaining were delivered post lunch. At the end of the session another round of quiz was conducted to judge the learning capacity of the students. This was followed by a feedback session and an interactive session. All the questions were asked from the course outline of the lectures, conducted during the workshop. The proposed topics of the lecture series were delivered within the stipulated time frame. Moreover, the students were enlightened about the opportunities of higher studies in the field of fire and safety engineering, associated job opportunities. Students got a scrutinised view about the related risks and hazards in the fire and safety department. It was a brilliant session, with negative dormant participants and everybody was stimulated by the very presence of the intellectual orator.



Expert talk on “Understanding Structural” under TEQIP-III

An expert talk on “Understanding Structural” was organised by the department of civil engineering, Assam Engineering College under TEQIP-III on 19th February, 2020. The lecture event mainly aimed at the audience comprising 6th and 8th semester students of the department. The event was coordinated by Dr. Jayanta Pathak, Mr. Bhaskarjyoti Das and Mr. Bibhuti B. Bhardwaj where a total of 160 students participated. The resource person of the event was Mr. Rajeev Bhatia, General Manager (M-core team) from Steel Authority of India Limited (SAIL). Mr. Bhatia is an IIT Delhi graduate (1994) with a B.Tech degree in Civil engineering, who then joined SAIL in the Central Marketing Organisation. After working for about 17 years in hard core marketing and sales functions, Mr. Bhatia joined the research wing of the



lecture, the inquisitive students asked many questions and seemed to be totally engulfed. Overall, it was a very brilliant session and everybody was affirmatively benefited by it. The event ended with a vote of thanks followed by distribution of lunch packages to all the participants.

Expert talk on “Green Building” under TEQIP-III

company at headquarter and for the past three years he has been working as a core team member of the SAIL-Uday initiative. Mr. Bhatia in his lecture discussed the various aspects of steel design encompassing different types of steel sections, their manufacturing process and difficulties faced during the manufacturing process. The students got to learn about the physics behind the shape of different steel sections and the uses of those sections too. After the

With a firm belief that “Conservation is a state of harmony between men and land”, the department of civil engineering, Assam Engineering College, organized an expert talk on sustainability, with the mother agenda being ‘Introduction to Green Buildings’ on 28th February, 2020. The event was solely sponsored by TEQIP-III for which the interested undergraduate students of the department had to get themselves registered through the provided online





Engineering” on 14th March, 2020. Registration fee did not exist for the participants of the event as it was organized under TEQIP-III scheme. The event was made mandatory for the final year students while the UG 4th and 6th semester students were also highly encouraged to attend this educational bonanza. The event was coordinated by Professor Dr. Jayanta Pathak and Asst. Professor Mr. Bibhuti B. Bhardwaj from the Department. The event saw a staggering number of 131 participants. The resource person for the event was Er. Bhudeb Sarma, Executive Engineer, PWRD, Brahmaputra Bridge Construction Division. An alma mater of Jorhat Engineering College,

link to attend the talk show. The event was coordinated by Dr. Jayanta Pathak and Mrs. Rhitwika Barman. The event saw a startling number of 151 participants. The resource person for the event was Ms. Ragini Goswami, an IGBC accredited professional, Proprietor, Ecospace Green Design Consultancy. By profession, Ms. Goswami is an architect with a specialisation in Green Buildings. She has been engulfed in the field of sustainability for the past 8 years. The talk show commenced right after lunch and was set in motion with an inaugural speech by Dr Diganta Goswami. Ms Ragini Goswami instituted the event with a brief lecture on Harit Prem Bharat Mahotsav by IGBC. Following this trail, the expert enlightened the participants about the various elements of a green building. Ms Goswami gave the students an eagle view of the various design aspects of a green building, stimulating their conscience towards contributing to a better and a greener future. The end of the event was marked by an extended vote of thanks by Dr. Diganta Goswami from the department.



Er. Bhudeb Sarma is a renowned structural engineer working in PWD Assam. Mr. Sarma has been involved in several big scale structural and prestigious projects of Northeast India. For twenty years he served in the bridge design cell contributing to the design, repair and management of 100 plus bridges, flyovers, ROBs and other structural works under PWRD. The event commenced on time and was graced by an inaugural speech by Dr. Jayanta Pathak. Various aspects of bridge designing as well as the particular project of construction of an extra dosed bridge over river Brahmaputra connecting Guwahati and North Guwahati were discussed in detail. Er. Sarma teleported the students into the realities of the construction world and confronted them with the various hurdles being faced by the engineers at site. The positive feedback from the students reflects the success of the event which ended with a vote of thanks from the coordinator.

Expert talk on “Bridge Engineering” under TEQIP-III

With sheer diligence and commitment of providing quality education and opting for a holistic development of the students, the department of civil engineering, Assam Engineering College organised an expert talk on “Bridge

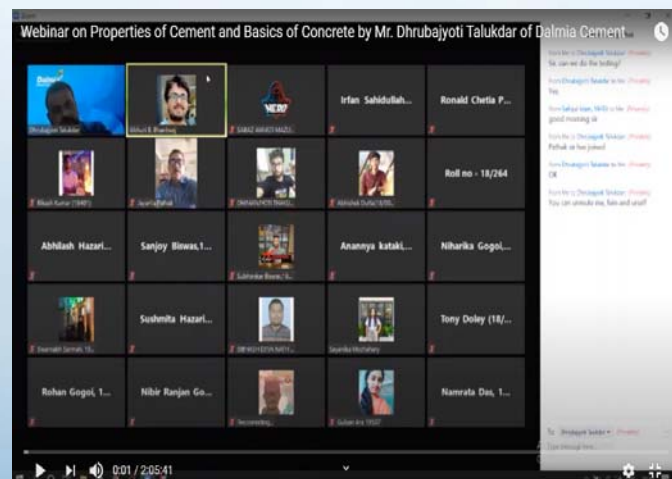


Two-day webinar on “Cement properties, basics of concrete and construction realities” under TEQIP-III



The ongoing covid-19 pandemic couldn't dilute the course of events being organised and hosted by the department of civil engineering, Assam Engineering College. Amidst the covid-19 crisis, the department organised a two-day webinar on “Cement properties, basics of concrete and construction realities” on 7th and 8th May, 2020. The sole sponsor of this event was TEQIP III. The webinar was coordinated by Professor Dr. Jayanta Pathak and Asst. Professor Mr. Bibhuti B. Bhardwaj of the department. The resource person for the event was Mr. Dhrubajyoti Talukdar, Deputy General Manager, Technical Service Dept., NER, Dalmia Cement Bharat Ltd. Being a civil engineering graduate from JEC, Mr. Talukdar started his career as a

trainee structural consultant. His career went through a drastic metamorphosis as he leaped from working in MNCs to currently heading the technical service function of the Dalmia Cement, Northeast operation as the Deputy General Manager. His specialisation is in product development, application and promotion. The webinar was held in two phases and in two days. It was held using the “Zoom Cloud Meeting” portal on both the days. During the first phase, the main topic being illuminated was “Cement properties and basics of concrete”. The link for the webinar was made available to UG 4th and 6th semester students of the department. The webinar commenced at 10 AM with a rejuvenating

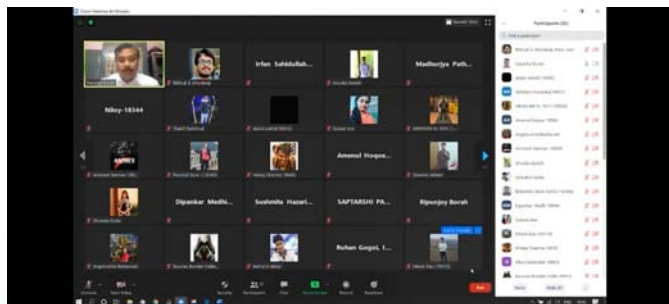


opening stance by Dr. Jayanta Pathak. The webinar then strengthened the boundaries of the theoretical classroom knowledge of the participants and enhanced their passion towards the subject to a higher notch.

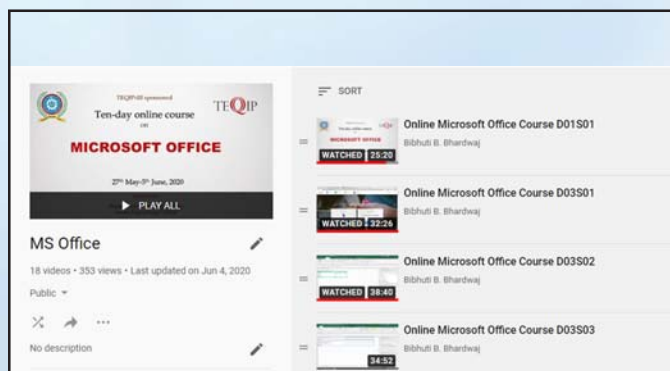
The phase 2 discussion on day 2 was centered around “Basics of concrete and construction realities” targeting the following audiences- UG 4th, 6th and 8th semester students. Problems faced by engineers in a construction site because of poor understanding of the materials were discussed in detail. The resource person then patiently and diligently cleared all the doubts being raised by the students. Everybody maintained sanctity and decorum during the flow of events. The first webinar of the department ended with a vote of thanks from the coordinator at around 4:30 PM.



Ten-day online workshop on "Microsoft Office" under TEQIP-III



In the world of digitalisation where everything is recorded and kept globally in digitized form, people seldom forget how important it is to learn the basics of MS-Office. Keeping this in mind the department of civil engineering of Assam Engineering College organised a ten-day webinar of MS-office training which was packed with eighteen hands- on sessions. It started from 27th of May till 5th of June and a total of 52 interested students from B.Tech 4th semester participated the same. The resource persons for this online workshop were faculty from the department itself viz. Mr. Bibhuti B. Bhardwaj, Mrs. Rhitwika Barman and Dr Sasanka Borah. Dr. Palash Jyoti Hazarika, Head and Dr. Jayanta Pathak, TEQIP coordinator of the department also joined the inaugural session and briefly described the importance of MS office in the field of civil engineering. From the second session onwards the resource persons started the online training sessions on three main domains of MS office viz. MS Word, MS Excel and MS PowerPoint.



A majority of the sessions (10 out of 18) were focused on MS Excel as it is one of the most important tools required by civil engineers in every field. Knowing the shortcuts and formulae of MS Excel makes a lot of work easier, since the engineers deal with huge stacks of data on a daily basis. The students also got to learn many important tools like Lookup functions, Pivot table, Whatif Analysis, conditional formatting, human graph etc. from MS Excel. Five hands-on sessions were also held on MS Word where

they were taught topics like TOC generation, cross references, mail merge, text reviews etc. Dr. Sasanka Borah took a special session on "Table creation" and explained fantastically how to deal with a "stubborn" table in MS word. Finally, the students were taught the art of making an attractive presentation in the last three sessions. All the participating students were awarded with a "Certificate of participation" under TEQIP-III.

Expert lecture on "Strategic preparation of GATE for B.Tech 4th semester students" under TEQIP-III

Graduate Aptitude Test in Engineering, popularly known as GATE, is one of the most important exams for an engineering student. Owing to this fact, on 27th June, 2020, the Department of Civil Engineering, Assam Engineering College, organised an online expert lecture on the topic "Strategic Preparation of GATE" for the students of B.Tech 4th semester. The resource person for the lecture was Mr. Ridip Dutta, Officer Grade A, Numaligarh Refinery Ltd. Mr. Bibhuti B. Bhardwaj, Assistant Professor hosted the event on behalf of the department .

The lecture was scheduled from 6 PM and commenced exactly on time. Mr. Dutta was a splendid orator who creatively managed to hypnotise the attention of his audience right from the start. He prepared a Powerpoint presentation for highlighting the strategic points. He adopted a systematic approach to educate the participants by dividing the whole mother agenda into the following sub-heads; "What is the GATE?", various benefits of GATE, GATE eligibility, cut off scores at different IITs, GATE syllabus, GATE score and preparation strategies.



Mr. Dutta made his opening stance by giving an eagle view of the whirlpool assessment system of GATE. Following this trail, he mentioned the benefits of cracking GATE to allure the students' interest. Subsequently, he covered all the agendas of the lecture one by one.

He mentioned that qualifying in GATE is a mandatory requirement for seeking admission and/or financial assistance to Postgraduate Programs (Master's and Doctoral) with the Ministry of Education (MoE) and other Government Scholarships/Assistantships, subject to the admission criteria of the admitting institute. "The GATE score is also used by some Public Sector Undertakings (PSUs) for their recruitment and by several other universities in India and abroad for admissions", the expert said.

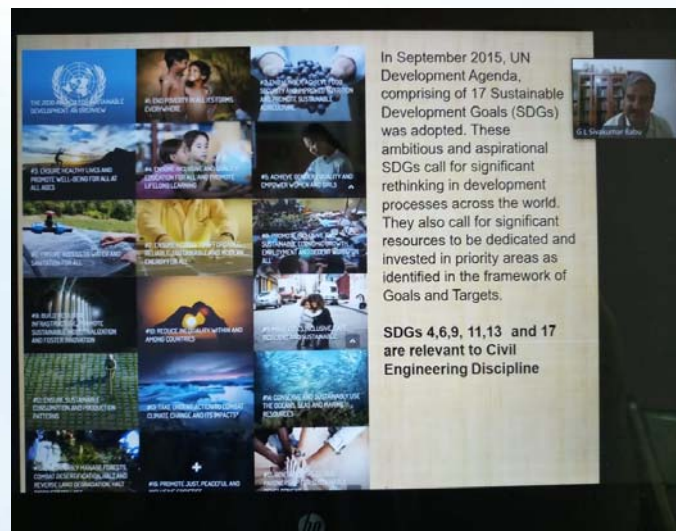
After summing up all the foreground information, he briefly explained 'why, when, how and what' to prepare for the GATE exam. He said that the best time to prepare for GATE is from the 3rd year of B.Tech program and that is the sole reason why the lecture was specifically designed for the students of 4th semester. Towards the end of the lecture, he touched upon the questions which had been harbouring in the minds of all the students throughout the session. He diligently replied clearing everyone's doubts. Everyone expressed their gratitude to Mr. Dutta at the end of this beneficial lecture for delivering such quality content and sparing time from his busy schedule to guide the blooming engineers.

Online FDP on "Sustainable Environment: An Engineering Perspective: SEEP 2020" under TEQIP III

A One-week long, online Faculty Development Program (FDP) on Sustainable Environment: An Engineering Perspective 2020 (SEEP: 2020), was successfully organised by the civil engineering department of Assam Engineering College from 13th to 18th of July, 2020. The program was sponsored by Technical Education Quality Development Program (TEQIP) phase -III and partly by the Civil Engineering Department, AEC. The coordinators for the event were Dr. Jayanta Pathak, Dr. Abinash Mahanta and Mrs. Puspanjali Sonowal from the Civil Engineering Department.

The prime objective of conducting this FDP was to generate knowledge among the participants regarding various sustainable practices related to environmental

engineering. The FDP addressed the various aspects of Solid Waste Management, Geoenvironmental Engineering, Environmental Geotechnics, Specific contaminated sites and their remediation, Water Pollution etc. The FDP was conducted in online mode using commercially available online meeting applications. The FDP was open for faculty and scholars, directly/indirectly involved in the allied fields. There were 542 number of participants registered for this program from different universities and colleges across the countries. Among which, 356 participants successfully completed the program and received participation certificates.



Prof GL Siva Kumar Babu, Professor, IISc Bangalore and President of Indian Geotechnical Society inaugurated the program. In his inaugural address, the Professor stressed upon the importance of sustainable environment from a geoenvironmental engineering point of view. The inaugural session was followed by his keynote speech on 'Sustainable Issues in Civil Engineering'.

Resource Persons from reputed academic institutions like Prof. GLS Siva Kumar Babu (IISc Bangalore), Dr. B.V.S. Viswanadham (IIT Bombay), Prof. Ajay Kalamdhad (IIT Guwahati), Dr. Janki Ramaiah (IIT Tirupati), Dr. Amit Kumar (MNIT Jaipur), Dr. Purnanand Savoikar (GEC Goa), Dr. Abinash Mahanta (AEC Guwahati), Prof. Amarsinh Landage (GEC Karad) took classes in total 14 sessions. Dr. Tapan Chakraborty, Rtd. Scientist H, CSIR-NEERI & Chair Professor VNIT also delivered two keynote speeches in the program. On 18th July, the last day of the program, Prof. D.N. Singh, IIT Bombay interacted with the participants on various topics of environmental engineering and concluded the first online FDP SEEP: 2020 by CED, AEC.



Online FDP on “Disaster Management Mitigation and Response: DMMR 2020” under TEQIP-III

During the summer of 2020 several natural hazards such as Flood, Landslides, Earthquake, Cyclones, and Pandemic were occurring all across the globe. This region of India had been witnessing the disastrous effect of all the above mentioned hazards at a time which was causing huge loss of life and economy. Such a tough situation invites the need of a proper disaster management plan, mitigation and response by the authority and the society. Keeping this in mind, the Civil Engineering Department of Assam Engineering College Guwahati organised a one week long online Faculty Development Program (FDP) on Disaster Management Mitigation and Response from 3rd to 7th August, 2020. The coordinators of this event were Dr. Jayanta Pathak, Dr. Abinash Mahanta, Ms. Mitali Mandal and Mr. Bibhuti B. Bhardwaj of the department, AEC.

In this one week online FDP, eminent experts (both academics and industry) from all across the country were invited for delivering keynote speeches in their respective areas. The prime objective of conducting this one week long online FDP was to generate knowledge among the participants regarding the disastrous effect of various natural hazards and also to develop awareness regarding management, mitigation and response to it. The FDP was conducted in online mode using the commercially available online meeting application ‘Zoom’. The FDP was open for faculties and scholars, directly/indirectly involved in the allied fields. There were a total of 448 participants who registered for this program from different Universities and Colleges of all across the countries. 388 participants successfully completed the program and received their participation certificates. The program was sponsored by Technical Education Quality Development Program (TEQIP) phase -III and also partly by CED, AEC and there was no registration fee.

Resource persons from prestigious institutions across India like M.S. Manivannan (IAS Chief Executive Officer

ASDMA), Dr. Kailash Gupta (Resilience and Disaster researchers, Co-founder and Managing Trustee, TIEMS-India Chapter, Visiting Faculty of IIM Ahmedabad), Dr. Surya Parkash (Professor and Head, Geo-meteorological Risk Management Division, National Institute of Disaster Management), Dr. K. S. Pradeepkumar (Former Director, National Emergency Response and Health Safety & Environment, BARC), Dr. V.S. Prakash (Director of Karnataka State Natural Disaster Monitoring Centre), Er. Rajesh Dutta (Engineering Consultant, ASDMA), Dr. Jayanta Pathak (Professor, CED, AEC), Dr. Diganta Goswami (Associate Professor, CED, AEC), Dr. Bibhash Sarma (Associate Professor, CED, AEC), Dr. Bipul Talukdar (Associate Professor, CED, AEC), Dr. Sasanka Borah (Assistant Professor, CED, AEC), Dr. Abinash Mahanta (Assistant Professor, CED, AEC), Er. Akhil Das (Fire Safety Consultant), Prof. Amarsinh B. Landage (Professor, CED, GEC, Karad) interacted with the participants and gave lectures on a wide assortment of topics.

ASSORTED

Teacher's Day Celebration-2020

गुरुर्ब्रह्मा गुरुविष्णुः गुरुर्देवो महेश्वर,
गुरुव परब्रह्म तस्म श्रीगुरुव नमः॥

Guru leads to a path of light, Guru is that Para Brahma. Assam Engineering College has gifted its students some of the splendid teachers over the years. As a token of love and gratitude the students celebrate teachers’ day every year with grandeur and joy. The civil engineering department of the esteemed Assam Engineering College, always had the tradition of celebrating the day with a lot of hustle-bustle, musical euphoria, fun and games in Room no. 2.

But due to the perplexing epidemiological complexities offered by the year 2020, the students were grim as they couldn’t have a proper classroom interaction with their beloved professors for a long time. As the date for the celebration was drawing near, the students decided to celebrate teachers’ day through an unconventional method- “online video-conference meet”. Never had anyone, even in their wildest dreams, thought of foreseeing a day when these customary processes would take a kangaroo’s leap and enter the era of digitalisation; but technology does wonder.

The celebration was scheduled during the evening hours of 5th september, 2020. The event started with the “Guru Vandana”, sung by B.Tech 7th semester student- Ms. Dixita Das, one of the finest mozarts the department has ever had. Subsequently, a presentation on the civil



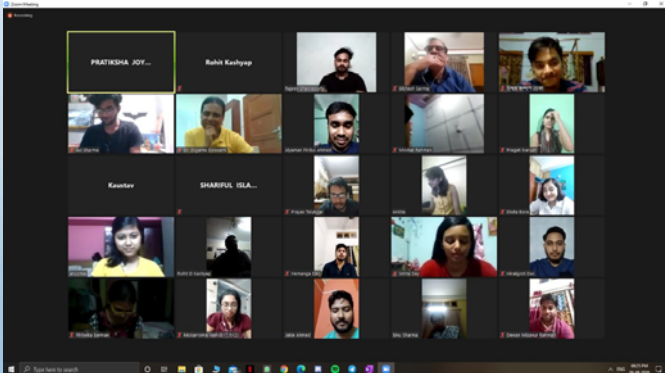


engineering department and the teachers featuring the student life and their hobbies was showcased. The students extended their warm wishes in the form of exquisite cards prepared for our extraordinarily exquisite faculty members. These cards were teleported to the professors through e-mail. The teachers gave the students a retrospective insight of their college life which added up extra spices to the already boiling broth. Everyone witnessed a wonderful interactive session. Amidst this, the students gave a few tantalizing performances. Few of these were pre-recorded while the others were performed live.

The showstopper performances were yet to commence. The students were well acquainted with their talented professors. They requested their esteemed teachers to pour their heart out in any form they want. This was followed by Dr. Bibhash Sarma reciting some of his poignant poems. Dr. Bharati Medhi Das, Dr. Anindita Bhattacharya and Mrs. Rhitwika Barman sang some of the most alluring and magnificent songs of the bygone era with Dr. Diganta Goswami on the chords. Further performances revealed Dr. Diganta Goswami is not only a wonderful guitarist but also a crystal singer. Drawing the curtains, a final vote of thanks was extended to all the teachers for patiently bearing with the students and network issues amidst their busy schedules.

Bidding adieu to batch-2020

Student life is one of the best phases of a person's life. Seldom do we know what we miss up during this time; it is only accounted for in the later phase of life. And the best years of this phase are the years of graduation, the years of hostel life, the time which passes on quickly but always



feels less. But alas! Due to the COVID-19 pandemic, the batch of 2016-2020 faced a dilemma for they lost a lot of precious time of their college life and it was already time to bid them goodbye.

The pandemic brought about so much change in the ways of living life. We saw digitalization in every field which also affected the fields of teaching and celebrating life. Due to the pandemic, for the very first time we saw that farewell was conducted online. The faculty of the civil engineering department of Assam Engineering College conducted a virtual get together with the batch of 2020 in the evening of 8th August, 2020. At the very beginning of the programme, Dr. Palash Jyoti Hazarika, HoD, CED gave an inspiring speech which filled everyone's heart with contentment. Following the speech, various musical performances were given by Dr. Diganta Goswami, Dr. Jayanta Pathak, Dr. Bharati Medhi Das and Dr. Abhinash Mahanta. A poem was also recited by Dr. Bibhash Sarma. All the performances by the teachers were very touching. Then came the performances of the students where they poured their heart out for one last time.



The junior batches then also decided to bid adieu to the 2020 batch by conducting a farewell on 13th September, 2020. A welcome speech was given at first by the students of the current 7th semester, after which there was a live performance session through Google meet. A pre-recorded cultural performance was also presented for the seniors. A game of 'Tags' was then played online, where a set of 10 tags were decided and anonymously voted upon by the batch of 2020. After that came the interesting game of "How well do you know your department?" where prizes were handed out too. As the event was nearing its end, a PowerPoint presentation was given in the form of a collection of memories of the seniors and at last, it was time for the seniors to pour out their hearts. The best part was at the end when all the students irrespective of batch sang the college anthem together for one last time as AECians. The passout batch agreed to the fact that they received a unique farewell, a one of its kind. They were overwhelmed, overjoyed as well as cried in between too for they did not expect their college life to end this way. Everything was well planned out and well executed by the junior students.



MISCELLANEOUS NEWS

NPTEL Courses 2020

Students receiving NPTEL certificates for various courses in the year 2020 are-

Geotechnical Engineering-I (Session: Jan-Apr, 2020)

Ankita Kalita (83%), Dixita Das (82%), Sudeshna Purakayastha (80%)

Geotechnical Engineering-I (Session: Sep-Dec, 2020)

Shrweta Dutta (93%), Pragyan Kalita (93%), Namrata Das (83%), Hriday Jyoti Sarma (60%), Swagatam Bora (60%)

Geotechnical Engineering Laboratory (Session: Sep-Oct, 2020)

Shrweta Dutta (90%)

Matrix Method of Structural Analysis (Session: Sep-Nov, 2020)

Jupitara Goswami (83%), Nairit Isan Nath (63%)

Placement Statistics

Amidst the lockdown and ongoing pandemic, 21 students from the 2016-20 batch got placed in five companies this year. The recruiters are - Genpact, i3infosoft, ACC concrete, RMX division and Luit Minerals. Moreover, 2 students from the current 7th semester batch viz. Dhiman Jyoti Thakuria and Abhinabh Buragohain have already got placed in Oil India Ltd. and Cognizant respectively.

18 students from the previous batches also got placed in Sterlite Power and Public Health Engineering Department under Govt. of Assam in the year 2020 only.

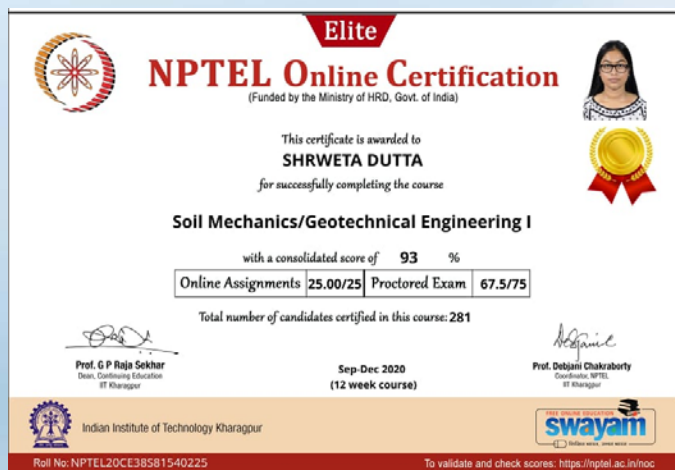
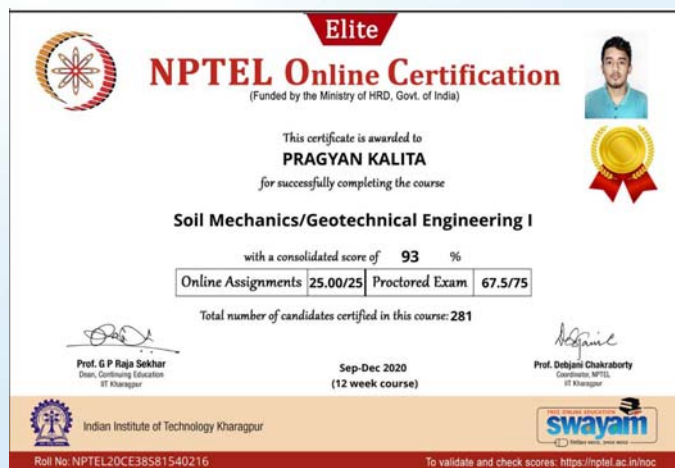
Performance in APSC-CCE

Serving the nation that people are born in is one of the biggest dreams of every human. Keeping this alive in the heart, some of the graduate students of Civil Engineering Department, AEC were able to fulfill their dream of serving the country. These are the following students -

1. Jintu Sarma of 2014 batch secured 2nd rank in ACS
2. Himanshu Saloi secured 37th rank in ACS
3. Kritartha Neog of 2015 batch secured 86th rank in ACS
4. Pranta Pratim Patra of 2011 batch secured 89th rank in ACS
5. Chinmoy Kalita of 2014 batch secured 16th rank in ALRS

Internship in collaboration with University of Melbourne, Australia

As per AICTE guidelines, online internship was made mandatory for all the students. But a few of them from 6th semester of Civil Engineering department were lucky enough to undergo a remote internship program from The University of Melbourne, under the supervision of Dr. Hemanta Doloi, currently a Senior Lecturer specializing in Project and Construction Management in the aforesaid University. This internship was a part of the 3rd International Conference On Smart Village And Rural Development, under Smart Village labs which is a collaborative effort between University of Melbourne and Assam Engineering College. The internship program started in the month of May, 2020 covering a duration of 3 months till August, 2020 during which the participants received in depth knowledge and information on rural development. Smart Village lab deals with exploring rural community development, practices and relevant policies with a focus on community-centric planning of affordable housing and infrastructure considering sustainable development and growth, community empowerment and other issues related to the creation of Smart Villages. The internship mainly aimed at providing a global platform to



share relevant knowledge and examples from practice associated with new forms of rural development. In order to create a smart community, comprehensive understanding of the target community is crucial. Even though a competitive environment prevails in any society, the principle of social equity can't be ignored when it comes to improving the societal bottom line through policy intervention and governance. This is the key for devising appropriate policies that empower a society holistically. Given the ongoing COVID-19 crisis and taking into consideration available options, COSVARD 2020 was hosted on a digital platform in Webinar format.

The internship was of great significance for the students since it created a scope for them to understand and relate the technicality of Civil Engineering with the practicality of daily community life. Moreover, the participants whose research papers were accepted under peer review processes were further eligible to participate in the Smart Villages Lab and deliver a paper presentation to the 3rd International Conference of COSVARD 2020. The selected papers will also be catalogued at the Australian National Library and will be made available in both hardcopy as well as e-collections at the University of Melbourne library.

Internship in collaboration with NORSAR, Norway

Five students from B.E. 6th semester, Civil Engineering Department of Assam Engineering College had the opportunity to undergo the summer online internship from the reputed organization- NORSAR, Norway. They carried out the internship work under Dr. Abdelghani Meslem, who is a Senior Research Engineer in the organization. The student group was constantly guided by Professor Dr. Jayanta Pathak from the department who himself helped these students grab this great learning opportunity. The internship work was focussed on assessing earthquake vulnerability of buildings. The students enriched their knowledge through 4 to 5 odd lectures from Dr. Meslem wherein they learnt all about shear walls, ductility of buildings, RSVP etc. They also learnt about the different irregularities of a building, assignment of vulnerability indices to a structure etc.

MoU with NHAI

Dept. of Civil Engineering, Assam Engineering College has signed an MoU with National Highway Authority of India (NHAI) for 5 years (starting from 7th October, 2020). NH stretches assigned to the institute under this MoU is "Nalbari to Srirampur section (195.88 km)"

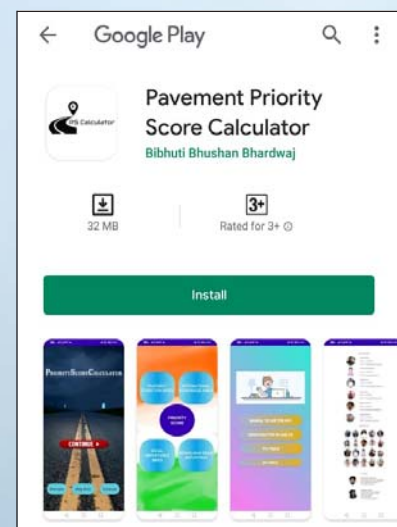
Benefits of the MoU-

- NHAI will offer internships to 40 nos. of UG/PG students of the department periodically.
- NHAI will pay stipend to those students @¹ 8000 pm for UG and @¹ 15000 pm for PG during the internship period.
- NHAI will give access to a few data for research & development to improve efficiency of highways

- NHAI will seek feedback from AEC on improving the efficiency of existing highway assets covering many aspects e.g. Road Safety, Improvement of riding comfort etc.
- NHAI may create laboratory infrastructure in the department.
- The stretches assigned to the institute will be co-branded by our institute's name along with NHAI.

Development of an android application

Six students of the department viz. Shamim Akhter, Sabaz Ahmed Mazumder, Saptarshi Paul, Shrweta Dutta, Hriday Jyoti Sharma and Abhilash Hazarika have come up with an Android Application by the name of "Pavement Priority Score Calculator" which helps to prioritize secondary road sections for maintenance and rehabilitation works. The application is developed using XML as the Markup Language and JAVA as the programming language in Android Studio. It considers the four important domains of any pavement section viz. functional distress, roughness, social importance and structural strength. From the user inputs related to these four domains, the application can compute and display a priority score, on the basis of which the user can further select the road sections for maintenance works. The app is also designed in such a way that it can work without any other equipment. The data such as characteristic deflection, roughness etc. which otherwise have to be collected by very costly equipment are predicted quite accurately by the app using 3D non-linear regression. The application is available now in Google Play Store for the benefit of the pavement engineer fraternity of India. This project is a continuation of the hard work put by Kaustav Kangkan Mahanta, Bhargav Raj Kashyap, Bhagyendra Deka, Arishma Kashyap, Samar Krishna Deka and Paramananda Deka from the 2016-2020 batch for which they received AEC Class 88 innovative project of the year award and a sum of Rs. 10,000/- as Aparna Kumar Padmapati Memorial scholarship. All these students worked under the guidance of Mr. Bibhuti B. Bhardwaj, Assistant Professor (TEQIP-III), AEC and Ms. Sarmistha Goswami, Assistant Engineer, PWRD.





ENTREPRENEURIAL CORNER

A tale of three friends

College life is the most memorable phase of one's life. But engineering colleges are where most of the fun happens, and that is exactly what happened in 2017. Three friends namely Rupam Choudhury, Mousum Talukdar and David Gogoi of Civil Engineering Department, from Assam Engineering College during their 7th sem project, they were asked to make projects involving environment-friendly materials in civil engineering. Mr. Mousum Talukdar was the one who first had this idea of making something sustainable. The 7th sem project got over but he held on to this idea.



After graduating, they had the choice of trying for jobs or being entrepreneurs. They diligently chose the latter, trying to mould their ideas into concrete plans.

Conventional process of making bricks in kilns releases harmful particulate matter (PM) which contributes to air pollution. Moreover, conventional bricks are made by digging the earth or using soil which strips the environment of the fertile topsoil which is essential for productive agriculture. The young minds developed a patented Plastic Embedded Lightweight Brick using fly ash from thermal power plants, waste plastic, cement among others. About 70% of the bricks comprises waste material and are made using electric machines instead of being fired in kilns, which eliminates the carbon emissions. These bricks are 10% lighter and in weight six conventional bricks make one Zerund brick which makes them super cost effective. Since they began their operations, they have catered to over 1000+ clients and have sold over 2.5 lakh bricks. These bricks have been used in at least 50+ mega projects of the government in the entire North-East India. This is indeed a proud moment for the college, the department and the whole student fraternity itself.

A chronicle

Every morning humans have the habit of taking up the newspaper and a cup of tea to go with it. The print media changed lives like none other, all the information of the world was at the fingertips of everyone. It became a habit, a ritual. But with changing times people lost touch with the print media hence having a generation who aren't socially and politically aware. But as the wheels of time kept running, humans again started reading newspapers. Trying to soak up knowledge, still a problem arised. The problem of insufficient time. Alternatives were searched and the best alternative was social media trying to cater the needs of this genre. Venturing in this new pool of entrepreneurship, some students of the Civil Engineering Department of AEC created TNEC - THE NORTH EASTERN CHRONICLES. At present they have 7 managing partners from various other regions out of which two are from AEC namely Somya Roy Choudhury and Prasadurjya Bhuyan. The idea came up when JIO was getting recognised and the youth started demanding more authentic and genuine sources of information. At a time when there were only a few but one, TNEC sprang into existence after a lot of difficulties and hardships since all of the founders and managing partners were/are students. After a couple of years TNEC got recognised and as of now they have partnered with 100+ national & international brands, colleges, products, social reform initiatives, etc. They are incubated in Assam Startup Nest and backed by IIM Calcutta Innovation Park and in a few months time they will turn TNEC into a private limited company. The startup has soared high but there was a point too when everything was lost when their page on Instagram got hacked and deleted. They went through a lot of hardships in those difficult times as starting from scratch was a difficult task but with God's grace and help from the Instagram Support Team they got their page back and now they are again on the road of going higher and higher.



Instagram: @north.eastern.chronicle
@mm.north.eastern.chronicle

VOLUNTEERING FORCE

In grateful recognition of valuable contribution in different activities, the department expresses heartfelt thanks to the following students-

Task: SAR works

1. Anannya Katak, B.Tech 5th semester
2. Animesh Barman, B.Tech 5th semester
3. Dipankar Medhi, B.Tech 5th semester
4. Gulshan Ara, B.Tech 5th semester
5. Irfan Sahidullah, B.Tech 5th semester
6. Kaustav Kundan Kalita, B.Tech 5th semester
7. Nandan Pegu, B.Tech 5th semester
8. Nayan Basumatary, B.Tech 5th semester
9. Safiqul Islam, B.Tech 5th semester
10. Saptarishi Paul, B.Tech 5th semester
11. Shrweta Dutta, B.Tech 5th semester
12. Sonmani Kalita, B.Tech 5th semester
13. Swagatam Bora, B.Tech 5th semester
14. Dixita Das, B.E 7th semester

Task: Recording of online lectures

The Covid-19 pandemic changed the means of education and turned it into an online programme. This commute caused major problems for those who belonged to rural areas having poor network connections and also for those who couldn't afford enough internet for scheduled classes. As a solution, Dr. Palash Jyoti Hazarika, HoD along with some other faculty members instituted the plan to record the online class sessions and have it uploaded on Youtube (in the unlisted mode). For this purpose, 2-3 students from each semester/section were assigned with the task of regular recording and uploading. The department also financed the assigned students for the internet data packs required for this cause. As the videos uploaded were unlisted ones, their links were maintained in a Google spread sheet, available for everyone's access. Every video description included the date of class, name of the professor and also the topics covered.

This arrangement was advantageous, not just for those having internet issues, but also for those who needed to refer back to the video lectures anytime later. This solution was found to be productive and has enhanced everyone's virtual class experience. The following students took the pain of recording and uploading each and every lecture of the semester, making the total count of uploaded videos go beyond 650 so far-

1. Ravindran Rajan Mahanta, B.Tech 3rd semester
2. Sibani Konwar, B.Tech 3rd semester
3. Yashin Halder, B.Tech 3rd semester
4. Animesh Barman, B.Tech 5th semester
5. Dipankar Medhi, B.Tech 5th semester
6. Kaustav Kundan Kalita, B.Tech 5th semester
7. Kaushik Medhi, B.Tech 5th semester

8. Bidisha Talukdar, B.E. 7th semester
9. Mridusmita Choudhury, B.E. 7th semester
10. Samridhhi Gogoi, B.E. 7th semester
11. Shibaraj Brahma Gayari, M.Tech 1st semester (WRE)
12. Hrishikesh Thakuria, M.Tech 1st semester (GE)

Task: Assam Cares Volunteering works

1. Ashmita Dey, B.Tech 3rd semester
2. Jahid Hasan Choudhury, B.Tech 3rd semester
3. Kailash Singha, B.Tech 3rd semester
4. Shahil Mohammad Zaman, B.Tech 3rd semester
5. Abhishek Kumar Roy, B.Tech 5th semester
6. Abhishek Dutta, B.Tech 5th semester
7. Anannya Katak, B.Tech 5th semester
8. Angshumita Bezbaruah, B.Tech 5th semester
9. Anusko Awesh, B.Tech 5th semester
10. Bibhash Deva Nath, B.Tech 5th semester
11. Bikash Kumar, B. Tech 5th semester
12. Dishant Baidya, B.Tech 5th semester
13. Keshmita Baishya, B.Tech 5th semester
14. Namrata Das, B.Tech 5th semester
15. Madhusmita Poddar, B. Tech 5th semester
16. Raja Brahma, B. tech 5th semester
17. Rajnish Hazarika, B. Tech 5th semester
18. Ripunjoy Borah, B.Tech 5th semester
19. Safiqul Islam, B.Tech 5th semester
20. Sarad Kumar Thakur, B.Tech 5th semester
21. Shahil Mahmud, B.Tech 5th semester
22. Subhankar Biswas, B. Tech 5th semester
23. Uddipan Hazarika, B. Tech 5th semester
24. Amartya Buragohain, B.E. 7th semester
25. Ashiqur Rahman Khan, B.E. 7th semester
26. Nayanpama Das, B.E. 7th semester
27. Rahul Chakravarty, B.E. 7th semester
28. Rituraj Borah, B.E. 7th semester





ACCOLADES

FACULTY PUBLICATION

- Ahmed, H. and **Borah T.** (2020) "Development of an Efficient Methodology for Improving Ground Water Recharge by Hydrus 1 D." HYDRO 2020 INTERNATIONAL 25th International Conference on Hydraulics, Water Resources and Coastal Engineering, March 26-28, 2021.
- Bharali, B. and **Misra, U. K.** (2020). "Development of a Diffusive Wave Flood Routing Model for an Ungauged Basin: A Case Study in Kuls River Basin, India." Modeling Earth Systems and Environment, Springer.
- Bharali, B. and **Misra, U. K.** (2020). "Investigation of Flood Routing Using Variable Parameter Kinematic Wave Model (VPKWM) for Non-Prismatic Natural Channel in an Ungauged Basin." Journal of Applied Engineering Sciences, Vol. 10(23), Issue 2/2020, Art. No. 292, pp. 111-118.
- Borah, B. and **Borah S.** (2020). "Genetic Algorithm based optimization and design of pile foundation." Indian Geotechnical Conference 2020, 17-19 December, 2020, Andhra University, Visakhapatnam, A.P., India.
- Das, K. K. and **Sarma, B.** "River Basin Development." International Conference on Sustainable Water Resources Management (SWARM 2020), Assam Engineering College, Guwahati, India and Indian Institute of Technology Guwahati, Assam, India. (Paper accepted)
- Das, D., Kalita, T. and **Chetia, M.** (2020). "Influence of Strain Rate on Unconfined Compressive Strength of Bentonite and Sand Mixes." Geotechnical Characterization and Modelling, Lecture Notes in Civil Engineering, Springer, 85.
- Das, H., Kalita, T. and **Chetia, M.** (2020). "Compaction and Strength Characteristics of Bentonite-Rock Quarry Dust Mixtures." Advances in Computer Methods and Geomechanics, Lecture Notes in Civil Engineering, Springer, 56.
- Gohain, S. and **Talukdar, B.** (2020). "Causes and Ecological Impact of Embankment Breach in Dhemaji District." Accepted in 25th International Conference on Hydraulics, Water Resources and Coastal Engineering (HYDRO 2020), NIT Rourkela.
- **Goswami, P., Goswami, D.,** Singh, R.B., Singh, P.K., Kashyap, S. (2020). "Characterization of Pure Rock Mass and Support System Design for Head Race Tunnel." International Journal of Recent Technology and Engineering (IJRTE). ISSN: 2277-3878. Vol. 8 Issue 6, March 2020. Pp. 5546-5552.
- Goswami, J., Hazarika, M. and **Borah, T.** (2020). "Comparative study of the quality of treated and untreated water from two water treatment plants in Guwahati, Assam (India)." A Web Conference of 3rd National Conference on Recent Advances in Science and Technology under TEQIP - III.
- Islam, N., Kalita, T. and **Chetia, M.** (2020). "Effect of Tyre Waste Addition on UCS of Bentonite-Sand and Bentonite-Rock Quarry Dust Mixes." Indian Geotechnical Conference, Andhra University, Visakhapatnam.
- Kakati, N. and **Chetia, M.** (2020). "Shear Strength of Rock Quarry Dust and Sand Mix." Emerging Trends in Civil Engineering, Lecture Notes in Civil Engineering, Springer, 61.
- Kalita, M., **Nath, U.K.,** and **Hazarika, P. J.** (2020). "Effect of Pile Spacing and Raft Thickness on the Behaviour of Piled-Raft Foundation – A Parametric Study Using FEM." Book Chapter in Advances in Structural Technologies, Springer Select Proceedings of CoAST 2019, PP 111-122, Volume 81, ISBN 978-981-15-5235-9 (eBook).
- Kashyap, S., **Goswami, D.,** Singh, R.B., Singh, P.K., **Goswami, P.,** Kalita, D. (2020). "Stability of Slopes for Dam Excavation by Slope Mass Rating in the Pure Hydroelectric Project." International Journal of Engineering Research & Technology (IJERT). ISSN: 2278-0181, Vol. 9 Issue 02, February, 2020. Pp. 640-646.
- Katakati, S. and **Borah, T.** (2020). "MODFLOW, MODPATH and MT3DMS based simulation of groundwater flow and leachate transport from landfill." HYDRO 2020 INTERNATIONAL 25th International Conference on Hydraulics, Water Resources and Coastal Engineering, March 26-28, 2021.
- Kotoky, S. and **Borah, T.** (2020). "An Experimental Study on Noise Pollution in the Campus of Assam Engineering College." A Web Conference of 3rd National Conference on Recent Advances in Science and Technology under TEQIP - III.
- **Mandal, M.** and **Nath, U.K.** (2020). "Performance of Self-Compacting Concrete with Partial Replacement of ingredients of conventional concrete by Slag." 2nd International Conferences on Future Aspects of Sustainable Technologies (Virtual Platform), Central Institute of Technology Kokrajhar, BTR, Assam, India, FAST 2.0/PP/48.
- **Pathak, J.,** Patwari, N. N. and **Sarma, B.** (2020) "A Comparative Prognostic Damage Scenario Of Non-Engineered Masonry and Traditional Assam Type Housing In Guwahati Urban Centre." ISET Journal of Earthquake Technology, Paper No. 551, Vol. 57, No. 1, March 2020, pp. 43-59.
- **Pathak, J.,** Meslem, A., Lang, D., Bora, A., Lindholm, C., Singh, Y. and Mazumdar, K. (2020) "Towards Real-Time Earthquake Loss Information System for Guwahati City, Assam, India", 17th World Conference on Earthquake Engineering (17WCEE), September 14-18, 2020, Sendai, Japan, published under the auspices of International Association for Earthquake Engineering.
- Rahman, H. S. and **Sarma, B.** (2020) "Optimization of Sukla Irrigation Canal." International Conference on Sustainable Water Resources Management (SWARM 2020), Assam Engineering College, Guwahati, India and Indian Institute of Technology Guwahati, Assam, India. (Paper accepted)

- Rahman, H. S. and Sarma, B. (2020) "Optimal Design of Sukla Irrigation Canal." HYDRO 2020 INTERNATIONAL 25th International Conference on Hydraulics, Water Resources and River Engineering, National Institute of Technology Rourkela, Odisha, India. (Paper accepted)
- Saha, P., Nath, U.K., Bharadwaj, J. and Paul, S., (2020). "Prediction of Dimension of a Building from its Visual Data using Machine Learning: A Case Study." 2nd International Conference on Cybernetics, Cognition and Machine Learning Applications, Goa (India).
- Saha, P., Nath, U.K., Bharadwaj, J., Paul, S. and Nath, G. (2020). "Building Image Classification using CNN." 2nd International Conference on Cybernetics, Cognition and Machine Learning Applications, Goa (India).
- Saikia, C. J. and Borah, T. (2020) "A study on the impact of water pollution due to dumping of waste in the deepor beel." HYDRO 2020 INTERNATIONAL 25th International Conference on Hydraulics, Water Resources and Coastal Engineering, March 26-28, 2021.
- Sharma, N., Goswami, D. and Pathak, J. (2020). "Behaviour of pile foundation of G+5 buildings on various soil types of Guwahati at regional scale." Arabian Journal of Geosciences (Springer). Pp. 1-9.
- Sharma, N., Goswami, D. and Pathak, J. (2020). "Spatially Distributed Sub-Soil Information Model of Guwahati City on Regional Scale." International Journal for Research in Applied Science and Engineering Technology (IJRASET). ISSN No. 2321-9653. Vol. 8 Issue VI, June 2020. DOI-DOI : 10.22214.
- Sharma, B. and Rahman, S. (2020). "Spatial Variability of subsoil properties of Guwahati city using GIS based Maps." Book Chapter, Recent Developments in Engineering Research, Book Publisher International. DOI: 10.9734/bpi/rder/v5.
- Siddique, A. F., Acharjee, A. and Sharma, B. (2020). "A Study on Characteristics of Soil Profile of Guwahati City against Different Ground Motions: 1D Nonlinear Ground Response Analysis." 7th International Conference on Recent

Advances in Geotechnical Earthquake Engineering and Soil Dynamics, Vol.1, July 2021, IISC Bangalore, India.

- Singh, P., Goswami, D., Kalita, D. (2020). "A comparison of Rock Mass Deformation Modulus from Empirical Correlations versus Plate Load Test at Pare Hydro-Electric Power Project, Papun Pare, Arunachal Pradesh." Indian Geotechnical Conference (2020). December 19-20, 2020. (Provisionally selected for publishing as a chapter in the Springer book "Geotechnical Characterisation and Foundations - Proceedings of Indian Geotechnical Conference 2020 Volume 1" by Springer Nature).
- Tewatia, S. K., Chetia, M., Nasrin, T. and Tewatia, K. (2020). "Consolidation: Critical Appraisal of Settlement versus Rate of Settlement (SRS) Approach with Fuzzy Logic." Indian Geotechnical Conference, Andhra University, Visakhapatnam.

UNDERGRADUATE STUDENT PUBLICATION

- Dhiman Kashyap and Dhiman Jyoti Thakuria (2020). "Flood resistant housing in Assam." Proceedings of 3rd International Conference on Smart Villages and Rural Development (COSVARD 2020), Dec 07-08, 2020, University of Melbourne and Assam Engineering College.
- Sudeshna Purkayastha and Rimpi Sharma (2020). "A Water Supply and Sanitation Study of Sundarbari Village around Jalukbari, Assam." Proceedings of 3rd International Conference on Smart Villages and Rural Development (COSVARD 2020), Dec 07-08, 2020, University of Melbourne and Assam Engineering College.
- B. B. Bhardwaj, S. Goswami, Shraweta Dutta, Sabaz Ahmed Mazumder, Saptarshi Paul, Hriday Jyoti Sharma, Shamim Akhter (2021). "Development of an android application to compute priority score for road sections." International Conference on Innovative Development in Engineering Applications (IDEA) 2021, Feb 08-10, 2021, Gaya College of Engineering, Gaya, India (Paper accepted).

FACULTY ACTIVITIES

Dr. Binu Sharma

- Supervised scholar Zakir Hussain for his Ph.D work with the topic "Response of Micropiles in Granular soil under various Loading Conditions"

Dr. Jayanta Pathak

- Nominated as Member of the Court, the Assam Science and Technology University by the Chancellor of the University, his Excellency the Governor of Assam, vide notification on 25 June 2020.
- Appointed as member of the Technical Committee by ASDMA, Govt of Assam to review National Seismic Risk Mitigation Programme (NSRMP) for the state of Assam.

- Worked as a social responsibility contributor for wind resistant community housing at Sundarbans, West Bengal, India after the Super Cyclonic Storm 'Amphan' as pro bono services to non-profit organizations.
- Delivered lecture - Refresher Course on Disaster Management & Emergency Response (IDC) - 05 organised by the UGC HRDC GU centre held from 07 -20 Oct 2020.
- Delivered lecture - WEBINAR on "Recent Trends in Structural and Environmental Engineering", organized by Assam Science and Technology University under TEQIP-III from 08/07/20 to 11/07/20 in association with the Department of Civil Engineering, Girijananda Chowdhury Institute of Management And Technology.



- Delivered lecture - FDP on “Disaster Management Mitigation and Response”, DMMR: 2020; 10 - 14th August 2020 sponsored by TEQIP-III, organised by Department of Civil Engineering, Assam Engineering College.
- Delivered lecture - Tiscon Discovery PRO-Skill Up-Gradation 3 weekend Training at IIT Guwahati, Assam.
- Moderated a Webinar series under Tiscon ediscovery, sponsored by TATA steel, on various topics of architecture and engineering during the pandemic, from June to October 2020.
- Chaired the session on Infrastructure, 3rd International Conference on Smart Villages and Rural Development (COSVARD 2020), 7-8 Dec 2020, Organised jointly by the University of Melbourne and Assam Engineering College.

Dr. Diganta Goswami

- Delivered Lecture on “ General Practice of Soil Testing in the North East”, at IGS- NABL Webinar organized by IGS Silchar and Agartala Chapters. 29th August, 2020.
- Delivered lecture on “Disaster Risk Reduction Specially on Flash Flood and Erosion”, organized by Director of Soil Conservation, Assam, Guwahati, 9th January, 2020.
- Performed solo one hour facebook live show organized by Music Vivant- Violin Tutorial.

Dr. Bipul Talukdar

- Lead Speaker in the webinar on “Let Us Understand Concrete” organised by Royal Global University on 6th June 2020
- Delivered lecture on “Sustainable Solution to Flood and Erosion Problem of Assam” in FDP on Emerging Prospects of STEM Education in Engineering and Technology organised by Royal School of Engineering and Technology during 21 - 28 July 2020.
- Delivered lecture on “Basics of E-learning Tools for Effective Teaching” organised by Radha Gobinda Baruah College, Guwahti on June 25, 2020
- Supervised scholar Nripen Majumdar for his Ph.D work with the topic “Erosion Hazard Assessment of Brahmaputra River Bank in Lower Assam Region”.

Dr. Bibhash Sarma

- Supervised two Research Scholars, namely, Krishna Kamal Das and Jahanur Rahman with the topics of Dr. Das and Dr. Rahman are “Water Resources Development of Kushi River Basin” and “Irrigation Development of Dhanshiri Basin”, respectively leading to their Ph.D under Guwahati University.
- Resource person for the one week online FDP on “Disaster Management Mitigation and Responses, 2020” (10th August, 2020 to 14th August, 2020) under TEQIP-III organised by Department of Civil Engineering, Assam Engineering College, Guwahati.
- Resource person for the training course on “Global Warming, Climate Change and Natural Disaster Management: Future Perspective” during 10th-12th



February, 2020 at Assam Administrative Staff College, Guwahati.

- Acted as subject matter expert member of the interview board for the post of Project Manager (Technical) of Assam Inland Water Transport Development Society on 01.02.2020.
- Resource person for the training program on “River Bank Stabilization” organised by the Director of Soil Conservation, Govt of Assam on 17th Feb, 2020.
- Invited expert in TV talk show in the Pratidin Time channel on 2nd December, 2020 on the topic “Proposed dam in China just upstream of India border and its effect”.
- Visited Samrang, at Bhutan foothill under Udalguri District, on invitation of the “Kalanadi Bahumukhi Dong Committee” and “Adhunik India Foundation” to suggest improvement of the existing traditional dong system for continuous water supply throughout the year.
- Participated in the one week online FDP on “Sustainable Environment - An Engineering Perspective, 2020” (13th July 2020 to 18th July 2020) under TEQIP-III organised by Department of Civil Engineering, Assam Engineering College, Guwahati.



Dr. Triptimoni Borah

- Resource person for Faculty Development Programme on Disaster Management Mitigation and Response (DMMR-2020) on the topic “Groundwater contamination Hazard”, organized by Department of Civil Engineering, Assam Engineering College from 10th to 14th August, 2020



Dr. Sasanka Borah

- Resource person for Training on, “Road Safety”, on 23rd September, 2020 delivered to Assam PWD (Roads) Engineers at PWD Convention Centre, Dispur, Guwahati - 781 006.
- Resource person for Faculty Development Programme on Disaster Management Mitigation and Response (DMMR-2020) on the topic “Site Response Analysis and Disaster management - A case study of Guwahati Region”, organized by Department of Civil Engineering, Assam Engineering College from 10th to 14th August, 2020
- Completed NPTEL Online Certification course on “*Geotechnical Engineering-1*” from January-April, 2020.
- Completed NPTEL Online Certification course on “*Geotechnical Engineering-II Foundation Engineering*” from January-April, 2020.
- Completed NPTEL Online Certification course on “*Geosynthetics and Reinforced Soil Structures*” from January-April, 2020.
- Completed MHRD-TEQIP-III KITE Course on - “Internet of Things (IOT)”, at Parimal and Pramod Chaudhari Centre for Learning and Teaching, IIT Bombay from 27th to 31st January, 2020.
- Coordinator for the Faculty Development Programme on “Disaster Management Mitigation and Response (DMMR-2020)”, organised by Department of Civil Engineering Department, Assam Engineering College from 10th to 14th August, 2020.
- Local Organising Committee Member in Faculty Development Programme on “Sustainable Environment-An Engineering Perspective (SEEP-2020)”, organised by Department of Civil Engineering Department, Assam Engineering College from 13th to 18th July, 2020.
- Member of Organising Committee of “*COSVARD - 2020, 3RD International conference on Smart Villages and Rural Development*” organised by Smart Villages Lab, The University of Melbourne and Assam Engineering College, Assam, India, 7-8th December, 2020.
- Member of Scientific Committee of “*COSVARD - 2020, 3RD International conference on Smart Villages and Rural Development*” organised by Smart Villages Lab, The University of Melbourne and Assam Engineering College, Assam, India, 7-8th December, 2020.
- Obtained Lifetime membership of “*Assam Science Society*”

Dr. Abhinash Mahanta

- Awarded Ph.D degree for the research work “Stability of Landfills in Hilly Regions” under the guidance of Prof. Manoj Datta and Prof. GV Ramana of Civil Engineering Department of IIT-Delhi in September 2020.
- Resource person for Faculty Development Programme on Disaster Management Mitigation and Response (DMMR-2020) on the topic “Preparedness and remediation proposal to overcome contamination hazard of the Deepor Beel in Guwahati City”, organized by Department of Civil

Engineering, Assam Engineering College from 10th to 14th August, 2020

- Delivered lecture on “Remediation methodology of sub-surface Water Contamination due to the Boragaon Dumpsite” at Network of Experts and Resources for Subsurface Remediation of Contaminated Sites (NERCS-2020), Co-ordinated by Geotechnical and Geo-environment group, Civil Engineering Department, IIT Delhi on 15th to 21st February, 2020
- Delivered lecture on “Ground and Surface Water Contamination due to the Boragaon Dumpsite in Guwahati City” at 4th International Conference on Advances in Civil and Structural Engineering (ICACSE- 2020) on 28th - 29th May, 2020 organized by GEC, Karad, Maharashtra
- Delivered keynote lecture on “Surface and Groundwater contamination in Guwahati City” at One week online Faculty Development program on “Sustainable Engineering - An Engineering Perspective (SEEP: 2020) on 13th to 17th July, 2020 organized by Department of Civil Engineering, Assam Engineering College Guwahati
- Delivered lecture on “Recent Advances in Computer Aided Design” at Five Days Online TEQIP TWINNING Workshop on CAD: Specialized Software on 22nd - 26th July, 2020 organized by Civil Engineering Department of J.C. Bose University of Science and Technology, YMCA, Faridabad, Haryana
- Delivered lecture on “Design of Engineered Landfills” on 27th July 2020 at Department of Civil Engineering, Govt College of Engineering & Technology, Bikaner, Rajasthan
- Delivered lecture on “Scaling the heights with Civil Engineering” at Five Days Online National Workshop on “Emerging Trends in Civil Engineering Impacting the Construction Industry” on November 03-07, 2020 organized by the Civil Engineering Department of Rajkiya Engineering College, Ambedkar Nagar, U.P.

Mr. Bibhuti B. Bhardwaj

- Certified as master trainer on “3-D printing & Design” by The National Association of Software and Service Companies (NASSCOM) in collaboration with IIT Hyderabad under the “Train the trainer” program of NPIU.
- Resource person for the ten-day online workshop on Microsoft Office under TEQIP-III, Assam Engineering College from 27th May to 5th June, 2020

STUDENT ACHIEVEMENTS

Ashmita Dey, B.Tech 3rd Semester

- ❖ Secured 2nd position in group dance competition in Spondon, 2019 of AEC.
- ❖ Secured 1st position in group dance competition in College Week 2020 of AEC.
- ❖ Awarded merit certificate in Automobile Quiz, 2020 organised by Automobile Club of AEC.

Mitakshi Das, B.Tech 3rd Semester

- ❖ Secured 3rd position in college week Group Dance competition, 2020 of AEC.



- ❖ Secured 3rd prize in college week Jyoti Sangeet Competition, 2020 of AEC.
- ❖ Secured 3rd prize in Dance Competition organised during Induction Program, 2019 of AEC.

Sibani Konwar, B.Tech 3rd semester.

- ❖ Titled “Miss Popular” in the personality contest of Mars and Venus, Pyrokinesis 2020.
- ❖ Awarded best player of AEC, under girls category in 3rd Shatranj Open Online Lichess Championship, 2020.
- ❖ Secured 3rd position in high jump under girls category in IIT-G spirit.
- ❖ Secured 2nd position in college week Group Dance Competition, 2020.

Vishal Rana, B.Tech 3rd Semester

- ❖ Received ‘Best Walk’ title in Mars and Venus, Pyrokinesis, 2020.

Bibhash Deva Nath, B.Tech 5th Semester

- ❖ Invited by Gorakhpur University, Uttar Pradesh as a guest and attended a national e-conference on Nath Panth.
- ❖ Received “Corona Yoddha Samman” for writing extensively on taking precautionary measures against COVID-19 in different newspapers of India from All India Yogi Association, New Delhi.
- ❖ Articles on literary topics, Assam’s flood and erosion problem, socio-economic problems, taking precautionary measures against COVID-19 and various other issues of Assam and India got published in different regional and national newspapers of India.

Hriday Jyoti Sarma B.Tech 5th Semester

- ❖ Received Elite certification in Soil Mechanics/ Geotechnical Engineering-I by IIT Kharagpur, NPTEL for the session Sep-Dec, 2020
- ❖ Received certificate of merit in the National Level Online Technical Quiz on “ENGINEERING DRAWING” conducted by Chaitanya Bharathi Institute of Technology on June 5, 2020.

Pragyan Kalita, B.Tech 5th Semester

- ❖ Received Elite + Gold Certification (93%) in Soil Mechanics/Geotechnical Engineering-I by IIT Kharagpur, NPTEL for the session Sep-Dec, 2020.
- ❖ A member of the organising team of the Build-Xtra event of Udbhavanam 8.0, 2020.
- ❖ Participated and represented AEC in the 29th CHETAN DEVRAJ MEMORIAL EAST ZONE CRICKET TOURNAMENT held at BIT Mesra, Ranchi. His team managed to reach the Semi Finals and were the table toppers after the group matches.

Safiqul Islam, B.Tech 5th semester

- ❖ Received certificate of merit in the National Level Online Technical Quiz on “ENGINEERING DRAWING” conducted by Chaitanya Bharathi Institute of Technology on June 5, 2020.

Shrweta Dutta, B. Tech 5th Semester

- ❖ Selected for “A Virtual Internship Programme on STAAD Pro” (194 were selected out of 2400 participants of a STAAD Pro workshop) conducted by the Department

of Civil Engineering, NMR Engineering College, Hyderabad (20th July - 31st July, 2020)

- ❖ Presented the construction progress of Kokrajhar Medical College and Hospital to the Governor of Assam on behalf of PWD (Buildings), Kokrajhar Division (14th September, 2020)
- ❖ Received Elite + Gold Certification (93%) in Soil Mechanics/Geotechnical Engineering-I by IIT Kharagpur, NPTEL for the session Sep-Dec, 2020.
- ❖ Received Elite + Gold Certification (90%) in Geotechnical Engineering Laboratory by IIT Bombay, NPTEL for the session Sep-Oct, 2020
- ❖ Received certificate of merit in the National Level Online Technical Quiz on “ENGINEERING DRAWING” conducted by Chaitanya Bharathi Institute of Technology on June 5, 2020.

Binong Kramsa, B.E. 7th semester

- ❖ Participated and secured 70% in National Level Online Technical Quiz on “Geotechnical Engineering” organized by St. Joseph’s College of Engineering, 22nd June, 2020

Dixita Das, B.E. 7th semester

- ❖ Completed online course on ‘Satellite Photogrammetry and its Application’.

Rituraj Borgohain, B.E 7th Semester

- ❖ Successfully organised the STACCATO in Pyrokinesis 2020 held on 13th February.
- ❖ Successfully organised the Inter College Lichess Arena Tournament 2020 held on 5th July.
- ❖ Secured 1st position in the All Assam Inter Institutions Lichess Arena Team Championship 2020 organised by AEC Chess Club and BVEC Chess Club held on 18th July.
- ❖ Successfully organised the AEC Lichess Arena on the occasion of International Chess Day held on 25th July 2020.
- ❖ Received the Certificate of Appreciation for successfully organising the SHATRANJ 1.0, SHATRANJ 2.0 and SHATRANJ 3.0 - Online Chess Event held on 2nd August, 8th September and 9th October 2020 respectively.
- ❖ Mentored the girls team of AEC Chess Club that participated in the 1st All India Online Blitz Girls Chess Tournament 2020 organised by Central Sports Club of Assam held on 14th August.
- ❖ Received the Certificate of Appreciation for live streaming the tournament games in the Shatranj Independence Day Chess Tournament, held on 15th August 2020.
- ❖ Successfully organised the AEC Freshers Online Chess 2020 in association with AEC Chess Club held on 29th October.
- ❖ Mentored the AEC Chess Club Team that participated in the Junior Chess League 2020 organised by North East Club, India from 7th-14th of November.
- ❖ Successfully organised the Orientation Programme of AEC Toastmasters Club held on 6th December 2020.

SNAPSHOTS FROM THE YEAR 2020



CONCEPT PRESENTATION
BY
E.O. PRESENTATION

BUILD XTRA 2020

CONTACT:
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BuildXtra 2020

UG Programme

Vision

To have complete synergy between teaching and learning for producing civil engineers, who are competent and socially responsible to contribute to the sustainable development of the state, the region and the nation, with global perspective

Mission

1. To provide state-of-the-art teaching and learning environment where students can solve problems related to civil engineering.
2. To generate excellent human resources in civil engineering through integration of research, innovation and sustainable technology in the learning domains of under-graduate and post-graduate education.
3. To make students capable of designing sustainable solutions for engineering challenges.
4. To develop researchers and regional leaders in the field of civil engineering by serving as a knowledge hub for the society through continuing education, professional program and innovative consultation.

PEO

1. To produce competent, smart and efficient civil engineering graduates capable of executing civil engineering works with planning, design, construction and project management capabilities.
2. To develop competency in the civil engineering under-graduates to analyze and formulate sustainable solutions of civil engineering and allied problems using the principles of applied mathematics, science and basic engineering tools.
3. To train the civil engineering under-graduates to understand the origin, working principles, and outcomes of civil engineering and allied projects from parts to whole, in terms of technology, economy, sustainability, social and environmental aspects.
4. To encourage inquisitiveness and innovation in the under-graduate and post-graduate students to motivate them for lifelong learning and higher studies or research in civil engineering and allied disciplines.
5. To instill confidence, professional responsibilities and ethical sense in the under-graduate and post-graduate civil engineering students, so that they can take significant and leading roles for development of the state, the region and the nation.



Faculty List

- Dr. Palash Jyoti Hazarika (HoD)
- Dr. Binu Sharma
- Dr. Jayanta Pathak
- Dr. Mrinal Kumar Borah
- Dr. Diganta Goswami
- Dr. Bipul Talukdar
- Dr. Bibhash Sarma
- Dr. Utpal Kumar Misra
- Mr. Bhaskarjyoti Das
- Dr. Triptimoni Borah
- Dr. Utpal Kumar Nath
- Dr. Malaya Chetia
- Dr. Pankaj Goswami
- Dr. Bharati Medhi Das
- Mrs. Pusanjali Sonowal
- Mrs. Rupjyoti Bordoloi
- Dr. Abinash Mahanta
- Dr. Sasanka Borah
- Dr. Indira Baruah Gogoi
- Mr. Bibhuti B. Bhardwaj
- Dr. Jayshree Hazarika
- Mr. Prasenjit Saha
- Ms. Mitali Mandal
- Mrs. Rhitwika Barman
- Dr. Anindita Bhattacharya

Staff List

- Mr. Niren Chandra Baishya
- Mr. Tafik Ali Dewan
- Mrs. Nimita Devi
- Mr. Jogesh Das
- Mr. Paban Bhattacharyya
- Mr. Ambika Charan Bordoloi
- Mr. Manoj Kumar Dutta,
- Mr. Pankaj Kumar Das
- Mr. Nalini Deka
- Mr. Subal Chandra Kalita
- Mr. Laghanu Rabha
- Mr. Prasanta Kumar Das
- Md. Ali Ahmed
- Mr. Samar Jyoti Sarma

Contact Us

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