



# CENTRAL UNIVERSITY OF PUNJAB

NAAC ACCREDITED 'A' GRADE UNIVERSITY  
FIVE STAR RATING UNDER GRIHA-LD MASTER PLAN

**RANKED 87<sup>th</sup> AMONG UNIVERSITY CATEGORY IN N.I.R.F. INDIA RANKINGS 2020**  
BATHINDA-BADAL ROAD, V.P.O. GHUDDA, DIST. BATHINDA – PUNJAB



## CUPB Newsletter

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## EDITORIAL

**A**s the country is celebrating 1st Anniversary of National Education Policy-2020, the Central University of Punjab, Bathinda (CUPB), under the guidance of the Hon'ble Chancellor Prof. Jagbir Singh and the dynamic leadership of the Hon'ble Vice Chancellor Prof. Raghavendra P. Tiwari, is putting the best efforts to implement the transformative educational reforms introduced under NEP-2020, aiming to actualize the vision of the Hon'ble Prime Minister Shri Narendra Modi and the Hon'ble Minister of Education Shri Dharmendra Pradhan to transform our education system as per the international standards and to develop global intellectual citizens who will contribute in the making of AatmaNirbhar Bharat.

Apart from the implementation of several innovative reforms under NEP-2020 (including adoption of learning outcome-based curriculum, National Academic Depository etc.), the university has strengthened its academic/research collaborations by signing an MoU/MoAS with Innovation – Technology Transfer Office (i-TTO) and Punjab Remote Sensing Centre to promote cooperation in IP management and Technology Transfer, and collaboration in the field of Geospatial Technology.

While adopting this collaborative approach, the scientists and research scholars of the university are conducting path breaking research to produce low-cost Oxygen Concentrators and to tackle oxygen supply during COVID-19 pandemic.

During these two months, the university continued its efforts to preserve the ecological environment and to enhance the fitness of our students and employees. In this direction, the university commenced 'Mega Plantation Drive-2021' on the World Environment Day with the aim to plant 10,000 saplings at CUPB campus. In addition to this, the NSS Cell along with the Dept. of Physical Education conducted 'Special Yoga Event Series' to mark International Yoga Day-2021. Further, the university authorities continue to organize COVID-19 Vaccination Camps to combat COVID-19 second wave and to ensure the safety of faculty, staff members and students.

In this tenure, several academic and extra-curricular activities have been organized at the university campus. The three-week NASI-TMC Summer School on Differential Geometry was one of the major workshops held during this period. Besides this, various departments have organized Webinars / Invited Lectures on the theme of Climate Change; Social Entrepreneurship; Inclusive and Equitable Higher Education; Disaster Management Plan; Preparedness for possible third wave; India's Cyber Security Challenges; Police Reforms and Administration of Criminal Justice; Applications of Real-Time Analytics in the Pharmaceutical Development etc. to enhance the conceptual understanding of students related to their discipline. Furthermore, the university organized special lectures on Effective Grant Writing; Artificial Intelligence and Research in Higher Education; Selection of Topics for Research, Research Proposal and Quality of Research; and Issues in Social Science Research and New Research Priorities to motivate faculty and research scholars to conduct qualitative research. Along with this, the university also organized special lectures on Career Opportunities in various industries, and motivational talks by successful start-up entrepreneurs to encourage students to acquire necessary skills during the programme.

The quality education and guidance from talented faculty coupled with hi-tech infrastructure and international exposure provided at CUPB has empowered our students to accomplish new milestones in their career and encouraged researchers to set new benchmarks in the field of education and research.

The Vision & Mission of the University, Academic Calendar and the daily activities/programmes are very much linked to NEP-2020, and the university is committed to implement NEP-2020 in totality to leverage its benefits to all the stakeholders.

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## VICE CHANCELLOR'S ARTICLE

### NATIONAL EDUCATION POLICY-2020: A YEAR OLD CRAWLING BABY

**D**r. APJ Abdul Kalam, former President of India, once opined that the aim of education is to build character, cultivate human values, develop scientific attitude with spiritual foundation, build confidence to face uncertain future, and to develop a sense of dignity, self-respect, and self-reliance. India's learning system needed urgent reforms to inculcate these attributes in our youth and to develop global competencies to make them socially and economically relevant and finally, to capitalize on the geographic dividend. For this to happen, the education system should be able to train human agency with quality nutrients to the body, mind and soul and should be able to promote the spirit of universal brotherhood and to enrich other aspects of human agency for taking civilizational discourse to higher pedestals. It is in this context that all transformational reforms enshrined in National Education Policy (NEP-2020), announced by the Government of India a year ago on 29th July 2020, becomes even more important to implement with. NEP-2020 is in fact, not merely a document, but a commitment on the part of the Government of India for nation building through a reformed education ecosystem.



**Prof. Raghavendra P. Tiwari,**  
Vice Chancellor, CUPB

Student centric NEP-2020 provides for creating a lifelong learning knowledge society based on the premise of equal, affordable, and wider learning opportunities. Academic Bank of Credits (ABC) will enable students to opt for diverse courses and institutions, through digitally storing the academic credits earned from recognized institutions and facilitating the award of degrees upon the earned and accumulated credits required for the completion of the program. Multiple Entry and Multiple Exit options will meet learning needs of diverse group of learners. Multidisciplinary curricular framework with strong skill development components will provide an opportunity for contextualized holistic rather than compartmentalized and decontextualized learning eco-system. In order to make learning joyful, and to develop higher order thinking capabilities, an emphasis has been laid on experiential learning pedagogies, viz., discussion/debate/disputation, demonstration, activity, project/dissertation/internship/case study and excursion based collaborative learning, and flip- and other modes of blended pedagogical approach. Graduate Attributes (GA) learning outcomes will ensure qualities, skills, and understandings that students need to develop while pursuing studies for certification of the degrees. These attributes will help develop competencies beyond the scope of textbooks and classrooms. These will empower the graduates to become globalised citizens, and effective members of the knowledge society capable of improving the socio-economic conditions of the nation. The policy also emphasises on developing appropriate assessment tools for measuring the learning outcomes. Through the National Language Translation Mission envisaged for knowledge sharing between Indian languages, the governance-and-policy related knowledge, as well as the traditional knowledge preserved in various languages, will be made available on the internet in major Indian Languages. This will certainly promote the sense of nationalism.

Transformational reforms envisioned in NEP-2020 cannot be implemented without the use of technology. Teachers and students alike should be empowered to use technology in teaching-learning. For ushering in the era of trans-disciplinarity paradigm a cultural and moral shift is needed. Enhanced interaction amongst academia, industry and labs by the National Research Foundation is necessary. Institutional thrust areas of research will now revolve around SDGs and local and regional needs for promoting the 'Vocal for Local' concept.

All these make NEP-2020 capable enough to inculcate entrepreneurial and agile thinking, adaptive leadership styles, resilience, interpersonal and communication skills, critical thinking, problem solving, digital dexterity and global operating skills and to adapt them to real life scenarios as it emphasises on real life-long learning and on how to learn rather than on what to learn- necessary attribute of learning in globalised environment.

Tight but light, dynamic and flexible regulatory regime, and facilitative umbrella implementation plan is the need of the hour for translating NEP-2020 to the ground realities. The Prime Minister Office, the Ministry of Education and the University Grants Commission have really burnt mid-night oil for taking the NEP-2020 to the doorsteps of the

stakeholder including civil society through several rounds of national workshops. The Ministry of Education and UGC have made sincere efforts in drawing detailed implementation plan in respect of nine key-areas of the policy, viz., multidisciplinary and holistic education; equity and inclusion in higher education; research, innovations and rankings; global outreach of higher education; motivated, energised and capable faculty; integrated higher education system; governance and regulation; promotion of Indian knowledge system, languages, culture and values; and technology use and integration. In my considered view, time is ripe for implementation of NEP. Multidisciplinary learning outcome based curricular framework and Academic Bank of Credits, in my opinion are the doable from the academic session 2021-22. Owing to the Corona pandemic, however, implementation may be adversely affected.

Teachers' role becomes crucial in the implementation of NEP-2020. To successfully implement it, they must be capable enough to adapt and embrace the evolving discourse of education. They should be able to infuse course contents with newer and refreshing ideas, should provide enough time for learners beyond the classroom, engage them in meaningful discourses concerning all aspects of education and help them in finding solutions. Teachers should be able to convert static learning spaces into active learning sites resorting to personalised/flip/adventure/cooperative/peer/service/situated/free-choice, contextual, integrative, and reflective and action-oriented teaching. Successful implementation also depends upon the cooperation from administrators, student community, parents, civil society, and the media.

In essence, NEP-2020 is supportive, caring, trusting and aims to develop links between the well-being of humanity and academic and moral excellence. NEP-2020 is fully equipped to realize the national aspirations. If a year-old crawling baby is carefully nurtured to youthhood in the right contexts and intent, enshrined transformational reforms will prepare Bharat Centric youth capable of recapturing the lost glory of the ancient Education System and repositioning Bharat as the Vishwa Guru. Let us rally behind the clarion call of our Hon'ble Prime Minister for making 'Aatma Nirbhar Bharat' through a reformed learning eco-system.

**Prof. Raghavendra P. Tiwari,**  
**Vice-Chancellor,**  
**Central University of Punjab, Bathinda**

## ACADEMIC/RESEARCH COLLABORATIONS

### June 2, 2021: Central University of Punjab signs MoU with Innovation – Technology Transfer Office to promote cooperation in IP management and Technology Transfer

The Central University of Punjab, Bathinda (CUPB) signed a Memorandum of Understanding (MoU) with Innovation–Technology Transfer Office (i-TTO) to promote collaboration in the areas of IP Management, technology transfer and competency development.

i-TTO is a regional technology transfer office set up at Foundation for Innovation and Technology Transfer (FITT), the IP and Technology Transfer arm of Indian Institute of Technology, Delhi, with support from National BioPharma Mission, BIRAC (a Govt of India and World Bank Project) to assist the academic institutions.

The objective of this MoU execution is to promote cooperation between the two organizations and to

engage i-TTO to assist CUPB with IP management, transfer of technologies developed by its faculty and students and business facilitation.

In view of COVID-19 pandemic, the signing ceremony of this Memorandum of Understanding (MoU) was organized on Wednesday through a virtual platform wherein Shri Kanwal Pal Singh Mundra, Registrar, CUPB and Ms. Pooja Bhatia (Chief Manager, i-TTO, New Delhi) inked the pact in the esteemed presence of Prof. Raghavendra P. Tiwari, the Vice Chancellor of Central University of Punjab and Dr. Anil Wali, Managing Director, FITT. Members of CUPB IPR Cell and i-TTO team members also attended this programme.



*Group Photograph of CUPB & i-TTO Officials during the signing ceremony conducted on virtual platform*

While sharing the details of MoU, Ms. Pooja Bhatia (Chief Manager, i-TTO) mentioned that under this association, i-TTO will assist CUPB to excel in the field of IP management, technology transfer and capacity building. The services that will be provided by i-TTO to CUPB will comprise assessment of research outcome, IP filling, drafting IP & tech-transfer policy, technology assessment & promotion, negotiation and signing of deals with corporates and capacity building.

On this occasion Dr. Anil Wali, Managing Director, FITT, mentioned that CUPB is a research centric university, and it has the potential to set higher standards in the area of IP management and technology transfer. He stated that, under this MoU, i-TTO will act as a facilitator

and provide the necessary support to ease the process of patent application filling and tech transfer

In his address, Prof. Raghavendra P. Tiwari, Vice Chancellor, CUPB, mentioned that CUPB has set high benchmarks in the field of research and innovation with high research publications in international journals and research projects. As a research-centric university, we need to improve our performance in the number of patent applications filed which are currently low due to the absence of a patent support system. Prof. Tiwari stated that the purpose of this MoU is to encourage our researchers and faculty to build competencies in the areas of IP Registration and Tech Transfer by taking assistance of a professional organization having expertise in this aspect. He expressed his hope that this partnership will certainly prove to be helpful in generating a higher number of patent registrations in future and build a system to generate additional income for the university in the form of patent royalty and technology transfer fees.

At the start of the programme, Prof. Anjana Munshi, Dean Research, welcomed the participants. Dr. Preeti Khetarpal, Coordinator, IPR/Technology Transfer Cell at CUPB coordinated the programme and shared the details of the MoU document. Prof. R.K. Wusirika gave the concluding remarks. Prof. Monisha Dhiman, President Institution Innovation Council at CUPB extended a formal vote of thanks. This MoU signing ceremony was virtually attended by Ms. Reema Sahni Mediratta (Project Manager – IP & Tech Transfer, i-TTO), Ms. Pragti Aggarwal (Senior Project Officer, IP, i-TTO) and Prof. Raj Kumar, (Members of CUPB IPR Cell).

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## July 12, 2021: Central University of Punjab signs MoAS with Punjab Remote Sensing Centre to promote collaboration in area of Geospatial Technology

The School of Environment and Earth Sciences at the Central University of Punjab, Bathinda (CUPB) signed a Memorandum of Academic Support (MoAS) with Punjab Remote Sensing Centre (PRSC), Ludhiana to promote research and academic collaboration for the application of Geospatial Technology.

During the ceremony Dr. Brijendra Pateriya, Director, PRSC, Ludhiana inked the pact with CUPB in the esteemed presence of Prof. Raghavendra P. Tiwari, the Vice Chancellor of the Central University of Punjab.

The programme commenced with the welcome address by Dr. Sunil Mittal, Dean, School of Environment and

Earth Science, CUPB. While sharing the MoAS objectives, he informed that under this memorandum both the organizations will commence a one-year Post-Graduate Diploma in Geoinformatics to build skilled manpower and to create research in the field of Geoinformatics. In this programme, students will study the first semester at CUPB and the second semester at PRSC, Ludhiana.

Dr. Brijendra Pateriya, Director, PRSC expressed his happiness over signing this MoAS with CUPB. He shared that this collaboration would help the scientists of both institutions to initiate joint research projects, exchange research materials, write research papers in International Scientific Journals, publish Books and



generate IPR together. He highlighted that the PG Diploma in Geoinformatics to be introduced under this MoAS will be the first of its kind exclusive programme in Geoinformatics in this region.

In his presidential address, Prof. Raghavendra P. Tiwari, the Vice Chancellor of the Central University of Punjab, stated that this MoAS will be beneficial to the people of Punjab in particular and country at large in general, as the Geospatial Technologies can help us to find out innovative solutions for environmental issues of Punjab and could play a vital role to preserve the ecological environment of our country by making optimum utilization of natural resources in the sustainable manner. He added that this collaboration is well-aligned with the NEP-2020 vision to provide maximum opportunities for a skill-based education in the form of Joint Degree Programme to be offered by both these organizations with sharing of resources and expertise. He emphasized that this collaboration is a step towards empowering youth with the skill of using emerging scientific technologies for sustainable development.



*CUPB Vice Chancellor Prof. Raghavendra P. Tiwari and PRSC Director Dr. Brijendra Pateriya showcasing the MoAS during the Signing Ceremony*

Towards the end, Dr. Puneeta Pandey delivered a formal vote of thanks. On this occasion, Dr. Raj Setia, Dr. Ajay Mathur and Mr. S.K. Sahoo were present from PRSC. Prof. Vinod K. Garg, Dean Student Welfare, Prof. R.K. Wusirika, Dean Incharge Academics, Dr. J.K. Patnaik, HoD, Dept. of Geology, Dr. L.T. Sasang Guite, HoD, Dept. of Geography, Dr. Dhanya MS and Dr. P.K.Sahu also attended the programme from CUPB.

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## MAJOR EVENTS

### June 4, 2021: Central University of Punjab commenced Mega Plantation Drive-2021 on World Environment Day

On the World Environment Day, the Central University of Punjab, Bathinda (CUPB) organized an inaugural programme for the commencement of the Mega Plantation Drive at its' lush green 500-acre campus situated at Village Ghudda, Dist. Bathinda.



*Vice Chancellor Prof. Raghavendra P. Tiwari planting tree saplings during CUPB Mega Plantation Drive-2021*

Prof. Raghavendra P. Tiwari, the Vice Chancellor, conceptualized this 'Mega Plantation Drive-2021' with the objective of planting 10,000 saplings to establish a Rose Garden, a Jamun Road and develop sites of Triveni and Commercial trees in the university.

At the start of the programme, Vice-Chancellor Prof. Raghavendra P. Tiwari along with the faculty, staff and research scholars planted saplings of rose plants for setting up of CUPB Rose Garden. Another special highlight of this programme was the plantation of 'Triveni' (a cluster of three trees Peepal, Banyan and Neem planted in a triangular shape) near the Guest House, Animal House and the Botanical Garden of the university. After this, saplings of Jamun Tree were planted on the Jamun Road. The programme also featured plantation of saplings of commercial trees like Sheesham. Apart from this, samplings of 'Amaltas' Tree known for its beauty and medicinal values were planted during this drive. During this programme, Prof. R.K. Wusirika, Dean In-charge, Academics, Prof. Vinod K. Garg, Dean Students Welfare, Prof. Anjana Munshi, Dean Research, Prof. P. Ramarao, Former DAA, Deans of

Schools of Studies, Head of the Departments and Officers of the University also planted saplings.

On this occasion, Prof. Raghavendra P. Tiwari mentioned that the purpose of 'CUPB Mega Plantation Drive 2021' is to inspire everyone to work towards 'ecological restoration', a UN decade theme to prevent ecosystem degradation. He shared that different varieties of saplings to be planted in this drive have been carefully selected based on their usage entailing the plantation of

'Trivenis' having ecological and medicinal significance and 'Sheesham' having commercial applicability. He appreciated the members of the programme organizing team including Prof. Sanjeev Thakur, Prof. Deepak Chauhan, Prof. Monisha Dhiman, Er. Saurabh Gupta and Sh. B.K. Tripathi for the successful execution of this programme.

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## June 29, 2021: Central University of Punjab Organized an Invited Lecture on Effective Grant Writing: A way forward to Research

The Office of the Dean Research at the Central University of Punjab under the patronage of Vice Chancellor Prof. Raghavendra P. Tiwari organized an invited lecture on the topic 'Effective Grant Writing: A way forward to Research'. The keynote speaker of the programme was Prof. V.K. Singh, Professor of Chemistry, IIT Kanpur and Former Director, IISER, Bhopal. The programme was attended by Deans, HoDs, faculty and students of the university.

While addressing the participants, Prof. V.K. Singh threw light on the various types of calls made by government agencies to sanction research grants like Startup Research Grant, Core Research Grant, Intensification of Research in High Priority Areas etc. He stated that during the early stages of drafting a proposal, a researcher needs to select a call which they want to apply through, identify the research problem, propose the idea for its solution, emphasize its applicability, and elaborate its benefits to the society. He underlined that the introductory aspects of the research proposal such as Title, Summary and Objectives should be well-drafted in a simplified language, be focused and to the point. The Work Plan of a Research Proposal including the methodology, time schedule and plan of action for

utilization of research outcome should be practical, measurable, and as per the time frame of the Research Project. He asserted that the applicant should follow research ethics and propose a genuine budget for the Research Proposal.



*Prof. Vinod K Singh*

Prof. Singh stressed that an applicant should understand the importance of time limit while delivering their lectures/presentation in front of the reviewing committee and should handle questions of reviewers with a positive approach. Post lecture, the participants shared their queries with the expert speaker which were properly answered.

In his presidential address, Prof. Raghavendra P. Tiwari, the Vice Chancellor, conveyed his gratitude towards the expert speaker for enlightening the participants on the topic of the programme.

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## July 1, 2021: Central University of Punjab organized a special lecture on Machine Learning: an innovative learning in Biology

The Institutional Innovation Council in collaboration with Incubation & Start-up Support Centre and Research Park of the Central University of Punjab jointly organized an Expert Lecture on 'Machine Learning: An Innovative learning in biology'. The programme conducted under the patronage of Prof. Raghavendra P. Tiwari, the Vice Chancellor, was a part of Lecture Series aimed to spread awareness about various innovative practices for better employability.

In this programme the invited speaker Dr. Satyajeet Khare, Assistant Professor, Symbiosis School of Biological Sciences, Pune, shared his views on how advanced Artificial Intelligence is currently used in our daily life and how it can be beneficial for biological research. He explained the fundamentals of Machine Learning & Artificial Intelligence tools and showed various approaches that can be useful while analysing the biological data. The talk showed that machine





*Screenshot of the programme*

learning can be very useful in Biology because through this approach, human interference/bias can be completely excluded and the end result will be unbiased and thus of the highest quality. Dr. Khare recommended adopting a combination of multiple machine learning approaches and results should be averaged out to reap maximum benefits. Though the lecture was focused on

genomics studies only, the speaker also highlighted that clinical data management, predictive medicine, management and analysis of epidemiological data like in the case of COVID-19 can be really benefited from machine learning.

Prof. Anjana Munshi, Dean Research, started the programme proceedings by introducing various innovative practices implemented at the Central University of Punjab. The guest was formally introduced by Dr. Sandeep Singh. Prof. Monisha Dhiman gave a formal vote of thanks on behalf of IIC. The talk was attended by students and faculty from various departments.

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## July 20, 2021: Central University of Punjab organized an Interactive Session on Issues in Social Science Research and New Research Priorities

The Office of Dean Research at the Central University of Punjab, Bathinda under the patronage of the Vice Chancellor, Prof. Raghavendra P. Tiwari organized an interactive session on the topic 'Issues in Social Science Research and New Research Priorities'. The event was graced by Prof. V.K. Malhotra, Member Secretary, Indian Council of Social Science Research, New Delhi who shared his ideas and experiences with the audience as the distinguished resource person.

Prof. Anjana Munshi, Dean Research, welcomed the participants and introduced Prof. Malhotra and Prof. P.K. Mishra, Dean, School of Social Sciences, made a presentation wherein he highlighted the thrust areas of research carried out by the social science faculty of CUPB and shared their challenges during problem formulation, study design and publishing research output. Following this, the HoDs and young faculty members presented the research work carried out by their respective departments.



*Prof. V.K. Malhotra*

Prof. V.K. Malhotra stated that CUPB has done commendable work in the field of research in a short span of 12 years since its establishment, and the university has immense potential to improve its rankings in the years to come. He informed that ICSSR provides funding to scholars to conduct cutting

edge research in various field of social sciences including Sociology and Social Anthropology; Political Science; Economics; International Studies; Social Geography and Population Studies; Commerce and Management; Social Psychology; Education; Social Linguistics / Socio-Cultural Studies; Law / International Law; National Security & Strategic Studies; and Other allied Social Science disciplines. He spoke about fellowships & research projects offered by ICSSR and underlined various social science disciplines under which ICSSR provides grants to organize Training and Capacity Building Programmes to enhance the quality of research. He asserted that post consideration of ICSSR's impactful policy suggestions to the Ministry of Education in the past few years has provided wider opportunities to young faculty members to earn research grants and led to an increase in the share of social science research in the overall research of our country. An example of this is the introduction of short-term research projects under IMPRESS Scheme.



*Vice Chancellor Prof. Raghavendra Tiwari and CUPB faculty attending the programme*

While interacting with participants Prof. Malhotra advised the young researchers to adopt a problem-solving approach, follow research protocol and come up with original ideas for their research. He made an appeal to young faculty members to focus on new and emerging areas in social science research which include Data Sufficiency & Data Gap; Food & Nutrition Security; Start-ups & Technology Transfer; AtmaNirbhar Bharat; Social and Human Capital blended with Skill India; Indian Knowledge Systems; Issue of Migration; Analysing the working of major democracies of the world; Geo Politics; Disaster Management; Women Empowerment; River Water Sharing between states and Countries; Research Innovation & Patents, etc. to name a few. To solve the problems of researchers, he emphasized that ICSSR is putting efforts to provide new opportunities to provide support for the publication of research work via short term research projects.

In his presidential address, Prof. Raghavendra P. Tiwari, Vice Chancellor, CUPB, expressed his gratitude towards Prof. V.K. Malhotra for enlightening the participants. He mentioned that the deliberation by Prof. Malhotra has helped the faculty to understand the overall sphere of social science operations and its possible integration with the science streams. He stressed that social science researchers need to work towards multidisciplinary and transdisciplinary research, link their research to national issues/sustainable development goals, and come out with innovative solutions for various societal problems.

Towards the end, Prof. R.K. Wusirika, Dean Incharge Academics, gave a formal vote of thanks. The programme was attended by faculty, research scholars and students of the university.

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## July 29, 2021: CUPB fraternity attended Prime Minister's address to the education community on 1st Anniversary of NEP-2020

The faculty, research scholars, and students of the Central University of Punjab, Bathinda (CUPB) under the leadership of the Vice Chancellor Prof. Raghavendra P. Tiwari attended the LIVE telecast of the enlightening address by Hon'ble Prime Minister Narendra Modi and Hon'ble Education Minister Shri Dharmendra Pradhan to the education community on July 29, 2021 on the occasion of the completion of the one year of the transformative reforms introduced under the National Education Policy – 2020 (NEP-2020).

Higher Education. Shri Narendra Modi launched an array of initiatives including Vidya Pravesh, a three-month play-based school preparation module for Grade 1 students; Indian Sign Language as a Subject at the secondary level; NISHTHA 2.0, an integrated programme for teacher training designed by NCERT; SAFAL (Structured Assessment for Analyzing Learning Levels), a competency-based assessment framework for Grades 3, 5, and 8 in CBSE schools; and a website dedicated to Artificial Intelligence. The Prime Minister also launched the National Digital Education Architecture (NDEAR) and National Education Technology Forum (NETF) as among other initiatives.



*Hon'ble Prime Minister inaugurating various schemes of transformative educational reforms introduced under NEP-2020*

During the anniversary event, the Prime Minister unveiled various educational schemes such as 'Academic Bank of Credit' (that will provide multiple entry and exit options for students in Higher education); 1st Year Engineering Programmes in Regional Languages; and Guidelines for Internationalization of



*Vice Chancellor Prof. Raghavendra P. Tiwari attending the programme*

In his address, the Prime Minister stated that our future progress and growth of the nation is dependent on the

level of education and direction given to our youth today. He highlighted that the transformative reforms introduced under NEP-2020 will transform our education system as per international standards and develop global intellectual citizens who will change India's destiny. He stated that NEP-2020 assures our youth that the country is fully with them and their aspirations. He envisioned NEP-2020 as one of the bigger factors in 'mahayagya' of national development.

Education Minister Shri Dharmendra Pradhan emphasized that the new education policy of 21st

century NEP-2020 is based on the guiding principles to bring equity, affordability, solidarity, quality, and access to education. He motivated all stakeholders to ensure its effective implementation.

After watching the programme, Prof. Raghavendra P. Tiwari, the Vice Chancellor of Central University of Punjab, asserted that our university is committed to implement NEP-2020 in totality to leverage its benefits to all the stakeholders.

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## ACTIVITIES ORGANIZED UNDER 'AZADI KA AMRIT MAHOTSAV'

### July 05—24, 2021: CUPB Department of Mathematics and Statistics organized NASI-TMC Summer School on Differential Geometry as a part of Azadi Ka Amrit Mahotsav Celebrations

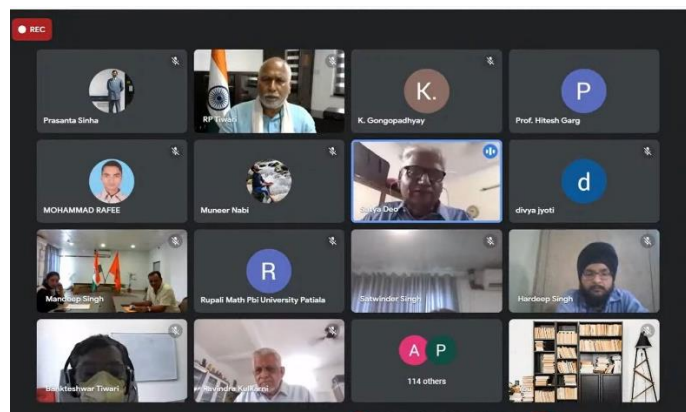
The NASI-TMC Summer School on Differential Geometry, funded by the National Academy of Sciences, India (NASI) and The Mathematics Consortium (TMC) was organized online by the Department of Mathematics and Statistics, Central University of Punjab, from July 05 to 24, 2021. The programme was conducted as a part of Azadi Ka Amrit Mahotsav under the patronage of Vice Chancellor Prof. Raghavendra P. Tiwari. The Summer School received 683 applications from across the country and abroad out of which 216 applicants were shortlisted for participation based on their interest shown in the registration form.

Distinguished Professor, Bhaskaracharya Pratishthana Pune, (Former President, TMC) graced the inaugural ceremony of this programme as the Guest of Honour and the Chief Guest respectively.

Prof. Satya Deo, the Guest of Honor of the inaugural ceremony, shared the importance of the programme theme in the present scenario. He threw light on the contribution of Indian Mathematician Prof. Vijay Kumar Pataudi to Differential Geometry and Topology subjects and encouraged participants to work in this field.

Prof. Ravi S. Kulkarni, the Chief Guest of the inaugural session, briefed about the importance of 'Differential Geometry' in both pure and applied mathematics. He shared that the concepts of 'Differential Geometry' are applicable in Physics, Chemistry, Engineering, Economics, Computer Vision, and other subjects.

Prof. Raghavendra P. Tiwari, the Vice Chancellor, CUPB, while delivering the presidential address mentioned that the topic of Summer School has its historical significance as the concepts of 'Differential Geometry' were extensively utilized during the Harappan Civilization. He highlighted the importance of 'Differential Geometry' in the field of space science, GeoPhysics, and other fields.



Screenshot of the Programme

Prof. Satya Deo, NASI Senior Scientist and General Secretary, NASI, Allahabad and Prof. Ravi S. Kulkarni,

While presenting the programme report during the concluding session, Prof. Gauree Shanker (Convener of



the Summer School), Head, Dept. of Mathematics & Statistics CUP, Bathinda, informed that the Summer School lectures were distributed in three modules. In the first two weeks, the lectures were based on: Curves and Surfaces (Module 1) and Smooth manifolds (Module 2). The motive of this course was to give intuitive knowledge of Differential Geometry to the participants. In the basic course of two weeks, 24 lectures and 12 tutorial sessions were conducted. Followed by the basic course, the third week was devoted to an advance course entitled "Surveys in Differential Geometry" (Module 3). In this week, a total of 13 lectures were delivered by eminent Differential Geometers of the top institutes of the Country. He mentioned that this programme has enhanced the understanding of the

participants regarding the concepts of advanced calculus, geometry, manifolds etc.

Out of 216 selected candidates 134 participants actively participated in all the sessions. A total of 134 certificates were awarded to participants. Keeping in mind all interested students who were not selected or could not apply to school, all lectures were live streamed on YouTube. These lectures are very helpful and will provide excellent opportunities for mathematics students to learn the basics as well as the advanced courses taught in Summer School. These are freely available to all on the Central University Punjab YouTube account.

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## ACTIVITIES ORGANIZED TO COMBAT COVID-19

### July 12, 2021: Free COVID-19 Vaccination Drive organized at Central University of Punjab

As a part of World's Largest Free Vaccination Campaign initiated by the Government of India nation-wide to prevent the spread of COVID-19, a special Vaccination Camp was organized at the Central University of Punjab, Bathinda (CUPB) on Monday under the patronage of Vice Chancellor Prof. Raghavendra P. Tiwari.

CUPB administration conducted this programme in association with Community Health Centre, Sangat (CHC Sangat) to immunize faculty, non-teaching staff and outsourced staff members.

On this occasion, a team of six persons from CHC Sangat led by Shri Om Prakash, Health Supervisor, visited CUPB Campus and administered Covishield Vaccine to CUPB employees.

Prof. Zameerpal Kaur, Controller of Examination (Officiating), Prof. Monisha Dhiman (Director, IQAC), Officers & employees of the university participated in this vaccination camp.



*CUPB faculty taking COVID-19 Vaccine during the Vaccination drive*

Prof. Vinod K Garg, Dean Student Welfare, expressed his gratitude towards Dr. Anju Kansal, SMO, CHC, Sangat & her team for extending essential support to organize this Vaccination Camp. In this Vaccination drive, more than 150 teaching and non-teaching employees along with their family members took the first / second dose of coronavirus vaccine.

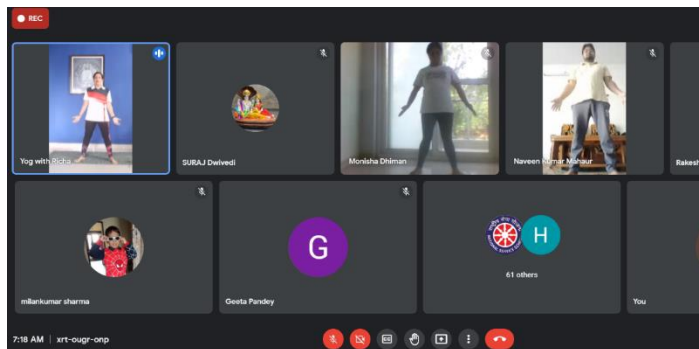
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## NSS ACTIVITIES

### June 17—20, 2021: Central University of Punjab organized 'Special Event Series' to mark International Yoga Day- 2021

The NSS Cell and the Department of Physical Education of the Central University of Punjab under the patronage of the Vice Chancellor Prof. Raghavendra P. Tiwari organized 'Special Event Series' to mark the International Yoga Day-2021. In this programme series, a three-day Art of Living Session, a Yoga Session, and a Yoga Asana Competition was organized from June 17—20, 2021. CUPB Faculty, staff and students of the university virtually participated in these programmes.

During the three-day Art of Living Session (June 17—19, 2021), participants learned yogic breathing, meditation and pranayama techniques from expert trainers Mr. Amitesh Marwah (State Youth Coordinator, Punjab) and Dr. Vikas Gautam (Patiala Medical College). To enhance physical, mental and emotional immunity of participants, this workshop also included asanas related to lymph nodes, exercise to clean our energy channels such as nadi shodhana and meditation with Sri Sri Ravishankar.



*CUPB faculty and students performing Yoga during Special Session by certified Yoga Trainer Ms. Richa Mishra*

In the Special Yoga Session held on June 20, 2021 with Ms. Richa Mishra, Certified Yoga Professional by Ministry of Ayush, GOI, the participants performed yogic prayer and specific asanas for prevention and management of common lifestyle disorders. In this session, Ms. Mishra also demonstrated technique of Surya Namaskar, Smaran Shakti Vikasak Kriya and Yoga postures for relaxation of muscles.

In the Yoga Asana Competition, employees and students of the university participated by submitting their photos/videos of performing different Yoga Asana. Rupika Chowdhary, Nirmala and Chitranshi Patel got the first, second and third rank respectively in the yoga competition among girl students. Sai Eswar, Ravi Prakash and Abhay Vashishth bagged first, second and third position respectively among yoga competition for boys' students. Dr. Vinod Kumar and Dr. Virender Singh got first and second prize respectively in the yoga competition for male faculty members.

Prof. R.K. Wusirika, Dean In-charge Academics, expressed his gratitude towards the trainers of these programmes and applauded participants for their sincere participation in various events. He encouraged youngsters to adopt Yoga as a part of their lifestyle for a healthy body and healthy mind. Prof. Monisha Dhiman congratulated activity coordinators for successful execution of this programme. She made an appeal to celebrate International Yoga Day-2021 by performing 'Yoga at Home and Yoga with family'.

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### July 23, 2021: Plantation drive organized as a part of Van Mahotsav

The NSS Cell of the university under the patronage of Vice Chancellor Prof. Raghavendra P. Tiwari organized a plantation drive as a part of Van Mahotsav campaign.

During this programme Prof. R.K. Wusirika, Dean Incharge Academics, Prof. Anjana Munshi, Dean

Research, Prof. Monisha Dhiman, Director IQAC & NSS Coordinator, faculty and staff of the university planted trees near the University Main Gate. Around 120 saplings of Shisham (Indian Rosewood) were planted in this plantation drive.





*CUPB faculty and staff members planting tree saplings during Plantation Drive*

## WEBINARS

**June 5, 2021: CUPB Dept. of Botany organized National Conference on Climate Change on World Environment Day**

- **Solution lies in embracing environmental sustainability at the personal level, says Prof. Raghavendra P. Tiwari, Vice-Chancellor, Central University of Punjab**

The Dept. of Botany, Central University of Punjab, Bathinda (CUPB) celebrated the World Environment Day by organizing a National Conference on Climate Change. The Chief Guest and Guest of Honour of this programme were Dr. Vandana Prasad, Director, Birbal Sahni Institute of Palaeosciences, Lucknow and Shri Manoj Chandran, IFS, Chief Conservator of Forests, Dehradun respectively. The Conference conducted in collaboration with the United Nations attracted 1492 participants from all over the country.

During the conference, Professor Raghavendra P. Tiwari, the Vice-Chancellor of the Central University of Punjab,

opined that an effective way to address environmental problems of the 21st century is to bring sustainability to a personal level. Prof. Tiwari added that reducing carbon footprint to achieve carbon neutrality is a collective effort and shifting responsibility to the government is not a solution for all the damages we are inflicting to our mother earth. He also highlighted the importance of afforestation and shared the efforts done by CUPB in this direction.

Speaking on this occasion Dr. Vandana Prasad, Director, Birbal Sahni Institute of Palaeosciences, Lucknow, spoke on 'Climate Change: Evidence from past records'. She





*Dr. Vandana Prasad*

discussed various methods to study past climate and highlighted the importance of these proxies, including pollen grain analysis and study of tree rings to study the climate during the last 10,000 years, especially during various civilizational discourses like Harappan Civilization.

Shri Manoj Chandran, IFS, Chief Conservator of Forests, Dehradun, spoke on 'Ecosystem Restoration of Temperate Grasslands'. He highlighted how grass taxonomy and collection became his passion in life, although he is a forest administrator by profession and did not have any formal training in plant taxonomy. To date, his private collection includes more than 800 species of grasses from across the Indian



*Shri Manoj Chandran*

subcontinent. He highlighted various environmental damages inflicted by ornamental grass species used in lawns introduced first by Britishers. Lawns not only demand copious amounts of freshwater but also does nothing to restore a damaged ecosystem. With bee populations on the steep decline everywhere globally, he highlighted the dire need to cultivate indigenous grass species.

An International Quiz was also conducted as part of this Conference in which the participants attended 15 questions on the theme of environment. Ms. Vidhi Sharma (UP), Ms. Nirmala (Rajasthan) and Mr. Jayakrishnan V.M. (Kerala) won first, second and third prizes, respectively. Prof. Tiwari congratulated all the winners as well as the participants.

The programme commenced with the welcome address by Prof. R.K. Wusirika, Dean In-charge Academics. Dr. Felix Bast, HoD, Dept. of Botany conducted this programme. Faculty, scholars and students from different departments of the university also attended this National Conference.

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## June 8, 2021: CUPB Dept. of Botany celebrated World Oceans Day by organizing a Webinar and International Quiz

The Dept. of Botany, Central University of Punjab, Bathinda (CUPB) celebrated the World Oceans Day by organizing a Webinar on the topic 'Planet Earth's Oceans: Its flywheel' and an International Quiz. The theme of Oceans Day Celebrations was 'The Ocean life and livelihoods'. This programme was part of the UN World Oceans Day celebrations.

The invited speaker of the programme was Prof. Vinod Kumar Gaur, Shanti Swarup Bhatnagar Award Winner (1979) and the Former Secretary, Ministry of Earth Sciences, Government of India. Prof. Gaur is a world acclaimed Seismologist and the first person who used GPS to calibrate velocity of Indian tectonic plate moving toward Eurasian plate.

In his keynote address, Prof. Vinod Kumar Gaur mentioned that the earth's ocean acts as its flywheel as it circulates large reservoirs of energy & minerals and helps in stabilizing the temperature by absorbing large amounts of heat. He highlighted how the oceans open up vast avenues for economic prospect including rare earth minerals. He also discussed the role of Ocean Conveyor Belts, caused by thermohaline currents in the deep ocean and wind driven currents on the surface, in

the movement of water across the globe. Prof. Gaur said that "Although the nearest coastline is hundreds of kilometres away from Punjab, this area had been a coastline approximately 55 million years ago". He highlighted that to mitigate the impact of carbon emission and greenhouse gases, the oceans have degraded their own health



*Prof. Vinod K. Gaur*

and gradually became warm and acidified, thereby increasing the sensitivity to climate change. Prof. Gaur also discussed the adverse effects of the increase in ocean water temperature on marine species and emphasized that scientists across the world should work towards creating technologies that can harness the cyclic energy of oceans and nourishing its regenerative potential.

In his presidential address, Prof. Raghavendra P Tiwari, the Vice Chancellor of Central University of Punjab, asserted that the increase in water pollution levels have increased the toxicity in several pockets of ocean to the dangerous level which threatens the existence of marine

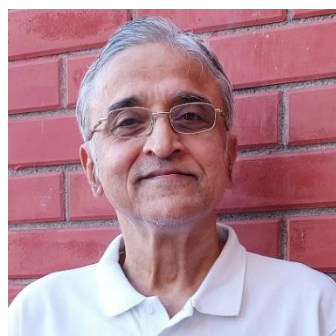
life in such areas. He stated that the impact on one component of the earth system will adversely affect other components. Hence all components of the earth system viz., lithosphere, biosphere, hydrosphere, and atmosphere have to be viewed and treated as an integral entity to save human civilization flourishing on mother earth. The technologies developed for harnessing natural resources should be based on Sustainable Development Goals to ensure that the various components of the ecosystem co-exists in a healthy manner and supplement and complement each other.

During this programme, an International Quiz Competition was also conducted in which 1360 participants from all over the world attended 15 questions on the theme of Oceans. The Quiz was moderated by Dr. Felix Bast, HoD, Dept. of Botany. Jaya Krishnan VM from Kerala, Anita Suresh Parsekar from Goa, and Rahul Mukherjee from West Bengal won the first, second and third prizes, respectively. Faculty, scholars and students from different departments of the university and elsewhere attended this programme.

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### June 29, 2021: CUPB Dept. of Mathematics & Statistics organized an invited talk on 'Role of Statistics in the era of Big Data, Analytics & Data Science'

On the National Statistics Day, the Dept. of Mathematics and Statistics of the Central University of Punjab, Bathinda (CUPB) under the patronage of Vice Chancellor Prof. Raghavendra P. Tiwari organized an Invited Lecture to celebrate the birth anniversary of late Prof. Prasanta Chandra Mahalanobis, the recipient of Padma Vibhushan Award. The title of the talk was "The Role of Statistics in the Era of Big Data, Analytics & Data Science". This talk was delivered by Prof. Rajeeva Laxman Karandikar, Distinguished Professor, Chennai Mathematical Institute.



*Prof. Rajeeva L Karandikar*

The Keynote speaker, Prof. Rajeeva L Karandikar gave an enlightening talk on the topic "The Role of Statistics in the Era of Big Data, Analytics & Data Science" which encouraged participants to think about the importance of Statistics in real life and in other

research areas. He mentioned that statistics has many practical applications in everyday life like classification of people's characteristics based on physical appearance, prediction of score in sports, weather forecast, emergency preparedness etc. He stated that statistical tools help the researchers in the areas of data acquisition, analysis, interpretation and presentation. He highlighted the importance of statistics in the exit polls and discussed how one can use the information to make accurate predictions. He emphasized that statistics play a vital role in different fields such as Medical Care, Insurance, Consumer Products, Financial Markets etc. His ability to present the topic in such an interesting way inspired the students & research scholars to think deeply about the importance of statistics and its relevance in the era of Big Data.

Towards the end, Dr. Gauree Shankar, HoD, Dept. of Mathematics and Statistics, expressed his gratitude towards the keynote speaker. Faculty, staff and students of the University attended this programme online.

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### June 30, 2021: CUPB Dept. of Financial Administration organized National Webinar on 'Social Entrepreneurship'

The Dept. of Financial Administration in association with Institution's Innovation Council (IIC) at the Central University of Punjab, Bathinda (CUPB) under the patronage of the Vice Chancellor Prof. Raghavendra P. Tiwari organized a National Webinar on the topic 'Social Entrepreneurship'. The keynote speaker of this

programme was Prof. Karunesh Saxena, Director IQAC & Director CDC, MLSU, Udaipur.

In his keynote address, Prof. Saxena stated that the concept of 'Social Entrepreneurship' emerged in the 1980s when Muhammad Yunus, the Noble laureate

from Bangladesh, founded Grameen Bank which



*Prof. Saxena addressing the participants*

pioneered the concept of microcredit. He defined ‘Social Entrepreneurship’ as the process of recognizing an opportunity to create social value and establish new business ventures to bring social change. He mentioned that Entrepreneurship is different from Social Entrepreneurship as the former aims to capture the business market share to maximum profits whereas the later aims to fill the market gap by providing sustainable solutions for social change, and profit is just a means of financial stability. He discussed case studies of successful Social Entrepreneurs such as Bindeshwar Pathak (founder of Sulabh International), Vineet Rai (founder of Avishkar Social Venture), Harish Hande (founder of SELCO solar lighting firm), Sunita Ghose (founder of Rangsutra textile sourcing firm), Saloni Malhotra (founder of desire crew Rural BPO) etc. and highlighted that all of them have common characteristics like creativity, desire, passion, leadership and self-motivation.



*CUPB faculty members attending the programme*

Prof. Saxena underlined that there are three types of social entrepreneurs i.e. Rainmakers, Change-makers and Spiritual Capitalists. He recognized Madhav Chavan (founder of NGO Pratham), and Anshu Gupta (Founder of NGO Goonj) as change-makers and identified Madhu Pandit Dasa (founder of Akshay Patra Foundation) and Sri Sri Ravishankar (Founder of Art of Living) as the Spiritual Capitalists. While throwing light on the challenges faced by social entrepreneurs, he pointed out that young social entrepreneurs generally faced financial constraints at the start and asserted that if their idea is novel then they tend to get financial support from angel investors. He encouraged CUPB research scholars and students to enter the field of ‘Social Entrepreneurship’ and become change-makers by creating social values.

Faculty and students from different departments of the university attended this programme on the virtual platform.

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## July 3, 2021: CUPB Dept. of Biochemistry organized a special lecture on ‘From Academic Excellence to Enterprise’

Central University of Punjab, Bathinda (CUPB) under the patronage of the Vice Chancellor Prof. Raghavendra P. Tiwari organized a special lecture on “From Academic Excellence to Enterprise”. The Department of Biochemistry at CUPB conducted this programme in association with Institution’s Innovation Council (IIC) as a part of the Talk Series: “The possibilities for a Science Enthusiast”. The keynote speaker of the event was Dr. Narendra Padhan, an accomplished researcher in the field of Cancer and Vascular biology and an upcoming Entrepreneur, Co-Founder and Director of a Startup Molecular Kitchen based in Uppsala, Sweden.

During his lecture, Dr. Narendra Padhan, the Guest Speaker, shared his experiences as a biology researcher and touched upon his key observations from and outside the laboratory, local vendors that made him take up the field of entrepreneurship. He expressed his concerns regarding the right training of students in their

formative years, the robustness of biological experiments along with the need for fast-track research work that gave him the idea to come up with his Startup platform, which provides virtual experimental training to life scientists. He elaborated on how the continuous process of learning, unlearning and re-learning along with the acquisition of new skills is a must to achieve something novel and useful. The event came up as a student-centric discussion with an interesting Q & A session moderated by student volunteers from the Department of Biochemistry.



*Dr. Narendra Padhan*

In the opening remarks, Prof. Ramakrishna Wusirika, Dean Incharge Academics highlighted the need for such



ventures to fulfil the need of job creators rather than job seekers through innovative ideas in the biological sciences. Dr. Manju Jain, Event Coordinator, concluded the session with the take-home message for the students to be rigorous and detailed in their scientific

pursuit to make it innovative and enjoyable towards building newer career possibilities. Around 100 science enthusiasts attended the webinar.

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## July 6, 2021: CUPB School of Education organized a webinar on Inclusive and Equitable Higher Education

The School of Education of the Central University of Punjab under the patronage of Vice Chancellor Prof. Raghavendra P. Tiwari organized a Webinar on 'Inclusive and Equitable Higher Education'. The keynote speaker of this programme was Dr. Sanjay Kant Prasad, Deputy Chief Commissioner of Persons with Disabilities, the Ministry of Social Justice and Empowerment, Govt. of India.

While introducing the programme theme Dr. Shankar Lal Bika, Head & Dean, School of Education, CUPB said, the concept of Equitable & Inclusive Education will be realized when all the students regardless of their challenges are placed in general education classes in their own neighbourhood Schools and Higher Education Institutions (HEIs).



**Dr. Sanjay K. Prasad**

The Keynote speaker Dr. Sanjay Kant Prasad stated that India is a diverse country with different groups of diverse people who are somehow deprived of the mainstream education and higher education. He described various types of human

diversities and considered Persons with Disability (PwD) having diverse groups who require larger support from academicians and policymakers to actualize the vision of diversity, equity and inclusion in the higher education sector in India. He shared that NEP-2020 has introduced innovative reforms to make quality higher education opportunities available to all individuals in the society. He talked about various types of disabilities as described in 'Persons with Disabilities Act, 2016' and discussed various Government Schemes to enhance the accessibility of primary and higher education programmes to every person and make PwD the productive citizens of our society. He stressed the need for the development of resources, developing the structure of resources and development of an accessible

environment for the effective utilization of resources to create an equitable and inclusive society. He referred to various software and aids and appliances to impart education to PwDs and emphasized the need to adopt an action and empirical research to find out need-based solutions for every student in the classroom. He also shared that the 'Rehabilitation Council of India' has designed rehabilitation professional education programmes for various types of disabilities and the same can be made available by universities with the approval of UGC to achieve the objective.



**Screenshot of the programme**

In his presidential address, Prof. Raghavendra P. Tiwari, the Vice Chancellor, stated that our ancient Indian holy scriptures, saints and social reformers have enlightened us to work towards creating an inclusive and equitable society. He underlined the need to change the existing vertical structure of resources to the horizontal structure, to increase the accessibility of resources to every section of society. He emphasized that change can be possible at the societal level when we appreciate the special abilities in every differently abled person and consider them as an important part of our society.

Prof. R.K. Wusirika, Dean Incharge Academics, gave concluding remarks and extended a formal vote of thanks. Faculty and students of the university attended this programme.

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## July 15, 2021: CUPB Dept. of Geography organized Webinar on 'Disaster Management Plan'

The Department of Geography, Central University of Punjab, Bathinda in collaboration with National Institute of Disaster Management (NIDM), New Delhi organized a Webinar on Disaster Management Plan (DMP). The Webinar was conducted under the patronage of Prof. Raghavendra P. Tiwari, Vice Chancellor, CUPB and Maj. Gen. M.K. Bindal, Executive Director, NIDM, Delhi. Its objective was to highlight the importance of Disaster Management Plan (DMP) and the role of DMP before the disaster, during the disaster and after the disaster. The invited speakers of this programme were Shri. Shekher Chaturvedi, Assistant Professor, NIDM, New Delhi and Shri Arun Verma, Young Professional from NIDM, New Delhi.

The first lecture of this programme was delivered by Shri. Arun Verma on 'Disaster Management Concepts & Vulnerability profile of India including Covid 19 status'. In his presentation, he highlighted the COVID related disaster and discussed the basic concepts of disaster management, types of disasters, and highlighted the different phases of



*Mr. Arun Verma*

disaster management and explained many disasters related terminology with pictorial examples.

The second presentation was delivered by Shri. Shekher Chaturvedi on 'Institutional framework of disaster management and Need of Disaster Management Plan, its formulation and various techniques such as HVCA technique used to develop Disaster Management Plan'. In his presentation he highlighted the genesis of many institutional and policy/groups related to disaster management across the globe and highlighted the institutional set up of disaster management in our country, and the role of central, state, district administration includes the NDMA, NDRF, NIDM and DM Act 2005 in disaster management. The lecture sessions were followed by a Question-Answer Session.



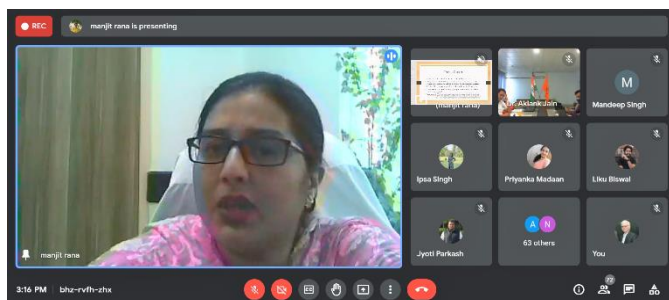
*Shri. Shekher Chaturvedi*

The programme was conducted through online mode. Faculty, research scholars and students from different departments of CUPB & other educational institutions participated in this workshop.

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## July 23, 2021: CUPB Dept. of Zoology organized Webinar on 'Awareness and Prevention of the Female Cancer'

The Dept. of Zoology at the Central University of Punjab, Bathinda under the patronage of the Vice Chancellor, Prof. Raghavendra P. Tiwari organized an interactive session on the topic 'Awareness and Prevention of Female Cancer'. The keynote speaker of this programme was Dr. Manjit Kaur Rana from AIIMS, Bathinda.



*Dr. Manjit Kaur Rana addressing the participants*

While addressing the participants Dr. Manjit Kaur Rana mentioned that Cancer is a disease wherein some of the body's cells grow uncontrollably and spread to other parts of the body. She stated that several clinical terms used for various types of cancer are Carcinoma, Sarcoma, Leukemia, and Lymphoma & Myeloma. She mentioned that if we detect cancer at the early stage, the survival chances of the patients increase many fold. She highlighted that breast and cervical cancer are the common types of female cancers which can be easily detected at the early stages if regular screening practice is followed. Dr. Manjit Kaur Rana educated the participants on how they can do the self-examination of the breast to monitor any changes in its size, shape, and presence of lumps in the breast. She also discussed the causes of cervical cancer and underlined the importance of timely screening and vaccination to prevent cervical

cancer. She recommended that all women ages twenty-nine or above should have regular clinical examinations every two years, and women above forty years should go for mammograms, Pap & HPV Tests every three to five years. In this way, with self-examination, doctor's advice, and regular screening, cancer can be detected at an early stage.

At the start, Dr. Aklank Jain, HoD, Dept. of Zoology, welcomed the participants and introduced the keynote speaker. Following this, Dr. Aarti introduced the programme theme. Towards the end, Ms. Shweta Arora, Deputy Registrar gave a formal vote of thanks.

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### July 23, 2021: CUPB Dept. of Punjabi organized a special lecture on "Revisiting Shiv Kumar Batalvi's Poetry" on the occasion of birth anniversary of Shiv Kumar Batalvi

To celebrate the birth anniversary of legendary Punjabi poet, Shiv Kumar Batalvi, the department organized a special online lecture on the title "Revisiting Shiv Kumar Batalvi's Poetry" ("ਸ਼ਿਵ ਕੁਮਾਰ ਬਟਾਲਵੀ ਦੀ ਕਵਿਤਾ: ਪੁਨਰ ਸੰਵਾਦ"). The invited speaker of this programme was Prof. Sukhdev Singh, Former Professor and Head, Department of Punjabi, Panjab University, Chandigarh.

subconscious of Punjab very closely and connected a large number of new readers / listeners with poetry. Prof. Sirsa talked about the myths and misconceptions of Shiv Kumar's poetry, problems of the criticism of Punjabi poetry, the wider spectrum of the metaphoric structures, sociological-psychological concerns of Batalvi's poetry and its present relevance.

Prof. Zameerpal Kaur, Dean, School of Languages Literature and Culture, expressed her gratitude towards invited speaker and thanked participants for making this programme a success.

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Prof. Sukhdev Singh

Prof. Sukhdev Singh in his speech pointed out that Shiv Kumar Batalvi gave a new face to Punjabi poetry by understanding the

### July 27—29, 2021 - CUPB School of Law organized three-day lecture series with eminent Academicians and Legal Practitioners

The School of Legal Studies of the Central University of Punjab, Bathinda (CUPB) under the patronage of Vice Chancellor Prof. Raghavendra P. Tiwari organized a three-day lecture series from 27—29 July 2021 to raise the quality of research in the discipline of law and to enhance the understanding of the current state of police reforms & administration of criminal justice. The distinguished speakers of this lecture series were Prof. Veer Singh, Former Vice Chancellor, NALSAR and Former Director, Chandigarh Judicial Academy; Prof. G.S. Bajpai, Vice Chancellor, Rajiv Gandhi National University of Law, Patiala; and Dr. Meeran Chadha Borwankar, IPS & Former Director General, Bureau of Police Research & Development, GOI.

well as disadvantages. He emphasized that AI could help the teachers to develop more effective student-centric learning modules and automated processes to evaluate students during the time of online learning and a smart classroom environment. Prof. Veer Singh advised researchers to use AI based techniques/software to enhance the quality of their research work in the stages of data collection, hypothesis testing and to check the similarity/ originality of their work etc.

In the second lecture, Prof. G.S. Bajpai delivered an expert talk on 'Selection of Topics for Research, Research Proposal and Quality of Research'. He stated that objectivity, quantification, generalization and methodology are the core elements of research in the discipline of law. He underlined that in a research proposal, a researcher should clearly state the problem of research, contextualize its significance, specify the research design, and elaborate its social relevance. He recommended youngsters to conduct a qualitative



analysis of the concept of legal justice and assess the impact of laws among civilians.



*Photo Collage of distinguished speakers Dr Meeran C Borwankar (top left), Prof GS Bajpayee (top right), Prof Veer Singh (bottom left) and CUPB Vice Chancellor Prof R.P. Tiwari (bottom right)*

During the third lecture, Dr. Meeran Chadha Borwankar enlightened the participants on 'Police Reforms and Administration of Criminal Justice'. She highlighted that pendency of a large number of criminal cases in courts of India and the low rate of conviction is a matter of

serious concern which not only encourages the criminals but also reduces the faith of civilians in the judicial system. She focused on the 2006 Supreme Court Ruling on police reforms and threw light on the efforts of the Maharashtra Government regarding its implementation. She stressed the need of filling up vacant posts, investment in infrastructure, regular training of police personnels to upgrade the standards of legal enforcement in our country.

In his presidential address, Prof. Raghavendra P. Tiwari, the Vice Chancellor, expressed his gratitude towards the expert speakers for delivering the scholarly address. He encouraged researchers to focus on societal problems to promote social justice, which will further promote equality, peace and happiness among citizens of our nation.

At the start, Prof. Tarun Arora, Dean, School of Legal Studies welcomed the participants, introduced the keynote speaker & threw light on the programme theme. Prof. Vinod K. Garg, Dean Student Welfare and Prof. R.K. Wusurika, Dean Incharge Academics extended the formal greetings to the speakers of the programme and shared their remarks towards the end. The programme was attended by faculty and students of the university as well as other educational institutions of different states of the country.

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## INVITED LECTURES

### Eminent academicians enlightened students during Invited Lectures organized by CUPB



*Prof. Harpreet  
Kaur*

June 11, 2021: CUPB Dept. of Psychology organized an Invited Lecture on 'Career Prospects in Psychology'. The keynote speaker of this programme was Dr. Harpreet Kaur, Professor, Dept. of Psychology, Punjabi University, Patiala. She motivated students to prepare for various opportunities in this profession and inspired research scholars to find innovative solutions to various problems in the society.



*Dr. Hemant Bhutani*

July 1, 2021: CUPB Dept. of Pharmaceutical Sciences and Natural Products along with Department of Pharmacology organized an invited talk on 'Applications of Real-Time Analytics in the Pharmaceutical Development'. The invited speaker of this programme was Dr. Hemant Bhutani, Director and Head of Analytical R&D, Bangalore, Biocon Bristol Myers Squibb R&D Centre, Bangalore.



*Dr. Rashmeet Singh*

July 21, 2021: CUPB Dept. of Microbiology and NSS, under the patronage of Vice Chancellor Prof. Raghavendra P. Tiwari, organized a Webinar on 'Preparedness for possible third wave of COVID-19 with Dr. Rashmeet, MBBS, MD (Medicine), IVY Hospital, Bathinda. He emphasized on strict adoption of COVID-19 appropriate behaviour, accelerating vaccination drive and consumption of a protein rich diet to get develop proper immunity to fight COVID-19.



*Shri Sandeep Patil*

July 12, 2021: CUPB Dept. of South and Central Asian Studies organized an expert lecture on India's Cyber Security Challenges. The invited speaker of this programme was Mr. Sameer Patil, Fellow, International Security Studies Programme (Gateway House), Indian Council on Global Relations (Mumbai).



*Shri Rajeev K. Arora*

July 30, 2021: To familiarize the students with employment opportunities in media, the Department of Punjabi organized an interactive session on the topic "Employment Opportunities for the Students of Literature in Media" with Mr. Rajeev K. Arora, Station Director, All India Radio, FM Bathinda. He talked about the skills required to succeed in this field.



*Prof. Suryaprasad Dixit*

July 31, 2021: To mark 141st birth anniversary of Hindi Kathasamrat Premchand, CUPB Dept. of Hindi organized a Special Lecture titled 'Premchand Ke Sahitye Mein Samajik Sanrachna Ka Swaroop' ('प्रेमचंद के साहित्य में सामाजिक संरचना का संकल्प'). The invited speaker of this programme was Prof. Suryaprasad Dixit, Former Professor and HOD, Dept. of Hindi, Lucknow University, Lucknow.

## STUDENT ACHIEVEMENTS

### The List of students defended Ph.D. Thesis (June 2021 to July 2021)

Sr. No.	Registration Number	Name	Department	Viva held date
1	CUPB/MPh-PhD/SS/CES/2013-14/24	Sunitha V.P.	Economic Studies	June 7, 2021
2	16phdmns02	Baljinder Kaur	Mathematics & Statistics	June 14, 2021
3	16phdgeg01	Prem Chand Kisku	Geography & Geology	July 28, 2021

### Other Achievements

Sr. No.	Department	Achievement
1	Dept. of Computer Science & Technology (CST)	4 students got placement through CUPB CST Department at Chandigarh University with package of 2.90 Lakhs per annum
2	Dept. of Psychology	Research papers of two students (Dimple Sarma & Swati Punia) of CUPB Psychology Dept. got selected for an International virtual conference on 'Psychological wellbeing in the pandemic era'

# RESEARCH PUBLICATIONS

## List of Research Publications

- Abiri, R., Abdul-Hamid, H., Sytar, O., Abiri, R., de Almeida, E. B., Sharma, S. K., Bulgakov, V. P., Arroo, R. R. J., & Malik, S. (2021). A brief overview of potential treatments for viral diseases using natural plant compounds: The case of sars-cov. *Molecules*, 26(13). <https://doi.org/10.3390/molecules26133868>
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## CUPB SCIENTIST'S RESEARCH IN NEWS

### July 6, 2021 - CUPB Scientists discovered a new plant species of moss in Antarctica, named it *Bryum Bharatiensis* as a tribute to Indian Goddess Saraswati

The Polar & Marine Biologist of the Central University of Punjab, Bathinda (CUPB) discovered a new native plant species of moss from eastern Antarctica. The species is named '*Bryum bharatiensis*' as a tribute to goddess Saraswati (also known as 'Bharati') and one of India's Antarctic Station 'Bharati'. The research paper describing the discovery has been accepted for publication by 'Journal of Asia-Pacific Biodiversity'.



*Close-up photo of the newly discovered species of moss, *Bryum bharatiensis**

This species was discovered by Dr. Felix Bast, Polar & Marine Biologist, and HoD, Dept. of Botany, CUPB, during his Antarctica visit as an expedition scientist in Indian Antarctic Mission 2016-17, wherein he found green plants on rocks near the Bharati station at Larsemann Hills, East Antarctica. After returning to CUPB, Dr. Bast along with his Ph.D. student, Mr. Wahid Ul. Rahman and collaborator Dr. Kriti Gupta (HoD, Department of Botany at DAV College, Bathinda) performed taxonomic assessments & various studies which confirmed that the species is a new species of moss discovered for the first time in the world. The authors used an approach combining morphology-based

traditional techniques with DNA Sequence-based modern tools for formalizing the species discovery.

Prof. Raghavendra P. Tiwari, the Vice Chancellor of the Central University of Punjab, congratulated the research team for this discovery. He stated that this discovery of 'moss on ice' in Antarctica is significant & alarming for the world, as it indicates the effect of climate change resulting in changing biodiversity patterns in Antarctica.

Prof. Anjana Munshi, Dean Research, informed that this is the sixth species discovery from the research group of Dr. Bast, all earlier five were new species of marine seaweeds from Indian coasts. She added that although this discovery adds achievement to our University Researcher Team, the increasing biodiversity on the south pole of the earth indicates the rise in temperature at the polar continent.

Dr. Felix Bast mentioned that this is the first and the only plant species discovery resulting from 40 years of Indian Antarctic Mission, which began in 1981. He said "Antarctica is now getting greenified; many temperate species of plants that previously could not survive in this frozen continent are now seen everywhere because of the warming up of the continent."

Besides the new species discovery, the study also revealed two new taxonomic records. The moss *Bryoerythrophyllum recurvirostrum* was recorded for the first time from Larsemann Hills and the moss *Coscinodon lawianus* from Schirmacher Oasis. The researchers hypothesised that moss in severe winters in Antarctica can dry up to the dormant stage while covered under tonnes of snow and it springs back to life by soaking water when the snow melts in summer.

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## July 21, 2021: CUPB and MRSPTU Scientists develop Metal-Organic Framework to tackle oxygen supply and making it affordable ahead of predicted 3rd wave of Covid-19

The Vice Chancellor of Maharaja Ranjit Singh Punjab Technical University (MRSPTU), Prof. Buta Singh Sidhu and Central University Punjab (CUP) officials addressed a joint press conference at MRSPTU to announce the successful development of Metal-Organic Framework (MOF's), which would prove beneficial and play a crucial role in tackling oxygen shortage and making it affordable amidst the predictions of 3rd wave of COVID-19.



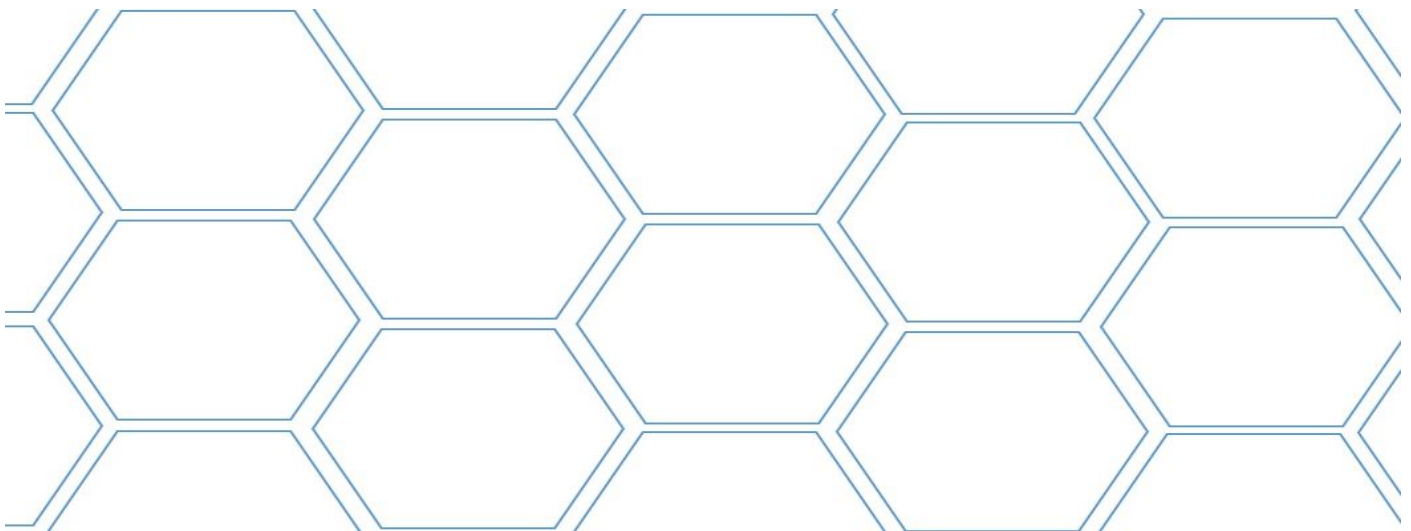
*Prof. Buta Singh Sidhu, MRSPTU Vice Chancellor, Prof. V.K. Garg, Dean Student Welfare, CUPB, Research Collaborators Dr. J. Nagendra Babu (CUIPB) and Dr. Meenu (MRSPTU) addressing during the Press Conference*

Explaining the technology, research collaborators Dr. J. Nagendra Babu, Assistant Professor, Dept. of Chemistry, Central University Punjab and Dr. Meenu, Assistant Professor, Dept. of Chemistry, MRSPTU, said "Ambient air consists of 78% of nitrogen and 21% of oxygen. Presently commercially available zeolites or molecular

sieves are being used for selective separation of oxygen from nitrogen. The syntheses of zeolites or molecular sieves is quite expensive and energy consuming technology. Herein, the scientists in a joint research work undertaken at MRSPTU, Bathinda and CUP have been successful in developing a Metal-Organic Framework (MOFs) with cavity specific for fit and selective binding of nitrogen over oxygen, which is the basic principle behind the Pressure Swing Adsorption (PSA) based oxygen concentrator."

They further explained, "These MOFs can be used as substitute materials for costly zeolites and molecular sieves that are being used commercially. These MOFs are easy to prepare in energy-efficient greener synthetic methods. The findings do establish the MOFs use in Pressure Swing Adsorption (PSA) process oxygen concentrators at individual scale and could be scaled up to even 300 beds hospital. Apart from this, these MOFs can also be used for enhancing the oxygen storage capacity of oxygen cylinders, which would be prospected later. The purity, efficiency and recovery of the PSA process require further optimization and we look forward to the same as the proposal is submitted to the Department of Science and Technology, Government of India Special Call for Oxygen Concentrators."

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अपने शोध का राष्ट्रीय मुद्दे से जोड़ना जरूरी : तिवारी

जयपुर: 'राष्ट्रीय शोध दिवस' के अवसर पर... अपने शोध को राष्ट्रीय मुद्दे से जोड़ना जरूरी...

सोयूची में समाजिक विज्ञान अनुसंधान में सुविधाएं और नई अनुसंधान प्रणालियां... शोध दिवस का उद्देश्य...

विश्व पर्यावरण दिवस पर जलवायु परिवर्तन विषय पर राष्ट्रीय सम्मेलन का आयोजन

नवंबर 5 पर... विश्व पर्यावरण दिवस के अवसर पर... जलवायु परिवर्तन विषय पर राष्ट्रीय सम्मेलन का आयोजन...

उत्तरीय क्षेत्रों में... जलवायु परिवर्तन... जलवायु परिवर्तन विषय पर राष्ट्रीय सम्मेलन का आयोजन...

राज्य प्रतियोगिता में लड़कियों में रूपिका चौधरी व लड़कों में साई ईश्वर ने मारी बाजी

नर्मला व रवि प्रकाश ने द्वितीय और चित्रा श्री व अभय वाशिष्ठ ने तृतीय... राज्य प्रतियोगिता में लड़कियों में रूपिका चौधरी व लड़कों में साई ईश्वर ने मारी बाजी...

यौग्यता विकास में सहयोग करेंगे सीयूपीबी और आइ-टीओ

करोड़ों के बच्चे अपनी पढ़त के माध्यम से बौद्धिक से कुशल विद्यार्थी बन पाएंगे... यौग्यता विकास में सहयोग करेंगे सीयूपीबी और आइ-टीओ...

पौखली में मनाया तंबाकू निषेध दिवस

विद्यार्थियों के समूहों में... तंबाकू निषेध दिवस... पौखली में मनाया तंबाकू निषेध दिवस...

सस्ते दाम में मिल सकेंगे आक्सीजन कंसंट्रेटर

आक्सीजन कंसंट्रेटर... सस्ते दाम में मिल सकेंगे आक्सीजन कंसंट्रेटर... राज्य सरकार ने आक्सीजन कंसंट्रेटर...

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एमओयू साइन करने से भू-स्थानिक प्रौद्योगिकी के क्षेत्र में सहयोग को मिलेगा बढ़ावा... सेंट्रल यूनिवर्सिटी ने पंजाब रिमोट सेंसिंग सेंटर के साथ साइन किया एमओयू...

New plant species in Antarctica named after India

अंटार्कटिका में नई पौधे की प्रजाति... New plant species in Antarctica named after India... अंटार्कटिका में नई पौधे की प्रजाति...

एनईपी-2020 : प्रधानमंत्री ने अकादमिक क्रेडिट बैंक का किया शुभारंभ

एनईपी-2020 की पूर्णतः सफलता... एनईपी-2020 : प्रधानमंत्री ने अकादमिक क्रेडिट बैंक का किया शुभारंभ... शिक्षा के माध्यम से समाजवाद...

सौच्यता विकास में सहयोग करेंगे सीयूपीबी और आइ-टीओ

करोड़ों के बच्चे अपनी पढ़त के माध्यम से बौद्धिक से कुशल विद्यार्थी बन पाएंगे... सौच्यता विकास में सहयोग करेंगे सीयूपीबी और आइ-टीओ...





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For any suggestions, please contact us at [pro@cup.edu.in](mailto:pro@cup.edu.in)

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