



BITS Pilani
Pilani Campus

Semester-I notes 2020-21

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 **BITS Pilani**
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Webinar on
Battling
COVID-19



Editorial

One more online semester calling for a new normal however the incessant journey to explore new avenues continue at BITS Pilani. Major highlights of the semester have been a webinar by Dr. Harsh Vardhan (Union Minister of Health and Family Welfare, Science & Technology), felicitation ceremony of Corona Warriors, celebration of Independence Day, Librarians' Day, NSS Plantation drive,etc.

As a part of adapting to the new normal, a series of webinars and online conferences were organised on New Education Policy, Anti-ragging, Chemical Sciences, Computer-Aided Drug Design, Drug Discovery and Delivery,etc.

The students and faculty members kept on adding to the glory of BITS. Many faculty members received distinguished awards and received several sponsored research projects by agencies like DST-SERB, ICMR, DBT, DRDO, SICRG, etc. Their exemplary work is evident from finding a place in the top 2% of world scientists list by Stanford University researchers getting the prestigious Platinum Award for the Mentor category of CII MILCA AWARD 2020.

To revive the connection of students towards the classical music community, online mode initiatives like informative posts and performance clips of great classical singers and musicians were initiated by Ragamalika club. NSS BITS Pilani took the initiatives to spread awareness and co-ordinated with the government agencies and NGOs to make provision for ration supplies during COVID-19.

Despite all odds, it was a memorable semester for BITS Pilani, where new milestones were set and numerous opportunities were provided to the faculty and students in academics and research.

Librarians' Day

Librarians' Day was celebrated in the library to commemorate the 128th Birth Anniversary of the Father of Library Science in India, Dr S.R. Ranganathan.

Prof Sudhirkumar Baral, Director, Pilani Campus was the Chief Guest on this occasion. He paid floral tributes to Dr Ranganathan and talked about Librarians' Role in enriching the knowledge of library users. Librarian, Mr Giridhar Kunkur welcomed the staff and talked about Dr Ranganathan's contributions to the LIS profession and highlighted the new initiatives taken by the BITS Pilani Library.

Dr Anand Byrappa, Chief Librarian, JRD Tata Memorial Library, Indian Institute of Science, Bengaluru, was the invited speaker during the library's webinar. He talked about the best practices adopted by IISc Library, Bengaluru in serving their teaching and research community.

Librarians' Day



Independence Day

Prof Souvik Bhattacharyya, Vice-Chancellor, BITS Pilani did the flag hoisting on Independence day accompanied by Prof Sudhirkumar Baral, Director, Pilani Campus. As per Indian government guidelines, the event was also telecasted live. There was a restriction on attending the function in person; only the Dignitaries, Deans, and Associate Deans participated.

Despite the restrictions, the enthusiasm for patriotism, unified diversity, and rich cultural heritage was visible. The songs sung by the Ph.D. students under Dr Anil Ral's guidance added to people's enthusiasm and pride. The National Pledge, an oath of allegiance to the Republic of India, was administered by Ms Abhilasha Srivastava. The Programme ended with the National anthem sung by all. The event was coordinated by Prof Devika, Faculty In-charge, Institute Functions.

Independence Day



TLC Online Teaching Workshop Series

The Teaching Learning Centre, BITS Pilani, Pilani Campus organized Online Teaching Workshop Series featuring three workshops on Pedagogy in Online Teaching, Methods of Online Teaching, and Technology for Online Teaching during August 6-10, 2020. In the first workshop on Pedagogy in Online Teaching, sessions on breakout rooms and use of Socrative app, gluing traditional and online lecturing, online discussions using Slack, use of tablets and mail-merge, as well as the results of students and faculty survey were discussed. In the second workshop on Methods of Online Teaching, two sessions on flipped mode of teaching, and the learning management platform Canvas were organized. In the third workshop on Technology for Online Teaching, sessions on Google classroom and G-suit tools, Microsoft Teams, the learning management system Nalanda for assessments, and some additional tools for student engagement were organized. A

total of 680 faculty members registered for this workshop with over 250 faculty members from Hyderabad and Goa campuses.

Training Session on Online Assessment using Google Classroom and Microsoft Teams

TLC conducted a half-day online training on conducting Online Assessment on September 6, 2020. Dr. Virendra Singh Shekhawat and Dr. Avinash Gautam acted as the resource persons in these training sessions. Dr. Virendra Singh Shekhawat conducted the first session on Preparing Quizzes/ tests using Google forms, which was attended by 133 participants. Dr. Avinash Gautam conducted the second session which was on using Microsoft Forms for Preparing Quizzes/ tests and sharing marks after correcting the same. This was attended by 93 participants.

Felicitations of Corona Warriors

A felicitation ceremony was organized on September 8, 2020 at the VFAST hostel for the corona warriors. It was attended by Prof Souvik Bhattacharyya, Vice-Chancellor, BITS Pilani, Prof Sudhirkumar Baral, Director, Pilani Campus and Prof S.K. Verma, Dean, Administration. People from the Health Department, Police Department, Administration, BITS Pilani Security, and Corporative stores were appreciated by the BITS family.

Felicitation of Corona Warriors



Prof Souvik Bhattacharyya, Vice-Chancellor, BITS Pilani, appreciated the efforts of Corona warriors in their fight against the virus. Prof Sudhirkumar Baral acknowledged the struggle the world is going through and appreciated the front line warriors.

and applauded all departments' efforts in these challenging times. The Crisis Response Team(CRT) of BITS Pilani were also recognized for their work. The program was also attended by Prof S. Routroy, CRT, Prof Gajendra Singh Chauhan, Faculty In-charge, Publications and Media Relations Unit, Prof V.S. Nirban, and Dr Pankaj Sharma, Faculty In-charge, VFAST Hostel. The program coordinator, Dr Sunil Kumar Dubey, Faculty In-charge, Public Relations, proposed the vote of thanks.

World Pharmacist Day

The Department of Pharmacy celebrated the World Pharmacist Day on September 25, 2020, to imbibe confidence in the budding pharmacists. Prof Hemant Jadhav, Head, Department of Pharmacy began the proceedings with a welcome note. Dr Anjaneyulu Muragundla, Assistant Vice President, Drug Discovery, BioXcellInveniAI, US & India, delivered a lecture entitled, 'Artificial Intelligence (AI) in Drug Discovery and Development: An Overview' on the occasion.

Webinar on New Education Policy

The Teaching Learning Centre organized a webinar on New Education Policy on September 26, 2020. The webinar titled "Naya Kshitij: NEP 2020 for Schools- Implementation Preparedness, Challenges and Way-Forward in Schools of Rajasthan" explored New Education Policy's various aspects with a particular focus on schools in Rajasthan. The webinar was attended by more than 484 participants from various schools in Rajasthan and other parts of the country. The webinar started with a short introduction to NEP 2020 by Prof Pushp Lata, Faculty In-charge, TLC.

Webinar on New Education Policy



Prof Souvik Bhattacharyya, Vice-Chancellor, BITS Pilani welcomed the Chief Guest, Dr (Mrs) Pankaj Mittal, and the online gathering. Dr (Mrs) Pankaj Mittal, Secretary-General, Association of Indian Universities (AIU) and former Additional Secretary, UGC, New Delhi, talked about the shift in the National Education Policy. She stressed on how the policy is forward-looking, student-centric, and is both application-oriented and learning outcome-oriented.

He emphasized the application of AI concepts to reduce the time, cost, and efforts involved in drug discovery research by citing some case studies. The lecture was followed by an interactive discussion and informative interventions by both the speaker and the participants. The celebration witnessed an active participation of around 100 participants including undergraduate, postgraduate, Ph.D. scholars, and faculty members of the various departments and colleges.

Dr Kashyapi Awasthi, Assistant Professor, Department of School and Non-Formal Education, National Institute of Educational Planning and Administration, was the Guest of Honour. She talked about the concept of the School complex and Cluster Leadership's role.

The webinar witnessed ten presentations from delegates, including school teachers, BITS faculty, and students. The presentation highlighted various innovative & affordable

technology-driven solutions in the education domain to bring about a tremendous social transformation.

The Webinar ended with a panel discussion on the preparedness of schools and their challenges in which Sri Krishna Avatar Sharma, Principal, Govt. Sr. Sec. School Sindholiya, Mr Deepchand Lakhwan, Principal, Mahatma Gandhi Government School, Ghardana Khurd, Buhana, and Dr Vijay Singh Balwada Principal, Jeevani International School, Chirawa participated.

The discussion was moderated by Prof Sudhirkumar Baral, Director, Pilani Campus. He asked panelists to share their views on how BITS Pilani can help implement the NEP. The panelists suggested different views like joining hands with schools for teacher training in technology, pedagogical techniques, and students' immersion and counseling and to take up initiatives. The webinar ended with a formal vote of thanks by Dr Kumar Sankar Bhattacharya.

Webinar on Anti-ragging

The Student Welfare Division organized a webinar series to create awareness about Anti-ragging. The first lecture of the series was delivered by Dr Himansu K. Bose, Registrar, Indira Gandhi Open University (IGNOU), New Delhi, on September 29, 2020. He said that one should be careful during an interaction with the juniors and should never cross the threshold.

Prof Souvik Bhattacharyya, Vice-Chancellor, BITS Pilani and Chairman, Anti-Ragging Committee shared his opinion. The District Legal Service Authority, Jhunjhunu, Dr Madhu Hisaria, and, Prof Sudhirkumar Baral, Director, Pilani Campus also addressed the gathering by sharing their views. Prof Srikanta Routroy Associate Dean, SWD, convened the session and Prof Navin Singh, Chief Warden, SWD proposed vote of thanks.

SAC and TLC jointly Organized Survey on the proceedings of the Online Semester (November 2020)

Both the Students' Academic Cell (SAC) and the Teaching Learning Centre (TLC) realized that due to the COVID-19 pandemic, all the teachers and students were forced to redefine the teaching-learning process in many ways. A remarkable effort was put by both the teaching fraternity and BITS students to mimic the "regular" teaching-learning process in the turbulent times. Earlier, the feedback was taken on the academic challenges that were faced by both the stakeholders due to this emergency shift to online teaching. Based on the survey results, an online teaching workshop was organized by TLC BITS before this pre-planned online semester-I, 2020-21. As uncertainty regarding the reopening of the campus prevailed, the Students' Academic Cell and the Teaching Learning Centre jointly solicited feedback using Google forms on the online mode of education, both from faculty and students in November 2020. This Survey aimed at gauging the effectiveness of teaching and learning using the new methods of teaching and communication such as Slack, Mentimeter, Nalanda discussion forums, etc., from the point of view of both the stakeholders. It also focused on understanding the students' opinions regarding what changes have worked and what aspects need revisiting for better students' engagement in learning. The Survey also intended to know the challenges teachers face in adapting to the online pedagogical practices and their suggestions to enhance the academic rigour and effectiveness. A staggering number of 1456 students and 110 faculty members participated in this online survey enthusiastically.

The survey was coordinated by Dr. Krishna Etika and Dr. Muhammed Afzal P.

Inauguration of Rain Water Harvesting Plant

BITS Pilani celebrated the birth anniversaries of Mahatma Gandhi and Lal Bahadur Shastri with full enthusiasm on October 2, 2020. Prof Sudhirkumar Barai, Director, Pilani Campus was the Chief Guest of the function. Prof S.K. Verma, Dean Administration and other dignitaries were present at the ceremony. The bhajans sung by the students under the guidance of Dr Anil Rai filled the audience with renewed vigor. Prof Sudhirkumar Barai administered the oath. The event was coordinated by Prof Shilpi Garg, Faculty In-charge, Institute Functions, and Infant Care Centre.

Inauguration of Rain Water Harvesting Plant



"Rain-Water Harvesting Plant" in the Infant Care Center was also inaugurated by Chief Guest Prof Sudhirkumar Barai.

Prof S.K. Verma, Prof Rajeev Gupta, Prof Devika, Ms Madhu Mishra, Prof Dipendu Bhunia and Prof Shilpi Garg were also present on the occasion. Prof Gupta stated that the plant has a tank of 25000 liters and is sufficient to serve the need of water for school children and staff for one year. It has various filters such as Self Purified Concrete Filters (Patented by BITS Pilani), making the water safe for drinking.

Prof Gupta pointed out that BITS Pilani, in association with various agencies like Department of Science and Technology (India), World Bank, Rajasthan Association of North America (USA), Ambuja Cement Foundation, Bhoruka Charitable Trust (BCT), Samgra Vikas Sansthan, and Sustainable Innovations has installed various water harvesting plants in ten villages of Rajasthan under "Akash Ganga Project". Through these plants, the team of Prof Gupta and BITS Pilani are continuously working to solve the water problem of Rajasthan state.

Webinar on Covid-19: Inaugurated by Union Minister Dr Harsh Vardhan

Union Minister of Health and Family Welfare, Science & Technology, Earth Sciences, and Chairman of WHO Executive Board, Dr Harsh Vardhan, inaugurated the two-day webinar "Battling COVID-19: Challenges & Opportunities in Healthcare and Bio-Pharma Sector" on October 3, 2020. Deliberating on the crisis, Dr Harsh Vardhan appreciated BITS Pilani's efforts in organizing such a timely webinar on the most pressing matter. He further reinforced Honorable Prime Minister Shri Narendra Modi's call to make "Atmanirbhar Bharat" by 2022.

Webinar on Covid-19



Prof Souvik Bhattacharyya, Vice-Chancellor, BITS Pilani welcomed the Chief Guest, Dr Harsh Vardhan, and other dignitaries from the pharma industry. He apprised the gathering about BITS Pilani's legacy and stated that our entrepreneurial spirit has led to innovations and provide affordable healthcare. Prof Sudhirkumar Barai, Director, Pilani Campus stated that the participating stalwarts from the pharma industry would show us the new directions, elevate the quality of life and provide affordable healthcare solutions to citizens of India.

The guests of honor for the occasion were Dr V.G Somani (Drugs Controller General, India), Dr Jal Prakash (Secretary-cum Scientific-Director, Incharge - Indian Pharmacopoeia commission), and Dr. Anurag Agarwal (Director, Institute of Genomics & Integrative Biology). Dr V.G. Somani updated about the progress the nation has made during the COVID-19 pandemic, the vaccine's development progress, and the challenges of COVID-19. He also briefed about the Indian Pharmacopoeia Commission's functioning and its contributions to the Nation's Pharma sector. Dr Anurag Agarwal discussed the progress and challenges of COVID-19 test kits to the audience.

Several experts from national and international health & pharma sectors participated in the webinar, including Dr Mark J Stevens (Partner, Lifesciences GUIDE HOUSE), Dr C.K Katiyar (CEO Healthcare Technical Emami Ltd.), Dr Suneet Shukla (Senior Pharmacologist USFDA), Dr Vibhav Garg (Director-Health Economics & Govt Affairs India HUB & ASEAN at Boston Scientific), Mr Vijay Simha (Entrepreneur & Angel Investor), Mr K.S Babu (Head Regulatory Affairs, Pfizer Healthcare), Mr K Chandrashekhar (Founder & CEO, Forushealth), Mr Vaibhav Singh (Co-Founder, Visit) and Mr Sridhar Ramanathan (President & CTO, Healthcubed).

The organisers of virtual seminar Dr Satyendra Kumar Sharma and Dr Sunil Kumar Dubey, stated that the event has brought the best health & industry experts on a single platform envisaging their plans to combat the crisis.

Global Meet on "Computational Modeling and Simulation: Recent Innovations, Challenges & Perspectives"

Global Meet on "Computational Modeling and Simulation: Recent Innovations, Challenges & Perspectives"

A four-week Global Meet on "Computational Modeling and Simulation: Recent Innovations, Challenges & Perspectives" was organized from October 16- November 7, 2020. Twenty-five internationally recognized speakers from USA, Germany, France, Japan, Netherlands, Australia, UK, Singapore, Israel & Malaysia delivered lectures covering various computation research aspects.

The event broadly covered computation themes in optimization and control, multiscale and multiphysics modeling, computation analysis, environmental modeling, dependability and security, computational biology, chemistry-computational biology, computational mechanics and medicinal chemistry.

Prof Souvik Bhattacharyya, Vice-Chancellor, BITS Pilani highlighted the importance of medical science by stating that how clinical trials are not sufficient considering the long-term sustainability. He stressed the importance of mathematical models used in real-life applications, the software and numerical tools used to simulate these models. Prof Sudhirkumar Barai, Director, Pilani Campus talked about how computational research can help to put continued efforts towards tackling societal problems while following all the norms of Covid-19.

Prof G. Sundar, Director, Hyderabad Campus, appreciated the team efforts to organize the event and focused on research collaboration among all the four campuses and the reputed universities worldwide. Prof G. Raghurama, Director, Goa Campus, emphasized the use of computational research involving nature-inspired algorithms. Prof R.N. Saha, Director, Dubai Campus, discussed how we could reduce cost and time using computational tools in clinical trials and screening drug-like molecules. He also stressed the need for more incredible collaborations at national and international levels.



Virtual Conference on Computer-Aided Drug Design

The Department of Pharmacy organized various conferences to celebrate its platinum jubilee (70th Year). The first in the series was a two-day 'International virtual conference on Computer-Aided Drug Design' inaugurated on October 30, 2020. The conference program featured ten international and nationally renowned scientists and received an overwhelming response of above 900 participants. During the inauguration, Prof Souvik Bhattacharyya, Vice-Chancellor, BITS Pilani addressed the participants and emphasized the need for disruptive healthcare technologies during the corona pandemic. He highlighted the significance of Artificial Intelligence-based solutions and the need to seek collaborations for interdisciplinary research.

Prof Sudhirkumar Barai, Director, Pilani Campus appreciated the department's efforts and emphasized pharma professionals' role during the pandemic. Prof Hemant Jadhav, Head, Department of Pharmacy, briefed on the department's achievements regarding research support from government agencies, industries, and

department publications. The inauguration session concluded with a video showcasing the department thrust areas and research facilities.

Virtual Conference on Drug Discovery and Delivery

Department of Pharmacy organized an 'International Virtual Conference on Drug Discovery and Delivery' on November 6, 2020. The conference highlighted the paradigm shift witnessed by pharmaceuticals in drug discovery and product development from random screening in early eras to rational drug design. The conference program featured 12 international and national invited speakers, renowned scientists in the field and had an assemblage of 350 participants. The inaugural event commenced with a formal welcome highlighting the conference as an excellent opportunity to disseminate immensely growing knowledge in pharmaceutical sciences by Prof Hemant Jadhav, Head, Department of Pharmacy.

Prof Sudhirkumar Barai, Director, Pilani Campus appreciated the department's critical role in carrying forward multidisciplinary research which has enabled it to be known as one of the top institutes in its field in India.

Webinar on Naya Kshitij

The Teaching Learning Centre organized a webinar on the New Education Policy on November 7, 2020. The webinar titled "Naya Kshitij: NEP 2020 for Higher Education" explored the new education policy's various aspects, emphasizing higher education quality improvement in Rajasthan. The webinar was attended by more than 325 participants from various higher education Institutions within Rajasthan and other parts of the country. The event was coordinated by Dr Tamali Bhattacharyya, the Research

Consultant at BITS Pilani, and Dr Shibani K. Jha. The webinar started with a welcome address by Prof Pushp Lata, Faculty In-charge, Teaching Learning Centre (TLC). Prof Pushp Lata also talked about the NEP's success for Schools held on September 26, 2020. Prof Souvik Bhattacharyya, Vice-Chancellor, BITS Pilani welcomed the Chief Guest, Ms Suchi Sharma (I.A.S.), Principal Secretary, Government of Rajasthan, and other distinguished guests.

Webinar on Naya Kshitij: New Education Policy 2020



Ms Suchi Sharma delivered a lecture on "Empowering Rajasthan through quality education in the context of higher education and NEP". She spoke on how the NEP policy should be implemented and the expectations of various stakeholders. She

also talked about innovative concepts such as the "Anandam" program in which the students are required to take up projects aiming to solve real societal problems. It was followed by a Panel discussion in which Ms Suchi Sharma (I.A.S.), Prof Anupam Basu, Director, NIT Durgapur, Prof Rahul Banerji, Director, LNMIIT Jaipur, and Prof Sudhirkumar Barai, Director, Pilani Campus participated. The discussion was moderated by Prof Souvik Bhattacharyya, Vice-Chancellor, BITS Pilani.

The discussants shared their vision of the improvements required in the current higher education model and NEP implementation at higher education institutions' levels. The panelists supported the notion that BITS Pilani should take up initiatives and join hands with local engineering colleges in Rajasthan and serve as a mentor to them as a part of the technical education quality improvement program (TEQIP). The Webinar ended with a formal vote of thanks delivered by Dr Shibani K Jha.

Webinar on The Chemical Sciences

BITS Pilani Library organized a webinar and prize distribution ceremony for the Academic Writing Competition for Research Scholars and the Department of Chemical Engineering in association with the Royal Society of Chemistry on November 7, 2020. The event started with a webinar by Prof Arvind K. Sharma on The Chemical Sciences: A Touch of History and the Future. He gave an insightful talk on the role of chemical sciences concerning the past achievement of the research work done to incorporate technology and a multi-pronged interdisciplinary approach to improve health, safety, and the environment. The webinar ended with an open platform soliciting questions from the audience.

Winners of Academic Writing Competition



The winners of the Academic Writing Competition were felicitated in the session. The session was addressed by Prof Banasri Roy, Head of the Department, Chemical Engineering. The competition subject was "Application of Chemical Engineering Research in Industry, Environment, and Society. The review committee adjudicated the articles considering the technical content, writing style, originality, specificity to the topic, quantum, and source of references.

Priya S. Tanvidkar secured first place for her article in the competition. Prateek Sharma secured second place and Anil Kumar secured third place for his article. Besides these winning articles, another article that caught the review

team's attention was "Contribution of chemical engineering research for the benefit of society" by Venkata Vijayan S.

The event was attended by participants from various domains such as EEE faculty Jahagirdhar Ankush Chandrakant, S.S. Gupta, a notable alumnus of BITS (Batch of 1968), etc. Prof Banasri Roy, Head, Department of Chemical Engineering, was instrumental in conducting the Academic Writing Competition. The event was coordinated by Dr Priya C. Sande, the Library Committee Member, and the BITS Pilani Library team. Mr Giridhar M. Kunkur, Librarian proposed vote of thanks.

Naya Kshitij Faculty Development Programme

The Teaching Learning Centre organized a six-day Naya Kshitij Faculty Development Programme 2020 during December 17-22, 2020, coordinated by Dr Tamali Bhattacharyya and Dr Shibani K. Jha. The FDP mainly focused on Online Teaching and Technology-Based Enhanced Learning with due consideration to the pandemic situation of COVID, which had created a sudden transition from the classroom to the online platform. It also focused on Designing and Developing appropriate Assessments Techniques for both online and traditional classroom teaching.

The FDP was attended by 59 participants from various higher education institutions across the country, Malaysia, and Nepal. Prof Souvik Bhattacharyya, Vice-Chancellor, BITS Pilani and Prof Sudhirkumar Barai, Director, Pilani Campus guided and supported the primary objective and the associated social cause of the Programme.

The FDP started with a welcome address by Prof Pushp Lata, Faculty In-charge, Teaching Learning Centre (TLC) where she talked about the initiatives taken by Dr Tamali Bhattacharyya and Dr Shibani K. Jha as coordinator of the FDP program.

Prof Sudhirkumar Barai, Director, Pilani campus welcomed the participants and shared his vision on the improvements required in higher education Institutes and the significance of FDP at the higher education institution's level. He mentioned how BITS Pilani has taken initiatives in using its trained resources by sharing the experiences with other institutes across the country and served as a mentor. He further suggested that the FDP would disseminate acceptable practices on using technology and pedagogical techniques offered at BITS Pilani.

Dr Shibani K. Jha, the coordinator, highlighted the features of Naya Kshitij FDP and BITS leadership role in executing the same and its significance in terms of NEP 2020 policy. She informed the participants and attendees about the steps taken by BITS Pilani in the direction. She also mentioned the NEP policy supporting "Train the Trainer" program for higher education institutes as an effective route to promote the quality of higher education in India and how it guided to bring Programme to the table.

The FDP ended with a formal vote of thanks by Prof Pushp Lata and E-Certificate distribution to participants completing FDP on the 6th day of the Programme.

Naya Kshitij Faculty Development Programme



Naya Kshitij: NEP 2020 Teachers' Training Workshop

The "Naya Kshitij: NEP 2020 Teachers' Training Workshop" (a five-day event) was organized by the Teaching Learning Centre (TLC) on December 21, 2020. All 44 school teachers, including eight principals, joined the workshop as participants. The workshop had several presentations and interactive sessions by various resource persons to cover multiple aspects of effective teaching and learning at the school level.

In the inaugural session, Prof Pushp Lata, Convener, TLC, presented the introductory notes to the participants and emphasized teachers' crucial role in bringing a change in the education system recommended by NEP 2020.

Prof Sudhirkumar Barai, Director, Pilani Campus stressed school teachers' critical role in society in his welcome address. He mentioned that leadership, ethics, integrity, honesty, and respecting elders, if appropriately taught at the school level, would reflect in the latter part of their lives, effectively developing soft-skills.

Dr Gautam Singhvi, the workshop coordinator introduced the resource persons - Dr Kumar Sankar Bhattacharya, Dr Virendra Singh Shekhawat, Prof Anshuman Dalvi, Ms Shikha Joshi, Prof Devika, and Mr Deepchand Lakhwan. He mentioned that teachers should be prepared well for the upcoming challenges in teaching through technology and also shared thoughts on the expected benefits of this workshop for effective teaching. The school-teachers' coordinator, Mr Deepchand Lakhwan, thanked BITS Pilani and the TLC for arranging the seminar. He emphasized the importance of self-updating time-to-time for sustainability in the system. The inauguration was followed by a session on how to be an inspirational teacher, conducted by Dr Kumar, and a training session on online teaching by Dr Virendra Singh Shekhawat. The workshop ended on December 25, 2020, and E-certificates were provided to all the registered participants.

Teachers Training Workshop



Call for Proposal: TLC Initiative (December 2020)

In order to support the project ideas focusing on developing and improving teaching-learning outcomes by exploring innovative teaching pedagogy and technological interventions in education, the Teaching Learning Center (TLC), BITS Pilani invited the BITS faculty and students to submit their project proposals for funding in November 2020. This initiative was coordinated by Dr. Ashutosh and Dr. Tamali Bhattacharyya. Six project proposals in the student category and five proposals in the faculty category were received. Based on the recommendation received from both the selection committees, the following projects have been selected for funding.

Projects selected in the student category:

1. App for Text to Speech conversion of textbooks for visually impaired, by Rohit Sunil Bohr (2017A7PS0225P).
2. Classification of Questions Based on Natural Language Processing and other Feature Vectors by Kaustubh Dwivedi (2017B5A70615P).
3. Intelligent video recording system for the classroom setting by Yogyo Modi (2018A7PS0235P).
4. A web-based Community Forum for BITSian students and professors by Manas Mishra (2017B5A70546P).

Projects selected in the faculty category:

1. Design of Safe and at-home Pharmaceutical Chemistry experiments to enhance learning outcomes during COVID-19 pandemic by Dr. Vaibhav A. Dixit.
2. High impact classroom teaching through industrial case studies from an enhanced project database by Prof. P. Srinivasan.

Academia:a confluence of ideas

Seminars/Conferences

Workshops/Training Programs

Enriching the Learning

Experience: Visits by Faculty

Dr Rahul Singhal, Department of Electrical and Electronics Engineering, virtually attended the 2020 Asia Pacific Microwave Conference (APMC 2020) in Hong Kong held during December 8 -11, 2020 and co-authored the following research papers presented during APMC 2020: (a) Hexagonal Monopole Antenna with Modified Ground Plane for Sub-6 GHz Communication Applications, and (b) Comparative Study of Translated Cross Dipole and Square Loop Frequency Selective Surfaces for Band Stop Characteristics in X-Band.

Invited Lectures/Talk by Faculty

Prof Surekha Bhanot, Department of Electrical and Electronics Engineering, delivered an invited talk in an online International Conference on Integrated Interdisciplinary Innovations in Engineering (ICIIIIE

2020), UIET, Punjab University Chandigarh, during August 28-30, 2020, on the topic "AI- an eclectic perspective and its role in interdisciplinary research". She also delivered an expert talk in TEQIP-III sponsored One Week STTP on "Recent Trends in Instrumentation Engineering" organized by SLIET, Longowal, and NIT, Uttrakhand during September 7-11, 2020 on the topic "Process Automation and Control Systems (PACS): New Directions". Prof Surekha also delivered an invited talk in the webinar Naya Kshitij: NEP 2020 for Schools Implementation Preparedness, Challenges and Way-Forward in Schools of Rajasthan, organized by TLC, BITS Pilani on September 28, 2020, on the topic "Integration of curriculum design in schools- Emphasizing Multidisciplinary Education with an Element of Choice". She also delivered an expert talk in QIP-AICTE ONLINE STC on Future of Industrial Automation (FIA-2020) (Oct 05-10, 2020) organized by SLIET, Longowal on the topic Past, Present, and Future of Industrial Automation on October 5, 2020.

Prof Arya Kumar, Department of Economics and Finance, delivered an invited talk through webinar on "Entrepreneurial Mind set and Characteristics" in the International Entrepreneurship Summer School 2020, organized by Entrepreneurship Hub der TU Braunschweig und der Ostfalia Hochschule for the budding entrepreneurs across countries on September 9, 2020. Prof Arya Kumar, also delivered an invited talk through webinar on "Technology Entrepreneurship in 21st Century" in the CVO Chartered Accountant and Cost Accountants' Association Mumbai on September 13, 2020.

Prof Sangeeta Sharma, Department of Humanities and Social Sciences, delivered a lecture on "Capacity Building: Role of Effective Presentation in Governance" in a three day online programme on "Capacity Building towards achieving Good Governance" conducted by AP HRDI (Andhra Pradesh Human Resource Development Institute) on October 15, 2020. She also delivered an invited lecture on "Creative Thinking" at SRM University on October 31, 2020. Prof Sangeeta was invited to deliver a lecture on "Gender Biases and Issues in Organization" as a part of three day online programme on "Protection of Women from Atrocities" conducted by AP HRDI (Andhra Pradesh Human Resource Development Institute) on September 14, 2020. She also delivered a series of invited lectures on "Soft skills development" at IIHMR, Bangalore, on August 1-7, 2020.

Prof Navneet Gupta, Department of Electrical and Electronics Engineering, delivered an invited talk on "Recent Advances and Opportunities in Metamaterial Based Antennas for Wearable Applications" in TEQIP-III Sponsored Online FDP on Research Challenges and Opportunities in Antenna Design (RCOAD-2020) during September 10-14, 2020 organized by the Department of ETCE, V.S. S. University of Technology, Burla, Odisha.

Prof Kuldip Singh Sangwan, Department of Mechanical Engineering, delivered an invited talk on Reverse Logistics and Integrated Supply Chain: Network Design and Research Issues during a Short Term Course on Effective Logistics for Sustainable Environment, National Institute of Technology Jalandhar on August 12, 2020. He also delivered an invited talk on Smart Manufacturing during a short term course on Advanced Manufacturing Processes & Applications Program, Malaviya National Institute of Technology Jaipur on August 21, 2020. Prof Sangwan also participated as an expert on Tech Talk organized by Automotive Component Manufacturers Association (ACMA) India on September 15, 2020. He was invited to deliver a talk on Industry 4.0: Smart manufacturing, digitalization, and beyond during a short term course on Industry 4.0- Industrial Automation Solutions & Applications, National Institute of Technology Jalandhar on September 21, 2020. He was also invited to deliver a talk on Sustainability and Circular Economy: A Supply Chain Perspective during Chintan- Friedrich Ebert Stiftung Foundation Webinar Series on Circular Economy on October 27, 2020. Prof Sangwan also delivered an invited talk on Smart Manufacturing during AICTE sponsored short term training program on Advanced Manufacturing Technologies and Applications, Sant Longowal Institute of Engineering and Technology (Centrally Funded Technical Institute) on November 27, 2020. He also gave an invited talk on the Historical Perspective of Sustainable Manufacturing during Short Term Training Program (STTP) on Sustainable Manufacturing for Atma Nirbhar Bharat, Malaviya National Institute of Technology Jaipur on December 21, 2020. He was also invited to deliver a talk on Smart Manufacturing during Short Term Training Program (STTP) on Sustainable Manufacturing for Atma Nirbhar Bharat, Malaviya National Institute of Technology Jaipur on December 25, 2020.

Dr Gautam Singhvi, Department of Pharmacy, delivered an invited talk on, "Dissolution Methodology: A Key Component for Pharmaceutical Product Development" at Ideal College of Pharmacy and Research Kalyan on August 29, 2020.

Dr Sunil Kumar Dubey, Department of Pharmacy, delivered an invited talk on, "Pharmacokinetic Compartment Modeling and Simulation Techniques" at DNA lab-A Centre for Applied Sciences, Dehradun on September 25, 2020.

Dr Murali M Pandey, Department of Pharmacy, delivered an invited talk on, "Career Prospects in Pharmacy" at Orientation & Induction Programme, 2020' organised by M. R. College of Pharmaceutical Sciences & Research, Bira, Ashoknagar, WB, India on December 11, 2020.

Dr Deepak Chitkara, Department of Pharmacy, delivered an invited talk on, "NanoBrid Platform Technology: A Scalable multi-component monolithic lipid-polymer hybrid nanoparticles for drug delivery applications" at National Symposium on Integrative medicines and Health: From Basic to Translational Research and Annual Meeting of Translational Biomedical Research Society (TBRS), Shri Ramswaroop Memorial University (SRMU), Lucknow-Deva Road, Barabanki, Uttar Pradesh on December 6, 2020.

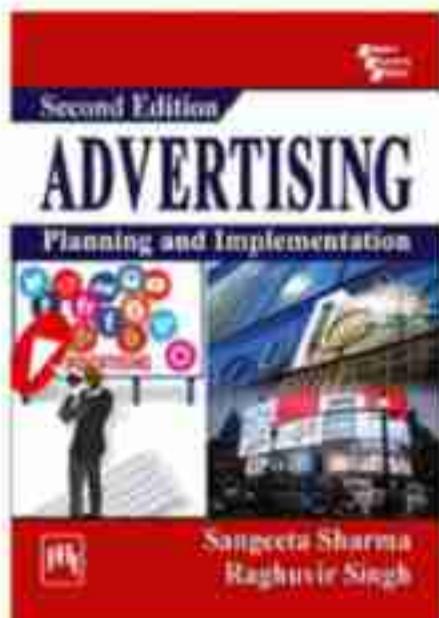
Prof Navin Singh, Department of Physics, delivered a webinar talk on "Stability of DNA molecule in confined geometry" in Global Meet on Computational Modelling and Simulation: Recent Innovations, Challenge, & Perspective, organized by BITS, Pilani on November 07, 2020. He also delivered a webinar talk on "Wave-particle duality: Foundation of Quantum Mechanics", organized by the Department of Physics, Amity University, Noida on December 13, 2020.

Prof Poonam Goyal, Department of Computer Science and Information Systems, was invited as a Panelist in Women in Information Retrieval (WIRE- 2020) held on December 18, in FIRE-2020 from 16 to 20 December 2020 (<https://sites.google.com/view/wire-fire/schedule>).

Prof Devika, Prof Pushp Lata, and Dr Rajni Singh, Department of Humanities and Social Sciences, delivered an invited talk on Cross-cultural Workshop organised by the Department of Mechanical Engineering on December 17, 2020.

Accolades and Achievements: Academic attainments of faculty

Prof Sangeeta Sharma, Department of Humanities and Social Sciences, received the best paper award for "Marketing at the Bottom of the Pyramid: Overcoming the Challenges through MICMAC Analysis" at National Conference on Managing during Turbulent Times held at ITM Business School, Navi Mumbai on September 25, 2020. She also published her book Advertising- Planning and Implementation.



Dr Paul Atish Tulshiram, Department of Pharmacy received "Dr. P.D. Sethi Memorial National Award 2019" by ANCHROM PVT LTD for his research work titled "Development and validation of a new HPTLC- HRMS method for the quantification of a potent pancreatic lipase inhibitory lead Echitamine from *Alstonia scholaris*". The award consists of a cash prize worth Rs. 15,000/- and a certificate. The award is granted to the authors of exceptional papers published in a particular year.



Prof Kuldip Singh Sangwan, Department of Mechanical Engineering, has been considered in the top 2% world scientists list by Stanford University researchers.

Prof P. Srinivasan, Department of Mechanical Engineering, has been awarded the prestigious Platinum Award for the Mentor category of CII MILCA AWARD 2020 (Highest award under this category). Prof Srinivasan has made an immense contribution towards arranging Practice School (PS) for 50,000 students in 1000 industries over 12 years. He has mentored 500 PS students at BHEL, Adani Power, Essar Power, Ultratech cement Units, and many other companies for ten years and has implemented 50 projects. He has conducted 30 executive training programs for 1500 working professionals from NTPC, SAIL, VSP, ABG Industries, etc. He is a recipient of the SSR Memorial teaching excellence award 2017 at BITS Pilani.

Distinguished Online Lectures

- **Mr Shakti Nayan (BITS Alumnus, MBA 2019) Consultant- Data Engg at Genpact**, delivered a talk on "Data engineering for effective information system" in the Department of Management, BITS Pilani on August 1, 2020.
- **Mr Sampark A. Sachdeva OYO – Region Head (West) & Chief Coach & Mentor (at a startup)**, delivered a talk on "Personal branding & impact of social movements on Marketing" in the Department of Management, BITS Pilani on August 2, 2020.
- **Mr Coumara Radja Ex-President Global Business, ZCL (Earlier Zandu Chemicals)**, delivered a talk on "International business and challenges" via online mode in the Department of Management, BITS Pilani on August 6, 2020.
- Mr Manoj Bali HR Analytics lead at Novartis, delivered a talk on "People Analytics" in the Department of Management, BITS Pilani on August 8, 2020.
- **Mr Murali Aiyer Social Entrepreneur and co-founder of SALT LABS, Ex HR Director CRISIL**, engaged in Consulting, Leadership Coaching and Mentoring, delivered a talk on "Leadership Skills and Competencies" in the Department of Management, BITS Pilani on August 10, 2020.
- **Dr Vineet Sehgal Senior Director, HR, PwC**, delivered a talk on "Digital Disruption and its impact" in the Department of Management, BITS Pilani on August 12, 2020.
- **Mr Sujit Panigrahi (BITS Alumnus, MMS 1994) Co-founder and CEO at Sequoia Fitness and Sports Technology, Additional Director General at Commonwealth Games Delhi 2010, Co-founder of Convergent Technologies**, delivered a talk on "Running a Business Enterprise effectively" in the Department of Management, BITS Pilani on August 17, 2020.
- **Mr Raju Reddy Distinguished Alumnus, BITS Pilani, Founder – Sierra Atlantic, Silicon Valley**, delivered a talk on "Entrepreneurship: A lifetime of rewards" in the Department of Management, BITS Pilani on August 19, 2020.

- **Mr Rohit Khullar (Assistant Manager Business Excellence at KPMG)**, delivered talk on KPMG Lean six sigma (Green belt) certification training workshop in the Department of Management.
- **Dr Sandeep Mora, Project and Technical Lead, MERCK (MSD), US**, delivered a talk on Bioprocess Development and Scale-up Biomaterial, Biobutanol, and Bioethanol in the Department of Chemical Engineering on October 3, 2020.
- **Dr. T.C.A. Raghavan (I.F.S. Retired)**, delivered a lecture on "India, South Asia and the World" in the Department of Humanities and Social Sciences on October 9, 2020.
- **Prof Akshaa Vatwani, IIT Gandhinagar**, delivered talk on Joint extreme values of L-functions in the Department of Mathematics on October 24, 2020.
- **Prof B. V. Rathish Kumar, IIT Kanpur**, delivered talks on Stabilized Variational Multiscale Sub-Grid Finite Element Analysis of Transport Model 2020 in the Department of Mathematics on October 17, 2020, and October 24, 2020.
- **Prof Christoph Herrmann, TU Braunschweig**, delivered a lecture on Sustainability thinking and Industry 4.0 under the GInGAS Project by DAAD in the Department of Mechanical Engineering on October 26, 2020.
- **Prof Bibekananda Maji, IIT Indore**, delivered talk on Ramanujan's formula for odd zeta values in the Department of Mathematics on October 31, 2020.
- **Prof Pawan Kumar Mishra, IIT Bhilai**, delivered talk on Nonlocal fractional problems involving critical growth in the Department of Mathematics on October 31, 2020.
- **Mr Kapil Malhotra, Sr. Vice President- Marketing, Gujarat Fluorochemicals Limited**, delivered a talk on Fluoropolymers and its applications in the Department of Chemical Engineering on October 31, 2020.
- **Dr Felipe Cerdas, TU Braunschweig, Germany**, delivered a lecture on Life cycle engineering for sustainable production and products, under GInGAS Project by DAAD in the Department of Mechanical Engineering on November 02, 2020.
- **Mr Bhavesh Ubhadiya, Senior Group Manager, WNS global services**, delivered a lecture on, "Competitive intelligence and secondary research" in the Department of Pharmacy on November 02, 2020.
- **Prof Reza Ashgari, TU Braunschweig, Germany**, delivered a lecture on International Tech Entrepreneurship, under GInGAS Project by DAAD, in the Department of Mechanical Engineering on November 05, 2020.
- **Prof Togashi Yuichi, Hiroshima University**, delivered talk on Small-Number Issues in Biological Systems in the Department of Mathematics on November 07, 2020.
- **Prof N. Saradha, CEBS, University of Mumbai**, delivered talk on Euclid's primes in the Department of Mathematics on November 07, 2020.
- **Prof A K Nandakumaran, IISc Bangalore**, delivered talk on Fourier Series and Transforms: Developments, Properties and Applications in the Department of Mathematics on November 07, 2020.
- **Prof Kuldip Singh Sangwan, Department of Mechanical Engineering**, delivered a lecture on Sustainability assessment frameworks and use case studies, under GInGAS Project by DAAD, November 19, 2020.
- **Prof Tetsuro Tsuji, Kyoto University**, delivered talk on Numerical analysis of unsteady rarefied gas flows based on the method of characteristics in the Department of Mathematics on November 21, 2020.
- **Prof Satoshi Taguchi, Kyoto University, Hiroshima University**, delivered talk on Asymptotic theory for a slightly rarefied gas over a boundary with a discontinuous temperature distribution in the Department of Mathematics on November 21, 2020.
- **Dr Saurabh Singh, Senior Group Head, Regulatory writing and submissions, Novartis Healthcare Pvt. Ltd.**, delivered a lecture on, "Drug development and Regulatory writing" in the Department of Pharmacy on November 25, 2020.
- **Prof Kamel Hooman, University of Queensland**, delivered talk on Natural draft dry cooling towers in the Department of Mathematics on November 28, 2020.
- **Prof Yong Tae Park, Associate Professor, Department of Mechanical Engineering, Myongji University, Korea**, delivered a talk on Layer-by-Layer Assembled Multi-Functional Nano Thin Films in the Department of Chemical Engineering on November 28, 2020.
- **Prof G D Veerappa Gowda, TIFR Centre For Applicable Mathematics, Bengaluru**, delivered talk on First Order Partial Differential Equations in the Department of Mathematics on December 05, 2020.
- **Dr Vipul Kakkar, Central University of Rajasthan**, delivered talk in the Department of Mathematics on December 22, 2020.

Significant projects

Principal Investigator and Name of the Department	Co-Principal Investigator and Name of Department	Project Title	Agency	Amount (INR)	Duration (Months)
Prof A K Das Department of Biological Sciences	-	28S Ribosomal RNA capture assay for the sensitive detection of plasmodium vivax	ICMR	80.02 Lakhs	36
Prof M.S. Dasgupta Department of Mechanical Engineering	-	Analysis, Design, and Development of low-cost cold storage for selected agricultural products based fully on solar and geothermal energy	DST	47.60 Lakhs	24
Dr Vankatesh Kadbur Prabhakar Rao Department of Mechanical Engineering	Dr Sujan Yenuganti Department of Electrical and Electronics Engineering	Design and Development of MEMS gyroscope for naval applications	DRDO (NRB)	46.69 Lakhs	36
Prof Anil Kumar Department of Chemistry	-	Synthesis and C-H Bond Functionalization of N-heterocycles Employing Novel Pincer-type complexes of late Transition metal	SERB	36.56 Lakhs	36
Prof Indresh Kumar Department of Chemistry	-	Direct Catalytic approach towards the Synthesis of C3-Substituted Pyrroles in Non-asymmetric/asymmetric Fashion	SERB	34.91 Lakhs	36
Dr Syamantak Majumder Department of Biological Sciences	Dr Shubasish Chowdhury Department of Biological Sciences	Enhancer of Zeste Homolog-2 role in Glomerular endothelial Dysfunction during Diabetic nephropathy	DBT	33.47 Lakhs	36
Dr Shamik Chakraborty Department of Chemistry	-	Investigation of the nature and origin of intermolecular Se-H...X(X=O, N, S, Se) hydrogen bonding interaction using matrix isolation infrared spectroscopy and theoretical calculations	SERB	29.52 Lakhs	36
D Subhasish Gangopadhyay Department of Physics	-	Crystallographic Orientation (lattice plane) dependent selective gas sensing: A new approach in metal-oxides (MOx) based gas sensor	SERB	22.37 Lakhs	36
Prof J.N. Bandyopadhyay Department of Physics	Prof Tapomoy Guha Sarkar Department of Physics	Study of driven quantum systems: Floquet Engineering of Novel Materials	SERB	23.91 Lakhs	36
Prof Amol Holkundkar Department of Physics	Prof J.N. Bandyopadhyay Department of Physics	Higher-harmonic generation in gases and solids and their implications in attosecond science	SERB	23.47 Lakhs	36

Principal Investigator and Name of the Department	Co-Principal Investigator and Name of Department	Project Title	Agency	Amount (INR)	Duration (Months)
Prof Rajeev Taliyan Department of Pharmacy	-	Exploring the Mechanisms(s) of gut microbiota link to Parkinson disease pathology and its reversal based on fibroblast growth factor 21 gene delivery through lentivirus system	ICMR	20.25 Lakhs	36
Dr Gaurav Dwivedi Department of Mathematics	-	A Study of Existence Questions to elliptic partial differential equations with gradient nonlinearities	SERB-CRG	18.62 Lakhs	36
Prof Devendra Kumar, Department of Mathematics	-	Development of uniformly convergent methods for two-parameter singularly perturbed boundary value problem	SERB	16.87 Lakhs	36
Prof Souvik Bhattacharyya Department of Mechanical Engineering	Prof M.S. Dasgupta Department of Mechanical Engineering	Educational Program for Sustainable Heating and Cooling Solutions for India	Research Council of NORWAY	11.47 Lakhs	36
Dr Vinay Chamola Department of Electrical and Electronics Engineering	-	Artificial Intelligence Enabled security provisioning and vehicular vision innovations for autonomous vehicles	Shastri Institutional Collaborative Research Grant (SICRG)	10.00 Lakhs	24
Prof Anil Kumar- Co-PI Department of Chemistry	-	Targeting the RNA-dependent RNA polymerase (RdRp) of SARS-COV2 for the development of inhibitors	SERB	5.77 Lakhs	24
Prof Shashank Gupta Department of Computer Science & Information Systems	-	Development of Deep Learning-Based Intrusion Detection System for Defending Android-Based HTML5 Web Applications against Cross-Site Scripting (XSS) attack	Data Security Council of India (DSCI)	5.52 Lakhs	06
Dr Shashank Gupta Department of Computer Science & Information Systems	Dr Amit Dua Department of Computer Science & Information Systems	Development of Deep Learning-Based Intrusion Detection System for Defending Android-Based HTML5 Web Applications against Cross-Site Scripting (XSS) Attack	Data Security Council of India (DSCI)	5.52 Lakhs	06

Student Events

Ragamalika 2020

The transition of the semester to online mode meant a change in the way concerts were organized. The online semester saw a series of creative and fresh online concerts streamed on Instagram and YouTube. To revive the connection of students towards classical music community, online mode initiatives like informative posts and performance clips of great classical singers and musicians were done through the club's official page on Instagram.

Although the seniors had already left the campus, the conclusion of the online semester brought an official end to some of the senior's college lives. Following the age-old tradition of a prenti concert, the club witnessed Prakhar Sharma's awe-inspiring "Long Distance" Tabla concert on December 25, 2020, with the only difference being that the ET audi sentiment was replaced by a YouTube stream.

NSS

COVID-19 Awareness Calling

Understanding the need to spread awareness among the public to limit the spread of the novel coronavirus, volunteers of NSS, BITS Pilani took the initiative to make everyone aware of the viral disease across the 7 villages under its aegis. Regular calling sessions were organized to cover more than 400 families across the villages.

Ration distribution

Owing to a lack of savings several families were left without ration supplies just after the first two weeks of the lockdown. NSS BITS Pilani at such a time took the initiative to coordinate with the government agencies and NGOs to make provision for ration supplies to the needy families. Calls were made to people to know about their problems and in cases when the problem was deemed to be genuine, they were told to contact the government helplines for assistance. In case they couldn't get assistance from the authorities, NSS helped them get in touch with other organizations willing to help.

Plantation Drive

A plantation drive was organized by NSS BITS Pilani on September 7, 2020. FIC EMU (Prof Dipendu Bhunia), FIC Societal Development (Dr Ashish Tiwari), Program officers Prof Harlon Bansal,



Prof Chandrashekhar, Prof Surojit Pandey, and Dr Krishnendra Shekhawat, actively participated in it.

Reopening of NSS School

Intending to provide education to the children studying across various schools in Pilani, NSS School started its functioning on August 10, 2020. Due to the outbreak of the COVID-19 pandemic and restrictions imposed by the government, the semester was entirely online. The School provided online resources to the students, classes were conducted online and different platforms were used to evaluate students and clear their doubts regularly. The mental health of the students was also affected due to the pandemic and several measures were taken to make them feel comfortable. Regular contact was maintained with the students and their parents/guardians to ensure that they did not face many difficulties.

Initiation of EPD Classes

The personality development of students has taken a very big hit due to the pandemic. There have been significant changes in the lifestyle of EPD class students, who have faced severe difficulties due to the financial crunch in their families and lockdown added to their woes. In such a situation, regular calls were being made to guide and counsel students to cope up with the stress. In August, English and personality development classes were conducted for the semester. The virtual classes included teaching the English language using interactive activities like tasks related to personality development.

Junoon - Unsung Heroes

Junoon, organized every year in the first/second weekend of September, is an opportunity for NSS BITS Pilani to extend their support and concern to the children with special needs.

This year due to restricted movement, a virtual talk was organized under the banner of Junoon - Unsung Heroes. The talk was with Mr Sharath Galkwad, a Paralympic Swimmer who has won laurels for India in sporting events all over the globe, on National Sports Day, August 29, 2020. It was shown live at 8 NGOs across Delhi and Jaipur and more than 50 BITSian students participated in the talk.

Commencement of Coding Classes

Coding classes are meant to clear the basics of school-going students and make them familiar with the fundamentals of coding in HTML and CSS language. Considering the pandemic, online coding classes commenced for the students of Kids Garden Secondary School on September 1, 2020. Regular classes, sessions, doubt clearing hours were organized and the required number of assignments were given to the students to help them ace the basics of coding.

Teachers' Day

On the occasion of Teachers' Day, NSS BITS Pilani requested everyone to recall the best moments of their students' life and recognize the contribution of their teachers. People were also asked to share their experiences as a student and put it on their social media handles. A special session was also organized for the students of NSS School to celebrate Teachers' Day. The session consisted of several activities that could be carried out on either WhatsApp or Google Meet and helped to further strengthen the connection between volunteers and students from NSS School.

Literacy Day

On Literacy Day, a session was held for the students of EPD classes to make them aware of the general things about literacy. The students were informed about how a person is classified as literate and the various policies of the government, like the Right to Education. The session also included a quiz on India's literacy rate.

Fit India Movement

On August 15, 2020, the honourable Prime Minister of India kickstarted the Fit India Freedom Run, a campaign to get people back on the running tracks and to curb the increasing lifestyle problems. Volunteers of NSS BITS Pilani supported the movement and participated in the campaign. A large number of volunteers registered on the government portal and ran more than 50 km from August 15 to October 2, 2020.

BITS Blood Portal

Keeping in mind the regular blood shortages faced by several critically affected patients across the nation and the ongoing use of plasma therapy for the treatment of COVID-19, NSS BITS Pilani in collaboration with Dhoondh has developed a portal to assist patients to get blood in less than 12 hours. The portal has been shared across the BITSian family and the data would only be stored with NSS BITS Pilani and Dhoondh, and no third party would be able to access the database.

National Unity Day

NSS BITS Pilani celebrated National Unity Day on the birth anniversary of Sardar Vallabhbhai Patel by taking an oath for unity in the diversity.

Rohit K Bharadwaj (2017B4A70633P) has been selected for Mitacs Globalink Research Internship 2021 on December 11, 2020. Mitacs Globalink Research Internship is a 12-week research internship that is fully funded by Mitacs and is conducted in Universities in Canada.

Rehan Kunal Jagota (2019B3TS1257P) was awarded First Place In Inter-Collegiate Paper Presentation Competition 2020-21, in the event Student Webinar and Paper Presentation Competition on New Education Policy 2020 at St. Joseph's College of Commerce, Bangalore on September 14, 2020.

Prerna Baranwal (2016B4A80568P) attended the event Design in Space for Life on Earth Design Challenge organized by the World Design Organization® (WDO) and Center for the Advancement of Science in Space (ISS National Lab) from September 28 to October 9, 2020. She also attended the Virtual 71st International Astronautical Congress from October 12 to 14, 2020. She is co-author of publications:

- Conceptual Design of a Mars Constellation for Global Communication Services using Small Satellites. Doi: <https://dl.iafastro.directory/event/IAC-2020/paper/60635/>
- Optical Communications for Small Satellites: A Review of Pointing Strategies & Requirements Optimization. Doi: <https://dl.iafastro.directory/event/IAC-2020/paper/60747/>

Saurav Harishankar Yadav (2018A2PS0113P) won the O.P. Jindal Engineering & Management Scholarship (OPJEMS) Scholar 2020 award on November 1, 2020.

Linisha Biswal, PhD student, Department of Chemical Engineering, won the gold award under the research scholar category, in the CII MILCA program, December 26-27, 2020 for her work on conductive polymeric beads for effluent treatment. She presented the work with the scope to translate the research into industrial output.

A.Sudarshan (F20190744) won INSPIRE Scholarships for Higher Education on August 6, 2020, by the Department of Science and Technology, Govt. of India, for securing JEE rank in the Top 10,000 and on the basis of CBSE 12th Board marks.

Bharat Agarwal (2019B4A70725P) won a Brainstorm Scholarship of 82 % worth INR 1,22,000 on August 17, 2020, for securing an all India Rank of 67 with a State Rank of 3 in Technothlon organised by IIT Guwahati.

Amarpal Singh Basra(2019B4PS0336P) was awarded INSPIRE Scholarship for Higher Education (SHE) of INR 1,20,000/- for the year 2019-2020 and 2020-2021 on November 20, 2020, by the Department of Science and Technology, Govt. of India.

Introducing new faculty

S.No.	Full Name	Designation	Department
1	L Rajya Lakshmi	Assistant Professor, Gr-I	Computer Science & Information Systems
2	Vijay Bajirao Kakade	Assistant Professor, Gr-I	Civil Engineering
3	Sandeep Joshi	Assistant Professor, Gr-I	Electrical & Electronics Engineering
4	Arkaprovo Ghosal	Assistant Professor, Gr-I	Chemical Engineering
5	Krishnendu Mondal	Associate Professor-Off Campus	WILPD-EEE
6	Tanmaya Mahapatra	Assistant Professor, Gr-I	Computer Science & Information Systems
7	Rahul Kumar	Assistant Professor, Gr-I	Electrical & Electronics Engineering
8	Revendranath Tirumalsety	Assistant Professor, Gr-I	Management
9	Paul Mathew	Assistant Professor, Gr-I	Humanities and Social Sciences
10	Samatha Benedict	Assistant Professor, Gr-I	Electrical & Electronics Engineering
11	Sourav Kumar Sasmal	Assistant Professor, Gr-I	Mathematics
12	Deepak Kumar Saxena	Assistant Professor, Gr-I	Management
13	Nishit Narang	Associate Professor-Off Campus	WILPD-CSIS
14	Sharda Tripathi	Assistant Professor, Gr-I	Electrical & Electronics Engineering
15	Shashank B S	Assistant Professor, Gr-I	Civil Engineering
16	Tribeni Roy	Assistant Professor, Gr-I	Mechanical Engineering
17	Divyansh Patel	Assistant Professor, Gr-I	Mechanical Engineering
18	Shaili Singh	Assistant Professor, Gr-I	Management
19	Mukul Joshi	Assistant Professor, Gr-I	Biological Sciences

Editorial team

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Student Members: Riya Gupta and Ravi Shankar

Special Thanks: Prof G.S. Chauhan, Faculty In-charge and Mr Ramesh Sharma, Publications and Media Relations

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